

# PRINCETON PLASMA PHYSICS LAB

Purchase Order Number:

S005243-F

Part Number:

VVSA PORTS

Part Name:

VVSA PORT EXTENSIONS  
FOR LOT #2

MTM Work Order Number:

65678/8.0



*Major*

**Tool & Machine, Inc.**

**Customer: 8780 - PRINCETON PLASMA PHYSICS LAB**  
**Customer P.O.: S005243-F**  
**Customer Part ID: VVSA PORTS - VVSA PORT EXTENSIONS**

Item#	Document Description / Material Description / File Name / Heat Lot
1	CERTIFICATE OF CONFORMANCE
2	NCR: - NCR19254 Signed.pdf

**110030 - CF BLANK FLANGE**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
3	188	10	10	Certificate of Conformance: / 110030 - CONFLAT BLANK FLANGE, 8.0 DIA. - mc107848.tif / CERTIFIED
4	188	10	10	Material Certification: / 110030 - CONFLAT BLANK FLANGE, 8.0 DIA. - Same as Item #3 / CERTIFIED
5	191	10	10	Certificate of Conformance: / 110030 - CONFLAT BLANK FLANGE, 8.0 DIA. - Same as Item #3 / CERTIFIED
6	191	10	10	Material Certification: / 110030 - CONFLAT BLANK FLANGE, 8.0 DIA. - Same as Item #3 / CERTIFIED
7	220	10	10	Material Certification: / 110030 - CONFLAT BLANK FLANGE, 8.0 DIA. - Same as Item #3 / CERTIFIED
8	220	10	10	Certificate of Conformance: / 110030 - CONFLAT BLANK FLANGE, 8.0 DIA. - Same as Item #3 / CERTIFIED
9	223	10	10	Material Certification: / 110030 - CONFLAT BLANK FLANGE, 8.0 DIA. - Same as Item #3 / CERTIFIED
10	223	10	10	Certificate of Conformance: / 110030 - CONFLAT BLANK FLANGE, 8.0 DIA. - Same as Item #3 / CERTIFIED

**110032 - CF BLANK FLANGE**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
11	204	10	10	Material Certification: / 110032 - CONFLAT BLANK FLANGE, 10.0 DIA. - mc108994.tif / CERTIFIED
12	204	10	10	Certificate of Conformance: / 110032 - CONFLAT BLANK FLANGE, 10.0 DIA. - Same as Item #11 / CERTIFIED
13	210	10	10	Material Certification: / 110032 - CONFLAT BLANK FLANGE, 10.0 DIA. - Same as Item #11 / CERTIFIED
14	210	10	10	Certificate of Conformance: / 110032 - CONFLAT BLANK FLANGE, 10.0 DIA. - Same as Item #11 / CERTIFIED

**110058 - CF FLANGE**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
15	200	10	10	Material Certification: / 110058 - CONFLAT BLANK FLANGE, 12.0 DIA. - mc107054.tif / CERTIFIED
16	200	10	10	Certificate of Conformance: / 110058 - CONFLAT BLANK FLANGE, 12.0 DIA. - Same as Item #15 / CERTIFIED
17	200	10	10	Non-Conformance: 17237 Customer document: SUBMITTAL - car04477.pdf

**190019 - BOLT SET**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
18	97	10	10	Material Certification: / 190019 - BOLT SET.500-20 X 3.0 SST HHCS,WASH, NUT - MC107847.TIF / CERTIFIED
19	97	10	10	Certificate of Conformance: / 190019 - BOLT SET.500-20 X 3.0 SST HHCS,WASH, NUT - Same as Item #18 / CERTIFIED

**401000 SPECIAL - CF HALF NIPPLE 2.5" LONG**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
20	110	10	10	Material Certification: / 401021 SPECIAL - DEL-SEAL CF HALF NIPPLE (SPECIAL LENGTH) - mc107040.tif / CERTIFIED
21	110	10	10	Certificate of Conformance: / 401021 SPECIAL - DEL-SEAL CF HALF NIPPLE (SPECIAL LENGTH) - Same as Item #20 / CERTIFIED
22	119	10	10	Certificate of Conformance: / 401021 SPECIAL - DEL-SEAL CF HALF NIPPLE (SPECIAL LENGTH) - Same as Item #20 / CERTIFIED
23	119	10	10	Material Certification: / 401021 SPECIAL - DEL-SEAL CF HALF NIPPLE (SPECIAL LENGTH) - Same as Item #20 / CERTIFIED
24	130	10	10	Material Certification: / 401021 SPECIAL - DEL-SEAL CF HALF NIPPLE (SPECIAL LENGTH) - Same as Item #20 / CERTIFIED

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25	130	10	10	Certificate of Conformance: / 401021 SPECIAL - DEL-SEAL CF HALF NIPPLE (SPECIAL LENGTH) - Same as Item #20 / CERTIFIED
26	149	10	10	Material Certification: / 401021 SPECIAL - DEL-SEAL CF HALF NIPPLE (SPECIAL LENGTH) - Same as Item #20 / CERTIFIED
27	149	10	10	Certificate of Conformance: / 401021 SPECIAL - DEL-SEAL CF HALF NIPPLE (SPECIAL LENGTH) - Same as Item #20 / CERTIFIED
28	196	10	10	Material Certification: / 401021 SPECIAL - DEL-SEAL CF HALF NIPPLE (SPECIAL LENGTH) - Same as Item #20 / CERTIFIED
29	196	10	10	Certificate of Conformance: / 401021 SPECIAL - DEL-SEAL CF HALF NIPPLE (SPECIAL LENGTH) - Same as Item #20 / CERTIFIED
30	201	10	10	Material Certification: / 401021 SPECIAL - DEL-SEAL CF HALF NIPPLE (SPECIAL LENGTH) - Same as Item #20 / CERTIFIED
31	201	10	10	Certificate of Conformance: / 401021 SPECIAL - DEL-SEAL CF HALF NIPPLE (SPECIAL LENGTH) - Same as Item #20 / CERTIFIED

**480FAN100-G-E - CF FLANGE 6"**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
32	255	10	10	Material Certification: / 480FAN100-G-E - BORED FLANGE, 6CF, FIXED, TAPPED - mc111127.tif / 920183
33	255	10	10	Certificate of Conformance: / 480FAN100-G-E - BORED FLANGE, 6CF, FIXED, TAPPED - Same as Item #32 / 920183
34	256	10	10	Material Certification: / 480FAN100-G-E - BORED FLANGE, 6CF, FIXED, TAPPED - Same as Item #32 / 920183
35	256	10	10	Certificate of Conformance: / 480FAN100-G-E - BORED FLANGE, 6CF, FIXED, TAPPED - Same as Item #32 / 920183
36	257	10	10	Certificate of Conformance: / 480FAN100-G-E - BORED FLANGE, 6CF, FIXED, TAPPED - Same as Item #32 / 920183
37	257	10	10	Material Certification: / 480FAN100-G-E - BORED FLANGE, 6CF, FIXED, TAPPED - Same as Item #32 / 920183
38	258	10	10	Material Certification: / 480FAN100-G-E - BORED FLANGE, 6CF, FIXED, TAPPED - Same as Item #32 / 920183
39	258	10	10	Certificate of Conformance: / 480FAN100-G-E - BORED FLANGE, 6CF, FIXED, TAPPED - Same as Item #32 / 920183
40	259	10	10	Material Certification: / 480FAN100-G-E - BORED FLANGE, 6CF, FIXED, TAPPED - Same as Item #32 / 920183
41	259	10	10	Certificate of Conformance: / 480FAN100-G-E - BORED FLANGE, 6CF, FIXED, TAPPED - Same as Item #32 / 920183
42	260	10	10	Certificate of Conformance: / 480FAN100-G-E - BORED FLANGE, 6CF, FIXED, TAPPED - Same as Item #32 / 920183
43	260	10	10	Material Certification: / 480FAN100-G-E - BORED FLANGE, 6CF, FIXED, TAPPED - Same as Item #32 / 920183
44	268	10	10	Certificate of Conformance: / 480FAN100-G-E - BORED FLANGE, 6CF, FIXED, TAPPED - Same as Item #32 / 920183
45	268	10	10	Material Certification: / 480FAN100-G-E - BORED FLANGE, 6CF, FIXED, TAPPED - Same as Item #32 / 920183
46	269	10	10	Certificate of Conformance: / 480FAN100-G-E - BORED FLANGE, 6CF, FIXED, TAPPED - Same as Item #32 / 920183
47	269	10	10	Material Certification: / 480FAN100-G-E - BORED FLANGE, 6CF, FIXED, TAPPED - Same as Item #32 / 920183
48	276	10	10	Certificate of Conformance: / 480FAN100-G-E - BORED FLANGE, 6CF, FIXED, TAPPED - Same as Item #32 / 920183
49	276	10	10	Material Certification: / 480FAN100-G-E - BORED FLANGE, 6CF, FIXED, TAPPED - Same as Item #32 / 920183
50	277	10	10	Certificate of Conformance: / 480FAN100-G-E - BORED FLANGE, 6CF, FIXED, TAPPED - Same as Item #32 / 920183
51	277	10	10	Material Certification: / 480FAN100-G-E - BORED FLANGE, 6CF, FIXED, TAPPED - Same as Item #32 / 920183

**480FAN160-G-E - CF FLANGE 8"**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
52	261	10	10	Material Certification: / 480FAN160-G-E - WELD FLANGE, 8CF, FIXED, TAPPED - mc111259.tif / 920135
53	261	10	10	Certificate of Conformance: / 480FAN160-G-E - WELD FLANGE, 8CF, FIXED, TAPPED - Same as Item #52 / 920135
54	262	10	10	Material Certification: / 480FAN160-G-E - WELD FLANGE, 8CF, FIXED, TAPPED - Same as Item #52 / 920135
55	262	10	10	Certificate of Conformance: / 480FAN160-G-E - WELD FLANGE, 8CF, FIXED, TAPPED - Same as Item #52 / 920135
56	270	10	10	Certificate of Conformance: / 480FAN160-G-E - WELD FLANGE, 8CF, FIXED, TAPPED - Same as Item #52 / 920135
57	270	10	10	Material Certification: / 480FAN160-G-E - WELD FLANGE, 8CF, FIXED, TAPPED - Same as Item #52 / 920135
58	271	10	10	Material Certification: / 480FAN160-G-E - WELD FLANGE, 8CF, FIXED, TAPPED - Same as Item #52 / 920135

**Customer: 8780 - PRINCETON PLASMA PHYSICS LAB**  
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59 271 10 10 Certificate of Conformance: / 480FAN160-G-E - WELD FLANGE, 8CF, FIXED, TAPPED - Same as Item #52 / 920135

**480FAN200-G-E - CF FLANGE 10"**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
60	266	10	10	Certificate of Conformance: / 480FAN200-G-E - WELD FLANGE, 10CF, FIXED, TAPPED - mc111128.tif / 920014
61	266	10	10	Material Certification: / 480FAN200-G-E - WELD FLANGE, 10CF, FIXED, TAPPED - Same as Item #60 / 920014
62	267	10	10	Certificate of Conformance: / 480FAN200-G-E - WELD FLANGE, 10CF, FIXED, TAPPED - Same as Item #60 / 920014
63	267	10	10	Material Certification: / 480FAN200-G-E - WELD FLANGE, 10CF, FIXED, TAPPED - Same as Item #60 / 920014

**480FAN250-G-E - CF FLANGE 12"**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
64	263	10	10	Material Certification: / 480FAN250-G-E - WELD FLANGE, 12CF, FIXED, TAPPED - mc111125.tif / 920014
65	263	10	10	Certificate of Conformance: / 480FAN250-G-E - WELD FLANGE, 12CF, FIXED, TAPPED - Same as Item #64 / 920014
66	264	10	10	Certificate of Conformance: / 480FAN250-G-E - WELD FLANGE, 12CF, FIXED, TAPPED - Same as Item #64 / 920014
67	264	10	10	Material Certification: / 480FAN250-G-E - WELD FLANGE, 12CF, FIXED, TAPPED - Same as Item #64 / 920014
68	265	10	10	Certificate of Conformance: / 480FAN250-G-E - WELD FLANGE, 12CF, FIXED, TAPPED - Same as Item #64 / 920014
69	265	10	10	Material Certification: / 480FAN250-G-E - WELD FLANGE, 12CF, FIXED, TAPPED - Same as Item #64 / 920014
70	272	10	10	Material Certification: / 480FAN250-G-E - WELD FLANGE, 12CF, FIXED, TAPPED - Same as Item #64 / 920014
71	272	10	10	Certificate of Conformance: / 480FAN250-G-E - WELD FLANGE, 12CF, FIXED, TAPPED - Same as Item #64 / 920014
72	273	10	10	Material Certification: / 480FAN250-G-E - WELD FLANGE, 12CF, FIXED, TAPPED - Same as Item #64 / 920014
73	273	10	10	Certificate of Conformance: / 480FAN250-G-E - WELD FLANGE, 12CF, FIXED, TAPPED - Same as Item #64 / 920014

**480FBL080-E - CF FLANGE 4.625"**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
74	274	10	10	Certificate of Conformance: / 480FBL080-E - BLANK FLANGE, 4.625CF, FIXED - mc111126.tif / 920135
75	274	10	10	Material Certification: / 480FBL080-E - BLANK FLANGE, 4.625CF, FIXED - Same as Item #74 / 920135
76	275	10	10	Certificate of Conformance: / 480FBL080-E - BLANK FLANGE, 4.625CF, FIXED - Same as Item #74 / 920135
77	275	10	10	Material Certification: / 480FBL080-E - BLANK FLANGE, 4.625CF, FIXED - Same as Item #74 / 920135

**DOMESKIRT**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
78	288	10	10	Material Certification: / INCONEL 625_5 - PLATE,NICKEL ALLOY .375" THK - mc111853.tif / 2650 4 6771
79	288	30		Inspection Data Checklist: 3 steps
80	289	10	10	Material Certification: / INCONEL 625_5 - PLATE,NICKEL ALLOY .375" THK - Same as Item #78 / 2650 4 6771
81	289	30		Inspection Data Checklist: 3 steps

**PORT DOME**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
82	4	22		Inspection Data Checklist: 3 steps
83	4	24		Certification: X-RAY VENDOR CERTIFICATION - MC114572.TIF
84	4	24		Map(s): X-RAY - mc120766.tif
85	5	22		Inspection Data Checklist: 3 steps



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86	5	24	Certification: X-RAY VENDOR CERT. - MC114564.TIF
87	5	24	Map(s): X-RAY - mc120772.tif
88	297	10	Map(s): X-RAY - mc121427.tif
89	297	10	Certification: X-RAY CERT - Same as Item #88
90	297	30	Certification: X-RAY CERTIFICATION - MC114571.TIF
91	297	30	Map(s): X-RAY - mc120791.tif

**PORT EXT. 5B SUB-ASSY - PORT EXT. 5B SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
92	190	10	10	Non-Conformance: 17240 Customer document: CUSTOMER SUBMITTAL - car04472.pdf

**SE120-002 - PPPL NCSX VVSA**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
93	0	10	20	Material Certification: Trace ID: 29110 / INCONEL625_035_GMAW - WELD WIRE/GMAW, .035 DIA - mc068650.tif / VX3417AK / XB8273
94	0	10	20	Material Certification: Trace ID: 123159 / INCONEL625_035_GMAW - WELD WIRE/GMAW, .035 DIA - mc109152.tif / VX3417AK / XB8273
95	0	10	50	Material Certification: Trace ID: 94239 / INCONEL625_062_GTAW - WELD WIRE/GTAW, .062 DIA - mc094944.pdf / AB8051 / AV8128
96	0	10	50	Material Certification: Trace ID: 94881 / INCONEL625_062_GTAW - WELD WIRE/GTAW, .062 DIA - mc095279.pdf / AB8051 / AV8128
97	0	10	60	Material Certification: Trace ID: 94241 / INCONEL625_093_GTAW - WELD WIRE/GTAW, .093 DIA - mc094945.pdf / CV8061 / K48859
98	0	10	60	Material Certification: Trace ID: 119262 / INCONEL625_093_GTAW - WELD WIRE/GTAW, .093 DIA - mc107551.tif / CV8061 / K48859
99	0	10	60	Material Certification: Trace ID: 121400 / INCONEL625_093_GTAW - WELD WIRE/GTAW, .093 DIA - mc108429.tif / CV8061 / K48859

**SE120-004 12-1 SW BLANK - PORT 12A SIDEWALL BLANK**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
100	31	10	10	Material Certification: / SE120-004 12-1 SW BLANK - PORT 12-1 SW FLAT BLANK - mc109051.tif / 2650 5 6805
101	113	10	10	Material Certification: / SE120-004 12-1 SW BLANK - PORT 12-1 SW FLAT BLANK - Same as Item #100 / 2650 5 6805

**SE120-004 12-1 SW - PORT 12- SIDEWALL LARGE RADIUS Qty: 1**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
102	31	20		Certificate of Conformance: - mc112352.tif
103	113	20		Certificate of Conformance: - Same as Item #102

**SE120-004 12-2 SW BLANK - PORT 12A SIDEWALL BLANK**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
104	32	10	10	Material Certification: / SE120-004 12-2 SW BLANK - PORT 12-2 SW FLAT BLANK - mc109052.tif / 2650 5 6805
105	114	10	10	Material Certification: / SE120-004 12-2 SW BLANK - PORT 12-2 SW FLAT BLANK - Same as Item #104 / 2650 5 6805

**SE120-004 12-2 SW - PORT 12-2 SIDEWALL Qty: 1**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
106	32	20		Certificate of Conformance: - Same as Item #102
107	114	20		Certificate of Conformance: - Same as Item #102

**SE120-004 4-1 SW BLANK - PORT 4-1 SIDEWALL BLANK**

**Customer: 8780 - PRINCETON PLASMA PHYSICS LAB**  
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**Customer Part ID: VVSA PORTS - VVSA PORT EXTENSIONS**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
108	124	10	10	Material Certification: / SE120-004 4-1 SW BLANK - PORT 4-1 SW FLAT BLANK - mc109053.tif / 2650 5 6805
109	139	10	10	Material Certification: / SE120-004 4-1 SW BLANK - PORT 4-1 SW FLAT BLANK - Same as Item #108 / 2650 5 6805

**SE120-004 4-1 SW - PORT 4-1 SIDEWALL Qty: 1**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
110	124	20		Certificate of Conformance: - mc112353.tif
111	139	20		Certificate of Conformance: - Same as Item #110
112	139	20		Certificate of Conformance: - mc111587.tif

**SE120-004 4-2 SW BLANK - PORT 4-2 SIDEWALL BLANK**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
113	125	10	10	Material Certification: / SE120-004 4-2 SW BLANK - PORT 4-2 SW FLAT BLANK - mc109057.tif / 2650 5 6805
114	140	10	10	Material Certification: / SE120-004 4-2 SW BLANK - PORT 4-2 SW FLAT BLANK - Same as Item #113 / 2650 5 6805

**SE120-004 4-2 SW - PORT 4-2 SIDEWALL Qty: 1**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
115	125	20		Certificate of Conformance: - mc112408.tif
116	140	20		Certificate of Conformance: - Same as Item #115
117	140	20		Certificate of Conformance: - MC111587.TIF

**SE120-004 4-3 SW BLANK - PORT 4-3 SIDEWALL BLANK**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
118	135	10	10	Material Certification: / SE120-004 4-3 SW BLANK - PORT 4-3 SW FLAT BLANK - mc108540.tif / 2650 4 6737
119	141	10	10	Material Certification: / SE120-004 4-3 SW BLANK - PORT 4-3 SW FLAT BLANK - Same as Item #118 / 2650 4 6737

**SE120-004 4-3 SW - PORT 4-3 SIDEWALL Qty: 1**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
120	135	20		Certificate of Conformance: - Same as Item #115
121	141	20		Certificate of Conformance: - Same as Item #115

**SE120-004 4-4 SW BLANK - PORT 4-4 SIDEWALL BLANK**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
122	136	10	10	Material Certification: / SE120-004 4-4 SW BLANK - PORT 4-4 SW FLAT BLANK - mc108539.tif / 2650 4 6737
123	142	10	10	Material Certification: / SE120-004 4-4 SW BLANK - PORT 4-4 SW FLAT BLANK - Same as Item #122 / 2650 4 6737

**SE120-004 4-4 SW - PORT 4-4 SIDEWALL Qty: 1**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
124	136	20		Certificate of Conformance: - Same as Item #115
125	142	20		Certificate of Conformance: - Same as Item #115

**SE120-004 4-5 SW BLANK - PORT 4-5 SIDEWALL BLANK**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
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**Customer: 8780 - PRINCETON PLASMA PHYSICS LAB**  
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126	137	10	10	Material Certification: / SE120-004 4-5 SW BLANK - PORT 4-5 SW FLAT BLANK - mc109056.tif / 2650 5 6796
127	143	10	10	Material Certification: / SE120-004 4-5 SW BLANK - PORT 4-5 SW FLAT BLANK - Same as Item #126 / 2650 5 6796

**SE120-004 4-6 SW BLANK - PORT 4-6 SIDEWALL BLANK**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
128	138	10	10	Material Certification: / SE120-004 4-6 SW BLANK - PORT 4-6 SW FLAT BLANK - mc118206.TIF / 2650 5 6796
129	144	10	10	Material Certification: / SE120-004 4-6 SW BLANK - PORT 4-6 SW FLAT BLANK - Same as Item #128 / 2650 5 6796

**SE120-004 NB SW BLANK - PORT NB SIDEWALL BLANK**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
130	26	10	10	Material Certification: Trace ID: 122990 / SE120-004 NB SW BLANK - PORT NB SIDEWALL BLANK - mc118207.tif / 2650 5 6820
131	26	10	10	Material Certification: / SE120-004 NB SW BLANK - PORT NB SIDEWALL BLANK - mc109033.tif / 2650 5 6820
132	27	10	10	Material Certification: / SE120-004 NB SW BLANK - PORT NB SIDEWALL BLANK - Same as Item #131 / 2650 5 6820
133	27	10	10	Material Certification: Trace ID: 122991 / SE120-004 NB SW BLANK - PORT NB SIDEWALL BLANK - Same as Item #130 / 2650 5 6820

**SE120-004 PORT 10 - PORT EXT. SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
134	225	10	10	Material Certification: / VVSA PORT 10 TUBE - TUBE, 10.0 OD X .250 WALL - MC107793.TIF / 2650 4 6731
135	225	20		Inspection Data Checklist: 1 steps
136	225	30		Map(s): X-RAY MAPS - mc120747.tif
137	225	30		MTM NDT Cert: X-RAY VENDOR CERT - MC110319.TIF
138	225	34		Inspection Data Checklist: 2 steps
139	230	10	10	Material Certification: / VVSA PORT 10 TUBE - TUBE, 10.0 OD X .250 WALL - mc107793.tif / 2650 4 6769
140	230	34		Inspection Data Checklist: 2 steps

**SE120-004 PORT 10A - PORT EXT. 10A SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
141	20	10		Inspection Data Checklist: 2 steps
142	228	10	10	Material Certification: / 110058 - CONFLAT BLANK FLANGE, 12.0 DIA. - Same as Item #15 / CERTIFIED
143	228	10	10	Certificate of Conformance: / 110058 - CONFLAT BLANK FLANGE, 12.0 DIA. - Same as Item #15 / CERTIFIED
144	228	10	10	Non-Conformance: 17237 Customer document: SUBMITTAL - Same as Item #17
145	229	10	10	Material Certification: / 401021 SPECIAL - DEL-SEAL CF HALF NIPPLE (SPECIAL LENGTH) - Same as Item #20 / CERTIFIED
146	229	10	10	Certificate of Conformance: / 401021 SPECIAL - DEL-SEAL CF HALF NIPPLE (SPECIAL LENGTH) - Same as Item #20 / CERTIFIED

**SE120-004 PORT 10B - PORT EXT. 10B SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
147	21	10		Inspection Data Checklist: 2 steps
148	233	10	10	Certificate of Conformance: / 110058 - CONFLAT BLANK FLANGE, 12.0 DIA. - Same as Item #15 / CERTIFIED
149	233	10	10	Material Certification: / 110058 - CONFLAT BLANK FLANGE, 12.0 DIA. - Same as Item #15 / CERTIFIED
150	233	10	10	Non-Conformance: 17237 Customer document: SUBMITTAL - Same as Item #17
151	234	10	10	Material Certification: / 401021 SPECIAL - DEL-SEAL CF HALF NIPPLE (SPECIAL LENGTH) - Same as Item #20 / CERTIFIED
152	234	10	10	Certificate of Conformance: / 401021 SPECIAL - DEL-SEAL CF HALF NIPPLE (SPECIAL LENGTH) - Same as Item #20 / CERTIFIED

**Customer: 8780 - PRINCETON PLASMA PHYSICS LAB**  
**Customer P.O.: S005243-F**  
**Customer Part ID: VVSA PORTS - VVSA PORT EXTENSIONS**

**SE120-004 PORT 11A - PORT EXT. 11A SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
153	22	10		Inspection Data Checklist: 2 steps
154	235	10	10	Material Certification: / INCONEL 625_112 - PIPE, ALLOY 625, 2.5" SCH 10 - mc108425.tif / 26504674

**SE120-004 PORT 11B - PORT EXT. 11B SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
155	23	10		Inspection Data Checklist: 2 steps
156	238	10	10	Material Certification: / INCONEL 625_112 - PIPE, ALLOY 625, 2.5" SCH 10 - Same as Item #154 / 26504674

**SE120-004 PORT 12A - PORT 12A SUB-ASSEMBLY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
157	2	30		Inspection Data Checklist: 4 steps
158	2	40		Inspection Data Checklist: 3 steps
159	2	70		Map(s): X-RAY MAP - mc113901.tif
160	2	70		Certification: X-RAY CERT - Same as Item #159
161	2	80		Inspection Data Checklist: 11 steps
162	2	120		Inspection Data Checklist: 7 steps
163	295	10		Map(s): X-RAY MAP - mc121426.tif
164	295	10		Certification: X-RAY CERT - Same as Item #163
165	295	30		Map(s): X-RAY MAP - mc113891.tif
166	295	30		Certification: X-RAY CERT - Same as Item #165

**SE120-004 PORT 12B - PORT 12B SUB-ASSEMBLY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
167	3	30		Inspection Data Checklist: 4 steps
168	3	40		Inspection Data Checklist: 3 steps
169	3	70		Map(s): X-RAY MAP - mc114975.tif
170	3	70		Certification: X-RAY CERT - Same as Item #169
171	3	80		Inspection Data Checklist: 11 steps
172	3	120		Inspection Data Checklist: 7 steps

**SE120-004 PORT 15 - PORT EXT. SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
173	241	10	10	Material Certification: / VVSA PORT 15 TUBE - TUBE, 4" O.D. X 0.25" WALL - mc111107.tif / 132793
174	241	20		Inspection Data Checklist: 1 steps
175	241	30		Map(s): X-RAY MAP - mc120771.tif
176	241	30		MTM NDT Cert: - MC111819.TIF
177	241	50		Inspection Data Checklist: 1 steps
178	244	10	10	Material Certification: / VVSA PORT 15 TUBE - TUBE, 4" O.D. X 0.25" WALL - Same as Item #173 / 132793
179	244	20		Inspection Data Checklist: 1 steps

**Customer: 8780 - PRINCETON PLASMA PHYSICS LAB**  
**Customer P.O.: S005243-F**  
**Customer Part ID: VVSA PORTS - VVSA PORT EXTENSIONS**

180	244	30		MTM NDT Cert: X-RAY CERT. - MC111814.TIF
181	244	30		Map(s): X-RAY MAP - mc120770.tif
182	244	50		Inspection Data Checklist: 1 steps

**SE120-004 PORT 15A - PORT EXT. 15A SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
183	24	10		Inspection Data Checklist: 2 steps
184	243	10	10	Certificate of Conformance: / FA06000133 - CF REDUCING NIPPLE, 6.00 TO 1.33" - mc108146.tif / CERTIFIED
185	243	10	10	Material Certification: / FA06000133 - CF REDUCING NIPPLE, 6.00 TO 1.33" - Same as Item #184 / CERTIFIED

**SE120-004 PORT 15B - PORT EXT. 15B SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
186	25	10		Inspection Data Checklist: 2 steps
187	246	10	10	Certificate of Conformance: / FA06000133 - CF REDUCING NIPPLE, 6.00 TO 1.33" - Same as Item #184 / CERTIFIED
188	246	10	10	Material Certification: / FA06000133 - CF REDUCING NIPPLE, 6.00 TO 1.33" - Same as Item #184 / CERTIFIED

**SE120-004 PORT 17 - PORT EXT. SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
189	166	10	10	Material Certification: / VVSA PORT 17 TUBE - TUBE, 4" O.D. X 0.25" WALL - mc111109.tif / 132793
190	166	20		Inspection Data Checklist: 1 steps
191	166	30		Map(s): X-RAY MAP - mc120764.tif
192	166	30		MTM NDT Cert: - MC111809.TIF
193	166	50		Inspection Data Checklist: 1 steps
194	174	10	10	Material Certification: / VVSA PORT 17 TUBE - TUBE, 4" O.D. X 0.25" WALL - Same as Item #189 / 132793
195	174	20		Inspection Data Checklist: 1 steps
196	174	30		Map(s): X-RAY MAP - mc120768.tif
197	174	30		MTM NDT Cert: - MC111813.TIF
198	174	50		Inspection Data Checklist: 1 steps

**SE120-004 PORT 17A - PORT EXT. 17A SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
199	162	10		Inspection Data Checklist: 2 steps

**SE120-004 PORT 17B - PORT EXT. 17B SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
200	164	10		Inspection Data Checklist: 2 steps

**SE120-004 PORT 18 - PORT EXT. SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
201	171	10	10	Material Certification: / VVSA PORT 18 TUBE - TUBE, 4" O.D. X 0.25" WALL - mc111111.tif / 132793
202	171	20		Inspection Data Checklist: 1 steps
203	171	30		Map(s): X-RAY MAP - mc120769.tif

**Customer: 8780 - PRINCETON PLASMA PHYSICS LAB**  
**Customer P.O.: S005243-F**  
**Customer Part ID: VVSA PORTS - VVSA PORT EXTENSIONS**

204	171	30		MTM NDT Cert: - MC111801.TIF
205	171	50		Inspection Data Checklist: 1 steps
206	177	10	10	Material Certification: / VVSA PORT 18 TUBE - TUBE, 4" O.D. X 0.25" WALL - Same as Item #201 / 132793
207	177	20		Inspection Data Checklist: 1 steps
208	177	30		MTM NDT Cert: X-RAY CERT. - MC111799.TIF
209	177	30		Map(s): X-RAY MAP - mc120758.tif
210	177	50		Inspection Data Checklist: 1 steps

**SE120-004 PORT 18A - PORT EXT. 18A SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
211	163	10		Inspection Data Checklist: 2 steps
212	165	10		Inspection Data Checklist: 2 steps

**SE120-004 PORT 2 - PORT EXT. SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
213	180	10	10	Material Certification: / VVSA PORT 2 TUBE - TUBE, 4" O.D. X 0.25" WALL - mc111112.tif / 132793
214	180	20		Inspection Data Checklist: 1 steps
215	180	30		MTM NDT Cert: - MC111797.TIF
216	180	30		Map(s): X-RAY MAP - mc120759.tif
217	180	50		Inspection Data Checklist: 1 steps
218	183	10	10	Material Certification: / VVSA PORT 2 TUBE - TUBE, 4" O.D. X 0.25" WALL - Same as Item #213 / 132793
219	183	20		Inspection Data Checklist: 1 steps
220	183	30		MTM NDT Cert: - MC111793.TIF
221	183	30		Map(s): X-RAY MAP - mc120754.tif
222	183	50		Inspection Data Checklist: 1 steps

**SE120-004 PORT 2A - PORT EXT. 2A SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
223	6	10		Inspection Data Checklist: 2 steps

**SE120-004 PORT 2B - PORT EXT. 2B SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
224	7	10		Inspection Data Checklist: 2 steps

**SE120-004 PORT 4A - PORT 4A SUB-ASSEMBLY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
225	8	30		Inspection Data Checklist: 22 steps
226	8	40		Inspection Data Checklist: 3 steps
227	8	70		Map(s): X-RAY MAP - mc121424.tif
228	8	70		Certification: X-RAY CERT - mc113903.tif
229	8	70		Certification: X-RAY CERT - Same as Item #227
230	8	70		Map(s): X-RAY MAP - Same as Item #228

**Customer: 8780 - PRINCETON PLASMA PHYSICS LAB**  
**Customer P.O.: S005243-F**  
**Customer Part ID: VVSA PORTS - VVSA PORT EXTENSIONS**

231	8	80	Inspection Data Checklist: 9 steps
232	8	120	Inspection Data Checklist: 6 steps
233	9	80	Inspection Data Checklist: 9 steps
234	294	10	Map(s): X-RAY MAP - mc121425.tif
235	294	10	Certification: X-RAY CERT - Same as Item #234
236	294	30	Map(s): X-RAY MAP - mc120789.tif
237	294	30	Certification: X-RAY CERT - MC113902.TIF

**SE120-004 PORT 4B - PORT 4B SUB-ASSEMBLY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
238	9	30		Inspection Data Checklist: 22 steps
239	9	40		Inspection Data Checklist: 3 steps
240	9	70		Certification: X-RAY CERT - MC114575.TIF
241	9	70		Map(s): X-RAY MAP - Same as Item #240
242	9	120		Inspection Data Checklist: 6 steps
243	298	10		Map(s): X-RAY MAP - MC114573.TIF
244	298	10		Certification: X-RAY CERT - Same as Item #243
245	298	30		Certification: X-RAY CERT - MC114563.TIF
246	298	30		Map(s): X-RAY MAP - Same as Item #245

**SE120-004 PORT 5 - PORT EXT. SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
247	186	10	10	Material Certification: / VVSA PORT 5 TUBE - TUBE, 6.0 OD X .188 WALL - mc107834.tif / 2650-4-6731
248	186	20		Inspection Data Checklist: 1 steps
249	186	30		MTM NDT Cert: X-RAY CERT - MC110342.TIF
250	186	30		Map(s): X-RAY MAPS - mc120753.tif
251	186	34		Inspection Data Checklist: 2 steps
252	189	10	10	Material Certification: / VVSA PORT 5 TUBE - TUBE, 6.0 OD X .188 WALL - Same as Item #247 / 2650-4-6731
253	189	20		Inspection Data Checklist: 1 steps
254	189	30		Map(s): X-RAY MAPS - mc120751.tif
255	189	30		MTM NDT Cert: X-RAY CERT - MC110344.TIF
256	189	34		Inspection Data Checklist: 2 steps

**SE120-004 PORT 5A - PORT EXT. 5A SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
257	10	10		Inspection Data Checklist: 2 steps
258	187	10	10	Non-Conformance: 17240 Customer document: CUSTOMER SUBMITTAL - Same as Item #92

**SE120-004 PORT 5B - PORT EXT. 5B SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
259	11	10		Inspection Data Checklist: 2 steps

**Customer: 8780 - PRINCETON PLASMA PHYSICS LAB**  
**Customer P.O.: S005243-F**  
**Customer Part ID: VVSA PORTS - VVSA PORT EXTENSIONS**

**SE120-004 PORT 6 - PORT EXT. SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
260	192	10	10	Material Certification: / VVSA PORT 6 TUBE - TUBE, 10.0 OD X .250 WALL - Same as Item #139 / 2650 4 6731
261	192	20		Inspection Data Checklist: 1 steps
262	192	30		MTM NDT Cert: X-RAY CERT - MC110335.TIF
263	192	30		Map(s): X-RAY MAP - mc120752.tif
264	192	34		Inspection Data Checklist: 2 steps
265	197	10	10	Material Certification: / VVSA PORT 6 TUBE - TUBE, 10.0 OD X .250 WALL - Same as Item #139 / 2650 4 6769
266	197	20		Inspection Data Checklist: 1 steps
267	197	30		Map(s): X-RAY MAPS - mc120756.tif
268	197	30		MTM NDT Cert: X-RAY CERT - MC110336.TIF
269	197	34		Inspection Data Checklist: 2 steps
270	230	20		Inspection Data Checklist: 1 steps
271	230	30		MTM NDT Cert: X-RAY CERT - MC110318.TIF
272	230	30		Map(s): X-RAY MAPS - mc120761.tif

**SE120-004 PORT 6A - PORT EXT. 6A SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
273	12	10		Inspection Data Checklist: 2 steps

**SE120-004 PORT 6B - PORT EXT. 6B SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
274	13	10		Inspection Data Checklist: 2 steps

**SE120-004 PORT 7 - PORT EXT. SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
275	202	10	10	Material Certification: / VVSA PORT 7 TUBE - TUBE, 8.0 OD X .188 WALL - MC107833.TIF / 2650-4-6731
276	202	20		Inspection Data Checklist: 1 steps
277	202	30		MTM NDT Cert: X-RAY CERT. - MC110331.TIF
278	202	30		Map(s): X-RAY MAPS - mc120757.tif
279	202	34		Inspection Data Checklist: 2 steps
280	208	10	10	Material Certification: / VVSA PORT 7 TUBE - TUBE, 8.0 OD X .188 WALL - Same as Item #275 / 2650-4-6731
281	208	20		Inspection Data Checklist: 1 steps
282	208	30		Map(s): X-RAY MAPS. - mc120746.tif
283	208	30		MTM NDT Cert: X-RAY CERT. - MC110329.TIF
284	208	34		Inspection Data Checklist: 2 steps

**SE120-004 PORT 7A - PORT EXT. 7A SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
285	14	10		Inspection Data Checklist: 2 steps
286	203	10	10	Non-Conformance: 17233 Customer document: SUBMITTAL (SAME AS 17237) - car04482.RTF



**Customer: 8780 - PRINCETON PLASMA PHYSICS LAB**  
**Customer P.O.: S005243-F**  
**Customer Part ID: VVSA PORTS - VVSA PORT EXTENSIONS**

287	207	10	10	Material Certification: / 401021 SPECIAL - DEL-SEAL CF HALF NIPPLE (SPECIAL LENGTH) - Same as Item #20 / CERTIFIED
288	207	10	10	Certificate of Conformance: / 401021 SPECIAL - DEL-SEAL CF HALF NIPPLE (SPECIAL LENGTH) - Same as Item #20 / CERTIFIED

**SE120-004 PORT 7B - PORT EXT. 7B SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
289	15	10		Inspection Data Checklist: 2 steps
290	209	10	10	Non-Conformance: 17233 Customer document: SUBMITTAL (SAME AS 17237) - Same as Item #286
291	211	10	10	Material Certification: / 401021 SPECIAL - DEL-SEAL CF HALF NIPPLE (SPECIAL LENGTH) - Same as Item #20 / CERTIFIED
292	211	10	10	Certificate of Conformance: / 401021 SPECIAL - DEL-SEAL CF HALF NIPPLE (SPECIAL LENGTH) - Same as Item #20 / CERTIFIED

**SE120-004 PORT 8 - PORT EXT. SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
293	212	10	10	Material Certification: / VVSA PORT 8 TUBE - TUBE, 4" O.D. X 0.25" WALL - mc111113.tif / 132793
294	212	20		Inspection Data Checklist: 1 steps
295	212	30		MTM NDT Cert: X-RAY CERT. - MC111800.TIF
296	212	30		Map(s): X-RAY MAP - mc120755.tif
297	212	50		Inspection Data Checklist: 1 steps
298	215	10	10	Material Certification: / VVSA PORT 8 TUBE - TUBE, 4" O.D. X 0.25" WALL - Same as Item #293 / 132793
299	215	20		Inspection Data Checklist: 1 steps
300	215	30		Map(s): X-RAY MAP - mc120748.tif
301	215	30		MTM NDT Cert: X-RAY CERT. - MC111802.TIF
302	215	50		Inspection Data Checklist: 1 steps

**SE120-004 PORT 8A - PORT EXT. 8A SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
303	16	10		Inspection Data Checklist: 2 steps
304	214	10	10	Certificate of Conformance: / FA06000133 - CF REDUCING NIPPLE, 6.00 TO 1.33" - Same as Item #184 / CERTIFIED
305	214	10	10	Material Certification: / FA06000133 - CF REDUCING NIPPLE, 6.00 TO 1.33" - Same as Item #184 / CERTIFIED

**SE120-004 PORT 8B - PORT EXT. 8B SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
306	17	10		Inspection Data Checklist: 2 steps
307	217	10	10	Material Certification: / FA06000133 - CF REDUCING NIPPLE, 6.00 TO 1.33" - Same as Item #184 / CERTIFIED
308	217	10	10	Certificate of Conformance: / FA06000133 - CF REDUCING NIPPLE, 6.00 TO 1.33" - Same as Item #184 / CERTIFIED

**SE120-004 PORT 9 - PORT EXT. SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
309	218	10	10	Material Certification: / VVSA PORT 9 TUBE - TUBE, 6.0 OD X .188 WALL - MC107834.TIF / 2650-4-6731
310	218	20		Inspection Data Checklist: 1 steps
311	218	30		Map(s): X-RAY MAPS. - mc120760.tif
312	218	30		MTM NDT Cert: X-RAY CERT. - MC110339.TIF
313	218	34		Inspection Data Checklist: 2 steps

**Customer: 8780 - PRINCETON PLASMA PHYSICS LAB**  
**Customer P.O.: S005243-F**  
**Customer Part ID: VVSA PORTS - VVSA PORT EXTENSIONS**

314	221	10	10	Material Certification: / VVSA PORT 9 TUBE - TUBE, 6.0 OD X .188 WALL - Same as Item #309 / 2650-4-6731
315	221	20		Inspection Data Checklist: 1 steps
316	221	30		MTM NDT Cert: X-RAY CERT. - MC110340.TIF
317	221	30		Map(s): X-RAY MAPS. - mc120744.tif
318	221	34		Inspection Data Checklist: 2 steps

**SE120-004 PORT 9A - PORT EXT. 9A SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
319	18	10		Inspection Data Checklist: 2 steps
320	219	10	10	Non-Conformance: 17240 Customer document: CUSTOMER SUBMITTAL - Same as Item #92

**SE120-004 PORT 9B - PORT EXT. 9B SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
321	19	10		Inspection Data Checklist: 2 steps
322	222	10	10	Non-Conformance: 17240 Customer document: CUSTOMER SUBMITTAL - Same as Item #92

**SE120-004 PORT FJS - PORT EXT. FJS SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
323	224	10		Inspection Data Checklist: 2 steps
324	247	10	10	Material Certification: / VVSA PORT FJS TUBE - TUBE, 4" O.D. X 0.25" WALL - mc111108.tif / 132793
325	247	20		Inspection Data Checklist: 1 steps
326	247	30		MTM NDT Cert: X-RAY CERT. - MC111817.TIF
327	247	30		Map(s): X-RAY MAP - MC120745.TIF
328	247	50		Inspection Data Checklist: 1 steps
329	249	10	10	Material Certification: / FA06000133 - CF REDUCING NIPPLE, 6.00 TO 1.33" - Same as Item #184 / CERTIFIED
330	249	10	10	Certificate of Conformance: / FA06000133 - CF REDUCING NIPPLE, 6.00 TO 1.33" - Same as Item #184 / CERTIFIED

**SE120-004 PORT NB - PORT NB SUB-ASSEMBLY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
331	1	30		Inspection Data Checklist: 4 steps
332	1	40		Inspection Data Checklist: 2 steps
333	1	70		Map(s): X-RAY MAP - MC113898.TIF
334	1	70		Certification: X-RAY CERT - Same as Item #333
335	1	75		Inspection Data Checklist: 9 steps
336	1	90		Inspection Data Checklist: 6 steps
337	296	10		Map(s): X-RAY MAP - MC113889.TIF
338	296	10		Certification: X-RAY CERT - Same as Item #337
339	296	30		Certification: X-RAY CERT - MC114577.TIF
340	296	30		Map(s): X-RAY MAP - mc120750.tif

**SE120-004-16 - PORT 11 PIPE**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
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**Customer: 8780 - PRINCETON PLASMA PHYSICS LAB**  
**Customer P.O.: S005243-F**  
**Customer Part ID: VVSA PORTS - VVSA PORT EXTENSIONS**

341 235 30 Inspection Data Checklist: 3 steps

**SE120-004-20A - VVSA DOME A**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
342	4	20	10	Dimensional Report: / SE120-004-20A - VVSA DOME A - mc110475.tif / CERTIFIED
343	4	20	10	Certificate of Conformance: / SE120-004-20A - VVSA DOME A - Same as Item #342 / CERTIFIED

**SE120-004-20B - VVSA DOME B**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
344	5	20	10	Certificate of Conformance: / SE120-004-20B - VVSA DOME B - Same as Item #342 / CERTIFIED
345	5	20	10	Dimensional Report: / SE120-004-20B - VVSA DOME B - Same as Item #342 / CERTIFIED

**SE120-004-23 - CONFLAT, 6.0 OD TAPPED Qty: 1**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
346	167	10		Non-Conformance: 17167 Customer document: SUBMITTAL (SAME AS 17237) - car04483.RTF
347	172	10		Non-Conformance: 17167 Customer document: SUBMITTAL (SAME AS 17237) - Same as Item #346
348	175	10		Non-Conformance: 17167 Customer document: SUBMITTAL (SAME AS 17237) - Same as Item #346
349	178	10		Non-Conformance: 17167 Customer document: SUBMITTAL (SAME AS 17237) - Same as Item #346
350	181	10		Non-Conformance: 17167 Customer document: SUBMITTAL (SAME AS 17237) - Same as Item #346
351	184	10		Non-Conformance: 17167 Customer document: SUBMITTAL (SAME AS 17237) - Same as Item #346
352	213	10		Non-Conformance: 17167 Customer document: SUBMITTAL (SAME AS 17237) - Same as Item #346
353	216	10		Non-Conformance: 17167 Customer document: SUBMITTAL (SAME AS 17237) - Same as Item #346
354	242	10		Non-Conformance: 17167 Customer document: SUBMITTAL (SAME AS 17237) - Same as Item #346
355	245	10		Non-Conformance: 17167 Customer document: SUBMITTAL (SAME AS 17237) - Same as Item #346
356	248	10		Non-Conformance: 17167 Customer document: SUBMITTAL (SAME AS 17237) - Same as Item #346

**SE120-004-29 - CF REDUCING NIPPLE**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
357	168	10	10	Certificate of Conformance: / FA06000133 - CF REDUCING NIPPLE, 6.00 TO 1.33" - Same as Item #184 / CERTIFIED
358	168	10	10	Material Certification: / FA06000133 - CF REDUCING NIPPLE, 6.00 TO 1.33" - Same as Item #184 / CERTIFIED
359	173	10	10	Material Certification: / FA06000133 - CF REDUCING NIPPLE, 6.00 TO 1.33" - Same as Item #184 / CERTIFIED
360	173	10	10	Certificate of Conformance: / FA06000133 - CF REDUCING NIPPLE, 6.00 TO 1.33" - Same as Item #184 / CERTIFIED
361	176	10	10	Material Certification: / FA06000133 - CF REDUCING NIPPLE, 6.00 TO 1.33" - Same as Item #184 / CERTIFIED
362	176	10	10	Certificate of Conformance: / FA06000133 - CF REDUCING NIPPLE, 6.00 TO 1.33" - Same as Item #184 / CERTIFIED
363	179	10	10	Material Certification: / FA06000133 - CF REDUCING NIPPLE, 6.00 TO 1.33" - Same as Item #184 / CERTIFIED
364	179	10	10	Certificate of Conformance: / FA06000133 - CF REDUCING NIPPLE, 6.00 TO 1.33" - Same as Item #184 / CERTIFIED
365	182	10	10	Material Certification: / FA06000133 - CF REDUCING NIPPLE, 6.00 TO 1.33" - Same as Item #184 / CERTIFIED
366	182	10	10	Certificate of Conformance: / FA06000133 - CF REDUCING NIPPLE, 6.00 TO 1.33" - Same as Item #184 / CERTIFIED
367	185	10	10	Material Certification: / FA06000133 - CF REDUCING NIPPLE, 6.00 TO 1.33" - Same as Item #184 / CERTIFIED
368	185	10	10	Certificate of Conformance: / FA06000133 - CF REDUCING NIPPLE, 6.00 TO 1.33" - Same as Item #184 / CERTIFIED

**SE120-004-32 - BOLT, 12PT, SILV PLT.**

**Customer: 8780 - PRINCETON PLASMA PHYSICS LAB**  
**Customer P.O.: S005243-F**  
**Customer Part ID: VVSA PORTS - VVSA PORT EXTENSIONS**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
369	254	10	10	Material Certification: / SE120-004-32 - BOLT, 12 PT, SILVER PLATED, .50-20 X 3.5 - mc110752.tif / 062313725

**SE120-004-33 - BOLT SET**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
370	159	10	20	Certificate of Conformance: / 190165 - BOLT SET, .312-24 X 2.00 LG - mc107045.tif / CERTIFIED
371	159	10	20	Material Certification: / 190165 - BOLT SET, .312-24 X 2.00 LG - Same as Item #370 / CERTIFIED

**SE120-004-34 - BOLT SET**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
372	159	10	30	Certificate of Conformance: / 190058 - BOLT SET, .312-24 X 1.25 12PT SILVER PLT - mc107047.tif / CERTIFIED
373	159	10	30	Material Certification: / 190058 - BOLT SET, .312-24 X 1.25 12PT SILVER PLT - Same as Item #372 / CERTIFIED

**SE120-004-35 - BOLT SET**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
374	159	10	40	Material Certification: / 190059 - BOLT SET, .312-24 X 1.75 12PT SILVER PLT - mc107046.tif / CERTIFIED
375	159	10	40	Certificate of Conformance: / 190059 - BOLT SET, .312-24 X 1.75 12PT SILVER PLT - Same as Item #374 / CERTIFIED

**SE120-004-36 - COPPER GASKET**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
376	159	10	50	Material Certification: / 191011 - GASKET, COPPER, 3.01 I.D. - mc107044.tif / CERTIFIED
377	159	10	50	Certificate of Conformance: / 191011 - GASKET, COPPER, 3.01 I.D. - Same as Item #376 / CERTIFIED

**SE120-004-37 - COPPER GASKET**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
378	159	10	60	Material Certification: / 191013 - GASKET, COPPER, 4.01 I.D. - mc107043.tif / CERTIFIED
379	159	10	60	Certificate of Conformance: / 191013 - GASKET, COPPER, 4.01 I.D. - Same as Item #378 / CERTIFIED

**SE120-004-38 - COPPER GASKET**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
380	159	10	70	Certificate of Conformance: / 191017 - GASKET, COPPER, 6.01 I.D. - mc107042.tif / CERTIFIED
381	159	10	70	Material Certification: / 191017 - GASKET, COPPER, 6.01 I.D. - Same as Item #380 / CERTIFIED

**SE120-004-39 - COPPER GASKET**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
382	159	10	80	Material Certification: / 191019 - GASKET, COPPER, 8.01 I.D. - mc107041.tif / CERTIFIED
383	159	10	80	Certificate of Conformance: / 191019 - GASKET, COPPER, 8.01 I.D. - Same as Item #382 / CERTIFIED

**SE120-004-40 - COPPER GASKET**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
384	159	10	90	Certificate of Conformance: / 191094 - GASKET, COPPER, 10.00 I.D. - mc107039.tif / CERTIFIED
385	159	10	90	Material Certification: / 191094 - GASKET, COPPER, 10.00 I.D. - Same as Item #384 / CERTIFIED

**SE120-004-42 - VITON O-RING**

**Customer: 8780 - PRINCETON PLASMA PHYSICS LAB**  
**Customer P.O.: S005243-F**  
**Customer Part ID: VVSA PORTS - VVSA PORT EXTENSIONS**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
386	108	10	10	Certificate of Conformance: / SE120-004-42 - O-RING, VITON - mc106890.tif / CERTIFIED
387	108	10	10	Material Certification: / SE120-004-42 - O-RING, VITON - Same as Item #386 / CERTIFIED
388	122	10	10	Certificate of Conformance: / SE120-004-42 - O-RING, VITON - Same as Item #386 / CERTIFIED

**SE120-004-44 - O-RING, VITON**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
389	133	10	10	Certificate of Conformance: / SE120-004-44 - O-RING, VITON - mc106822.tif / CERTIFIED
390	152	10	10	Certificate of Conformance: / SE120-004-44 - O-RING, VITON - Same as Item #389 / CERTIFIED

**SE120-004-47 - SEAL RETAINER SCREW**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
391	101	10	10	Material Certification: / 98164A133 - BHCS 316SST #8-32UNC-3A X 0.25" LONG - mc105456.tif / CERTIFIED
392	112	10	10	Material Certification: / 98164A133 - BHCS 316SST #8-32UNC-3A X 0.25" LONG - Same as Item #391 / CERTIFIED
393	123	10	10	Material Certification: / 98164A133 - BHCS 316SST #8-32UNC-3A X 0.25" LONG - Same as Item #391 / CERTIFIED
394	134	10	10	Material Certification: / 98164A133 - BHCS 316SST #8-32UNC-3A X 0.25" LONG - Same as Item #391 / CERTIFIED
395	153	10	10	Material Certification: / 98164A133 - BHCS 316SST #8-32UNC-3A X 0.25" LONG - Same as Item #391 / CERTIFIED

**SE120-004-48 - VVSA CLEVIS BOSS "A"**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
396	284	10	10	Material Certification: / INCONEL 625_255 - BAR,ROUND,NICKEL ALLOY 2.0" DIA - mc111533.TIF / 900257
397	284	30		Inspection Data Checklist: 1 steps
398	290	10	10	Material Certification: / INCONEL 625_255 - BAR,ROUND,NICKEL ALLOY 2.0" DIA - mc111533.tif / 900257
399	290	30		Inspection Data Checklist: 1 steps

**SE120-004-49 - VVSA CLEVIS BOSS "B"**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
400	285	10	10	Material Certification: / INCONEL 625_255 - BAR,ROUND,NICKEL ALLOY 2.0" DIA - Same as Item #396 / 900257
401	285	30		Inspection Data Checklist: 1 steps

**SE120-004-50 - VVSA CLEVIS BOSS "C"**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
402	286	10	10	Material Certification: / INCONEL 625_255 - BAR,ROUND,NICKEL ALLOY 2.0" DIA - Same as Item #396 / 900257
403	286	30		Inspection Data Checklist: 1 steps

**SE120-004-51 - VVSA CLEVIS BOSS "D"**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
404	287	10	10	Material Certification: / INCONEL 625_255 - BAR,ROUND,NICKEL ALLOY 2.0" DIA - Same as Item #396 / 900257
405	287	30		Inspection Data Checklist: 1 steps

**SE120-004-52 - O-RING, HELICOFLEX**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
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**Customer: 8780 - PRINCETON PLASMA PHYSICS LAB**  
**Customer P.O.: S005243-F**  
**Customer Part ID: VVSA PORTS - VVSA PORT EXTENSIONS**

406	99	10	10	Material Certification: / SE120-004-52 - O-RING, METAL, HELICOFLEX TYPE HNV - CUSTOMER SUPPLIED / N/A
407	99	10	10	Certificate of Conformance: / SE120-004-52 - O-RING, METAL, HELICOFLEX TYPE HNV - Same as Item #406 / N/A

**SE120-004-53 - O-RING, HELICOFLEX**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
408	100	10	10	Certificate of Conformance: / SE120-004-53 - O-RING, METAL, HELICOFLEX TYPE HNV - Same as Item #406 / N/A
409	100	10	10	Material Certification: / SE120-004-53 - O-RING, METAL, HELICOFLEX TYPE HNV - Same as Item #406 / N/A

**SE120-004-55 - NUT, 1/2-20 UNF, GRADE 8**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
410	254	10	20	Material Certification: / SE120-004-55 - NUT, 1/2-20 UNF, GRADE 8 - mc110063.tif / 744072 & E28031 & HT9618EY

**SE120-004-57 - BOLT, 12 PT, 1/2-20**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
411	254	10	40	Material Certification: / SE120-004-57 - BOLT, 12 PT, 1/2-20 UNF X 2.00, INCO 718 - Same as Item #410 / 744072 & E28031 & HT9618EY

**SE122-004-20A BLANK - DOME A FLAT BLANK**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
412	4	10	10	Material Certification: / SE120-004-20A BLANK - VVSA DOME A FLAT BLANK MATERIAL - mc108864.tif / 2650 4 6771

**SE122-004-20B BLANK - DOME B FLAT BLANK**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
413	5	10	10	Material Certification: / SE120-004-20B BLANK - VVSA DOME B FLAT BLANK MATERIAL - Same as Item #412 / 2650 4 6771

**SE122-018-1A BLANK - NCSX VVSA PORT 12A FLANGE BLANK Qty: 1**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
414	282	50		Certification: - mc111911.pdf

**SE122-018-1A - PORT 12A FLANGE Qty: 1**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
415	2	116		Certificate of Conformance: - mc114707.tif
416	2	118		Inspection Data Checklist: 6 steps
417	104	10	10	Material Certification: / SE122-018-1A BLANK - NCSX VVSA PORT 12A FLANGE BLANK - mc109789.tif / 65H7
418	104	20		Inspection Data Checklist: 5 steps
419	282	10	10	Material Certification: / SE122-018-1A BLANK - NCSX VVSA PORT 12A FLANGE BLANK - mc111004.tif / 818102
420	282	20		Inspection Data Checklist: 5 steps

**SE122-018-1B BLANK - PORT 12B FLANGE BLANK**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
421	115	10	10	Material Certification: / SE122-018-1B BLANK - NCSX VVSA PORT 12B FLANGE BLANK - Same as Item #417 / 65H7
422	126	10	10	Material Certification: / SE122-049-1A BLANK - NCSX VVSA PORT 4A FLANGE BLANK - Same as Item #417 / 65H7
423	145	10	10	Material Certification: / SE122-049-1B BLANK - NCSX VVSA PORT 4B FLANGE BLANK - Same as Item #417 / 65H7
424	283	50		Certification: - Same as Item #414

Customer: 8780 - PRINCETON PLASMA PHYSICS LAB  
 Customer P.O.: S005243-F  
 Customer Part ID: VVSA PORTS - VVSA PORT EXTENSIONS

**SE122-018-1B - PORT 12B FLANGE Qty: 1**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
425	3	116		Certificate of Conformance: - mc114708.tif
426	3	118		Inspection Data Checklist: 6 steps
427	283	10	10	Material Certification: / SE122-018-1B BLANK - NCSX VVSA PORT 12B FLANGE BLANK - Same as Item #419 / 818102
428	283	20		Inspection Data Checklist: 5 steps

**SE122-019-1A BLANK - PORT 12A SEAL RETAINER BLANK**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
429	107	10	10	Material Certification: / SE122-019-1A BLANK - PORT 12A SEAL RETAINER BLANK - mc110471.tif / 604254-2B

**SE122-019-1A - PORT 12A SEAL RETAINER**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
430	107	20		Inspection Data Checklist: 8 steps
431	107	30		Inspection Data Checklist: 1 steps

**SE122-019-1B BLANK - PORT 12B SEAL RETAINER BLANK**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
432	120	10	10	Material Certification: / SE122-019-1B BLANK - PORT 12B SEAL RETAINER BLANK - Same as Item #429 / 604254-2B

**SE122-019-1B - PORT 12B SEAL RETAINER**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
433	120	20		Inspection Data Checklist: 8 steps
434	120	30		Inspection Data Checklist: 1 steps

**SE122-049-1A - PORT 4A FLANGE Qty: 1**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
435	8	116		Certificate of Conformance: - mc114930.tif
436	8	118		Inspection Data Checklist: 6 steps
437	126	20		Inspection Data Checklist: 6 steps
438	126	50		Certification: - mc111897.pdf

**SE122-049-1B - PORT 4B FLANGE Qty: 1**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
439	9	116		Certificate of Conformance: - mc114931.tif
440	9	118		Inspection Data Checklist: 6 steps
441	145	20		Inspection Data Checklist: 6 steps
442	145	50		Certification: - Same as Item #438

**SE122-057-1A BLANK - PORT 4A SEAL RETAINER BLANK**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
443	131	10	10	Material Certification: / SE122-057-1A BLANK - PORT 4A SEAL RETAINER BLANK - Same as Item #429 / 604254-2B
444	150	10	10	Material Certification: / SE122-057-1B BLANK - PORT 4B SEAL RETAINER BLANK - Same as Item #429 / 604254-2B

**Customer: 8780 - PRINCETON PLASMA PHYSICS LAB**  
**Customer P.O.: S005243-F**  
**Customer Part ID: VVSA PORTS - VVSA PORT EXTENSIONS**

**SE122-057-1A - PORT 4A SEAL RETAINER**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
445	131	20		Inspection Data Checklist: 8 steps
446	131	30		Inspection Data Checklist: 1 steps
447	292	10		Inspection Data Checklist: 1 steps

**SE122-057-1B - PORT 4B SEAL RETAINER**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
448	150	20		Inspection Data Checklist: 8 steps
449	150	30		Inspection Data Checklist: 1 steps
450	293	10		Inspection Data Checklist: 1 steps

**SE122-072-1 - PORT NB FLANGE**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
451	82	20		Inspection Data Checklist: 8 steps

**SE122-072-1BLANK - PORT NB WELD FLANGE BLANK**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
452	82	10	10	Material Certification: / SE122-072-1BLANK - PORT NB FLANGE BLANK - mc110077.tif / 512120L04

**SE122-104-1A BLANK - PORT 12A COVER BLANK**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
453	106	10	10	Material Certification: / SE122-104-1A BLANK - PORT 12A COVER BLANK - mc109665.tif / 818102
454	117	10	10	Material Certification: / SE122-104-1B BLANK - PORT 12B COVER BLANK - Same as Item #453 / 818102

**SE122-104-1A - PORT 12A COVER ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
455	106	20		Inspection Data Checklist: 12 steps
456	106	50		Inspection Data Checklist: 3 steps

**SE122-104-1B - PORT 12B COVER ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
457	117	20		Inspection Data Checklist: 12 steps
458	117	50		Inspection Data Checklist: 3 steps

**SE122-149-1A BLANK - PORT 4A COVER BLANK**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
459	128	10	10	Material Certification: / SE122-149-1A BLANK - PORT 4A COVER BLANK - mc109667.tif / 65X9

**SE122-149-1A - PORT 4A COVER ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
460	128	20		Inspection Data Checklist: 13 steps



**Customer: 8780 - PRINCETON PLASMA PHYSICS LAB**  
**Customer P.O.: S005243-F**  
**Customer Part ID: VVSA PORTS - VVSA PORT EXTENSIONS**

461 128 50 Inspection Data Checklist: 3 steps

**SE122-149-1B BLANK - PORT 4B COVER BLANK**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
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462	147	10	10	Material Certification: / SE122-149-1B BLANK - PORT 4A COVER BLANK - Same as Item #459 / 65X9
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**SE122-149-1B - PORT 4B COVER ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
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463	147	20		Inspection Data Checklist: 12 steps
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464	147	50		Inspection Data Checklist: 3 steps
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**SE122-172-1 - PORT NB COVER**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
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465	84	10	10	Material Certification: / SE122-172-1BLANK - PORT NB COVER BLANK - Same as Item #452 / 512120L04
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466	84	20		Inspection Data Checklist: 3 steps
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467	84	50		Inspection Data Checklist: 7 steps
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**SE122-173-1 - PORT NB SEAL RETAINER**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
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468	98	20		Inspection Data Checklist: 6 steps
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**SE122-173-1BLANK - NB SEAL RETAINER BLANK**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
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469	98	10	10	Material Certification: / SE122-173-1BLANK - PORT NB SEAL RETAINER BLANK - mc110068.tif / NX4533AG
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**SE122-174-1 - HELICOFLEX SEAL**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
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470	280	10		Inspection Data Checklist: 1 steps
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471	280	10		Certification: CUSTOMER SUPPLIED -
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472	280	10		Certificate of Conformance: CUSTOMER SUPPLIED -
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**SE122-174-2 - HELICOFLEX SEAL Qty: 1**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
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473	281	10		Certificate of Conformance: CUSTOMER SUPPLIED -
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474	281	10		Inspection Data Checklist: 1 steps
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475	281	10		Certification: CUSTOMER SUPPLIED -
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CERTIFICATE OF CONFORMANCE

Page: 1  
Date: 08/29/06  
User ID: UPCHURC#

TO: PRINCETON PLASMA PHYSICS LAB

DATE: 08/29/2006

ATTENTION: Receiving Department

Seller certifies that:

Part Number: VVSA PORTS

Purchase Order: S005243-F

Part Name: VVSA PORT EXTENSIONS

Workorder: 65678/8.0

Part Serial Number: N/A

Quantity: 1

1. These materials and/or parts were produced in conformance with all contractually applicable Government and/or Customer specifications referred in, or furnished with, the above Purchase Order.
2. The materials and/or parts furnished under the above Purchase Order were produced:  
 From materials furnished by Customer for the production of such parts.  
 From materials for which the seller has available for examination chemical and/or physical test reports or other evidence of conformance to applicable specifications.
3. All processes required in the production of these part and/or materials are listed below and were performed by a facility or personnel approved or certified by the Seller and the customer when such approval or certification is required by contract.

Certifications are on file at this plant.

Other Requirements:

WSA PORT EXTENSIONS FOR LOT #2 MANUFACTURED PER P.O. REQUIREMENTS.

Signature: R.K. Upchurch

Title: Inspector

Date: 8-29-06

---

**Customer: PRINCETON PLASMA PHYSICS LAB**

Contact: Mike Viola  
E-Mail: [mviola@pppl.gov](mailto:mviola@pppl.gov)

Telephone: 609-243-3655  
Fax: 609-243-3248

**Part: SE120-004-52 / O-RING, METAL, HELICOFLEX TYPE**

Drawing ID: SE120-004                      Revision: 1

Customer P.O.: S005243-F/Ln:8  
Qty: 2 sets

Reported By: DOUG MCCORKLE  
E-Mail: dMcCorkle@MajorTool.com

Telephone: 317-636-6433  
Fax: 317-634-9420

Problem: BOTH LOT 8 AND 9 OUTER HELICOFLEX METAL SEALS ARE TOO SMALL TO ALLOW FOR PROPER FIT OF RETAINING STRIP. ACTUAL AMOUNT TOO SMALL IS UNKNOWN, VISUALLY APPEARS TO BE .120 TOO SMALL. IN OTHER WORDS THE OD OF SEAL RETAINER WOULD NEED .100 OFF ALL WAY AROUND TO MAKE WORK.

LOT 9 HAS MINOR DAMAGE TO SEALING FACE ON CUSTOMER SUPPLIED SEAL.

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**Proposed Disposition:**

CUSTOMER DISPOSITION REQUIRED

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Number of additional pages: \_\_\_\_\_

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**Customer Disposition:**     Use As Is     Rework     Repair     Scrap     Replace

**Technical Contact Approval:** \_\_\_\_\_

**Title:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Buyer Approval:** \_\_\_\_\_

**Title:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Major Tool Implemented By:** \_\_\_\_\_

**Title:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Nonconformance Report: Major Tool NC19254

This is for SE120-004-52 / O-RING, METAL, HELICOFLEX TYPE

Problem:

BOTH LOT 8 AND 9 OUTER HELICOFLEX METAL SEALS ARE TOO SMALL TO ALLOW FOR PROPER FIT OF RETAINING STRIP. ACTUAL AMOUNT TOO SMALL IS UNKNOWN, VISUALLY APPEARS TO BE .120 TOO SMALL. IN OTHER WORDS THE OD OF SEAL RETAINER WOULD NEED .100 OFF ALL WAY AROUND TO MAKE WORK.

LOT 9 HAS MINOR DAMAGE TO SEALING FACE ON CUSTOMER SUPPLIED SEAL.

Doug McCorkle

Project Disposition:

Rework first retainer set as desired - retainer strip radii may be cut off to allow for circumferential difference or tongue depressors may be used in place of seal retainer to hold seals in place during assembly.

Second and third set may be left per print.

Approvals:

Mike Viola

Digitally signed by Mike Viola  
DN: cn=Mike Viola, c=US  
Reason: I am approving this document  
Date: 2006.02.24 11:24:58 -05'00'

---

Procurement Technical Representative

Brad  
Nelson

Digitally signed by Brad Nelson  
DN: cn=Brad Nelson, c=US,  
o=ORNL, ou=FED,  
email=nelsonbe@ornl.gov  
Date: 2006.02.24 11:53:17  
-05'00'

---

Responsible Line Manager:

F.  
Malinowski

Digitally signed by F. Malinowski  
DN: CN = F. Malinowski, C = US,  
O = PPPL, OU = QA  
Reason: I have reviewed this document  
Date: 2006.02.24 11:56:09 -05'00'

---

Project Quality Assurance:



**MDC VACUUM PRODUCTS CORP**

23842 Cabot Blvd., Hayward CA 94545-1651

Phone: 510.265.3500 - Fax: 510.887.0626 - Toll Free: 800.443.8817

E-Mail: [sales@mdcvacuum.com](mailto:sales@mdcvacuum.com) - Web: <http://www.mdcvacuum.com>

*HIGH VACUUM COMPONENTS from one source...*

# **Certification of Conformance Catalog Products**

**COMPANY: MAJOR TOOL & MACHINE**

**ATTENTION: KATY DEBERNARDI**

**DATE: April 14, 2005**

**SUBJECT: CERTIFICATION OF PO# P05-01402**

This is to certify that the items shipped on the above referenced purchase order number comply with all standards in our MDC catalog.

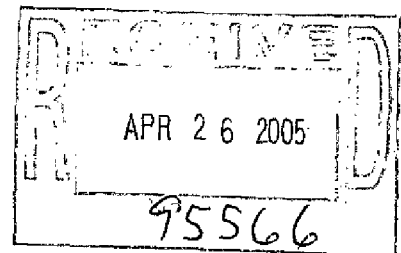
**MIKE SCHULTZ**

Shipping/Receiving Supervisor

MDC Vacuum Product Corporation

e-mail: [tcasaray@mdcvacuum.com](mailto:tcasaray@mdcvacuum.com)

Phone: (510) 265-3500 x 3522



1-12  
B.J.



4/26/05

*Dedicated to Quality and Service*



**MDC VACUUM PRODUCTS CORP**

23842 Cabot Blvd., Hayward CA 94545-1651

Phone: 510.265.3500 - Fax: 510.887.0626 - Toll Free: 800.443.8817

E-Mail: [sales@mdcvacuum.com](mailto:sales@mdcvacuum.com) - Web: <http://www.mdcvacuum.com>

*HIGH VACUUM COMPONENTS from one source...*

# **Certification of Conformance Catalog Products**

**COMPANY: MAJOR TOOL AND MACHINE, INC.**

**ATTENTION: KATY DEBERNARDI**

**DATE: 6/8/05**

**SUBJECT: CERTIFICATION OF PO# P05-01402  
MDC ORDER CONFIRMATION NUMBER: M390352**

This is to certify that the items shipped on the above referenced purchase order number comply with all standards in our MDC catalog.

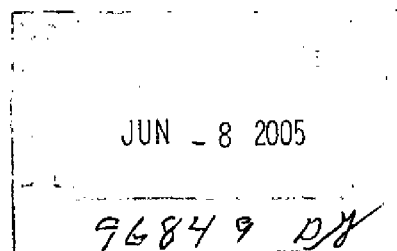
**MIKE SCHULTZ**

Shipping/Receiving Supervisor

MDC Vacuum Product Corporation JUN 15 2005

e-mail: [mschultz@mdcvacuum.com](mailto:mschultz@mdcvacuum.com)

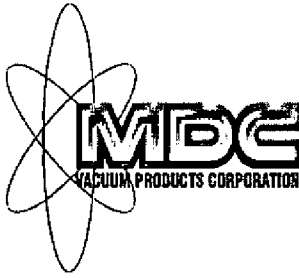
phone: 510 265 3500



*Lina 13-18*

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Form 10-13, Rev B



**MDC VACUUM PRODUCTS CORP**

23842 Cabot Blvd., Hayward CA 94545-1651

Phone: 510.265.3500 - Fax: 510.887.0626 - Toll Free: 800.443.8817

E-Mail: [sales@mdcvacuum.com](mailto:sales@mdcvacuum.com) - Web: <http://www.mdcvacuum.com>

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# ***Certification of Conformance Catalog Products***

**COMPANY: MAJOR TOOL & MACHINE**

**ATTENTION: KATY DEBERNARDI**

**DATE: April 4, 2005**

**SUBJECT: CERTIFICATION OF PO# P05-00919**

This is to certify that the items shipped on the above referenced purchase order number comply with all standards in our MDC catalog.

***MIKE SCHULTZ***

Shipping/Receiving Supervisor

MDC Vacuum Product Corporation

e-mail: [tcasaray@mdcvacuum.com](mailto:tcasaray@mdcvacuum.com)

Phone: (510) 265-3500 x 3522

4/6/05  
95013  
1-9  
B.A.

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4/6/05

---

**Customer: PRINCETON PLASMA PHYSICS LAB**

Contact: Frank Malinowski

E-Mail: [fmalinowski@pppl.gov](mailto:fmalinowski@pppl.gov)

Telephone: 609-243-2441

Fax: 609-243-2021

**Part: /SE122-112-3 (CF BLANK FLANGE)**

Drawing ID: SE122-113

Revision: 0

Customer P.O.: S005243-F

Serial No./Qty: N/A

Reported By: DOUG MCCORKLE

E-Mail: [dMcCorkle@MajorTool.com](mailto:dMcCorkle@MajorTool.com)

Telephone: 317-636-6433

Fax: 317-634-9420

Problem: Magnetic Permeability requirement 1.02 Max

Checks > 1.05, but < 1.1

---

**Proposed Disposition:**

CUSTOMER DISPOSITION REQUIRED

---

Number of additional pages: \_\_\_\_\_

---

**Customer Disposition:**     Use As Is     Rework     Repair     Scrap     Replace

**Technical Contact Approval:** \_\_\_\_\_

**Title:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Buyer Approval:** \_\_\_\_\_

**Title:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Major Tool Implemented By:** \_\_\_\_\_

**Title:** \_\_\_\_\_ **Date:** \_\_\_\_\_





**MDC VACUUM PRODUCTS CORP**

23842 Cabot Blvd., Hayward CA 94545-1651

Phone: 510.265.3500 - Fax: 510.887.0626 - Toll Free: 800.443.8817

E-Mail: [sales@mdcvacuum.com](mailto:sales@mdcvacuum.com) - Web: <http://www.mdcvacuum.com>

*HIGH VACUUM COMPONENTS from one source...*

# **Certification of Conformance Catalog Products**

**COMPANY: MAJOR TOOL & MACHINE**

**ATTENTION: KATY DEBERNARDI**

**DATE: April 4, 2005**

**SUBJECT: CERTIFICATION OF PO# P05-00919**

This is to certify that the items shipped on the above referenced purchase order number comply with all standards in our MDC catalog.

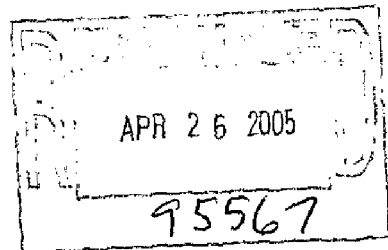
***MIKE SCHULTZ***

Shipping/Receiving Supervisor

MDC Vacuum Product Corporation

e-mail: [tcasaray@mdcvacuum.com](mailto:tcasaray@mdcvacuum.com)

Phone: (510) 265-3500 x 3522



83-87  
B.J.

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*u/2/1/5*



**MDC VACUUM PRODUCTS CORP**  
23842 Cabot Blvd., Hayward CA 94545-1651  
Phone: 510.265.3500 - Fax: 510.887.0626 - Toll Free: 800.443.8817  
E-Mail: [sales@mdcvacuum.com](mailto:sales@mdcvacuum.com) - Web: <http://www.mdcvacuum.com>  
*HIGH VACUUM COMPONENTS from one source...*

# ***Certification of Conformance Catalog Products***

**COMPANY: MAJOR TOOL & MACHINE**

**ATTENTION: KATY DEBERNARDI**

**DATE: April 4, 2005**

**SUBJECT: CERTIFICATION OF PO# P05-00919**

This is to certify that the items shipped on the above referenced purchase order number comply with all standards in our MDC catalog.

**MIKE SCHULTZ**  
Shipping/Receiving Supervisor  
MDC Vacuum Product Corporation  
e-mail: [tcasaray@mdevacuum.com](mailto:tcasaray@mdevacuum.com)  
Phone: (510) 265-3500 x 3522

4/4/05  
95042  
112-141  
B.2

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4/6/05



Trinos Vakuu-Systeme GmbH - Anna-Vandenhoeck-Ring 44 - 37081 Göttingen

Major Tool & Machine, Inc.  
 1458 E. 19th Street  
 Indianapolis, IN 46218  
 USA

**Certificate / Werksbescheinigung DIN EN ISO 10204 2.2:**

**Item:** 33 x 480 FBL 100-G-E, Weld Flange CF 6", thread  
**Bezeichnung:**

**We hereby confirm that the above described items are from:**  
**Hiermit bestätigen wir Ihnen, dass die Teile aus:**

**Order Number:** P.O. 5-04027 , AB-05-02356, RG 05-04280  
**Auftrags-Nr.:**

**Date:** ----- / 2. Aug. 2005 / 17. Aug 2005  
**Datum:**

**Material:** 316 LN ESR , CERN SPECS  
**Werkstoff:**

**Supplier ID:** K10386  
**Lieferanten Nr:**

**Batch ID :** 920 183  
**Chargen Nr:**

**Other Specs:** Magnetic permeability better than 1.01 µp  
**Andere Kennziffer:**

Göttingen, 19.Aug.2005

AUG 29 2005 MTM  
017

RECEIVED

AUG 24 2005

999553H

lines 1-33

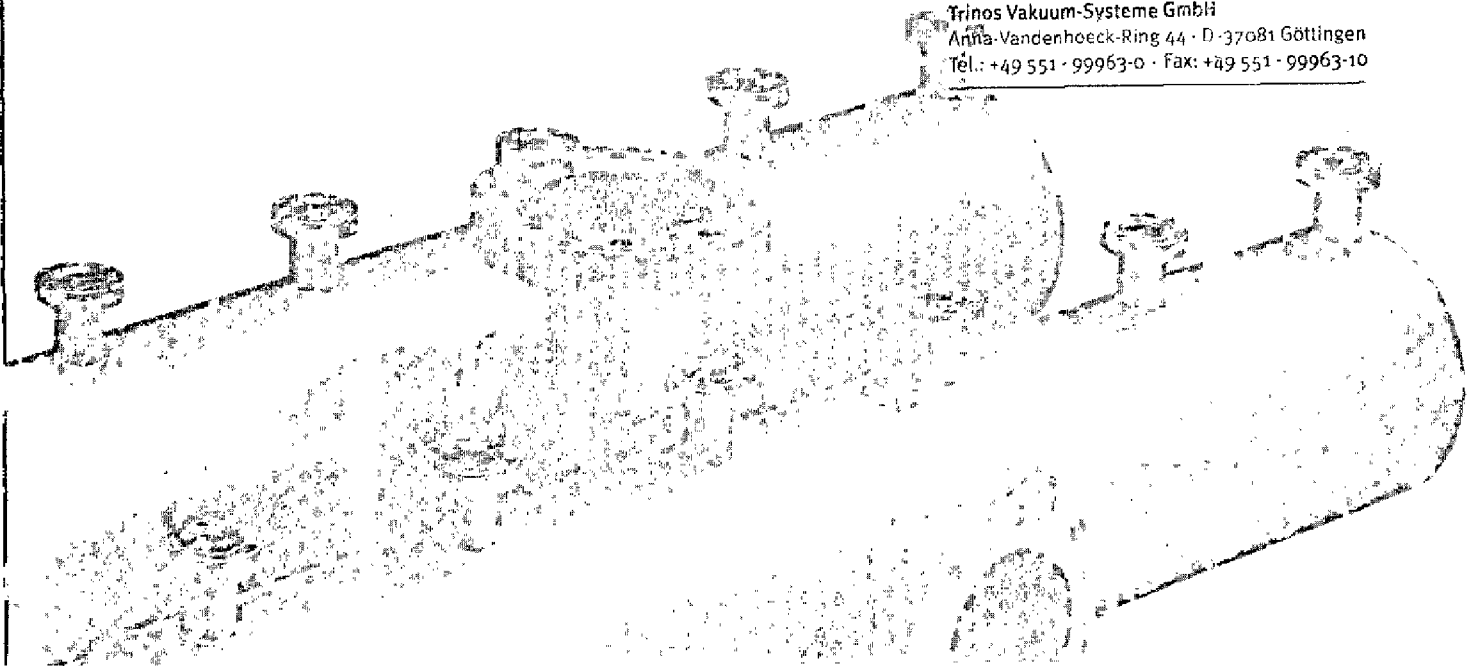
Geschäftsführende Gesellschafter: Betriebswirt Peter Spreitz Dipl.-Phys. Marcus Weinhausen	Bankverbindungen: Sparkasse Göttingen    BLZ: 260 500 01    Konto-Nr670 59 41 Kreis-Sparkasse Northeim    BLZ: 262 500 01    Konto-Nr.: 6 36 36 Dresdner Bank    BLZ 260 800 24    Konto-Nr.: 9 238 232 00	Ust.-IDNr.: DE 188 544 351 Amtsgericht Göttingen HRB 3008
--	---	--

Erzeugnisform Product		Stab, rund, geschmiedet, geschält Round bars, forged, peeled									
Werkstoff / Quality		1.4429 X2CrNiMoN17-13-3 ESU									
Anforderungen Requirements		Kundenbestellung / customer order 1.4429 X 2 CrNiMoN 17-13-3 ESU ,DIN 17440 09/96 1.4429 X2CrNiMoN17-13-3 "ESU" ,SL-LV 4429ESU 01/05									
Besichtigung und Maßnachprüfung Inspection and dimensional control Inspection et contrôle de dimension ohne Beanstandung without objection				Erschmelzung/Nachbehandlung Melting process/secondary refining Mode d'élaboration/traitement ultérieur ESU				Verwacklungsprüfung (spektralanalytisch) Identification test (spectral-analysis) examination of identification (analyse spectrale) ohne Beanstandung without objection			
Pos. Item	Anzahl Quantity	Abmessung Dimension						Gewicht kg Weight kg	Schmelz-Nr. Heat-No.		
1	2	155 mm rd. x 4880 - 5510 mm						1586	920183		
Schmelz- Heat %	C	Si	Mn	P	S	Cr	Mo	Ni	N2	Co	
920183	0,018	0,20	1,62	0,031	0,002	16,61	2,51	12,00	0,2180	0,046	
Der N2-Gehalt wurde toleriert. / The N2 content was tolerated.											
Wärmebehandlungszustand Condition of heat treatment		Lösungsgeglüht / solution annealed 1050°C 1h Wasser/water									
Probe-Nr. Test-No.	Lage Loc.	Temp. °C	Rp0,2 N/mm <sup>2</sup>	Rp1,0 N/mm <sup>2</sup>	Rm N/mm <sup>2</sup>	A5 %	Z %	Kerbschlagarbeit Impact value J	Probenform Shape of test piece Charpy-V	Härte HB Hardness	
Soll/Req.	L	RT	>=300	>=330	>=600	>=40		>=85	RT		
614J1	L	RT	371	427	689	49	82	296 298 298	RT	164-167	
Stückanalyse / Check analysis:											
C	Si	Mn	P	S	Cr	Mo	Ni	N2	Co	(N2 wurde toleriert/ N2 was tolerated)	
0,015	0,19	1,62	0,026	0,001	16,45	2,52	12,20	0,2150	0,036		
Korngröße nach / Grain size acc. ASTM E 112: 4											
Reinheitsgrad nach / Degree of purity acc. DIN 50602: K1 = 1,30											
Reinheitsgrad nach / Degree of purity acc. ASTM E 45, method D:											
Dünn/thin - Type A: 0,5 Type B: 0,6 Type C: 0,4 Type D: 1,0											
Dick/heavy - Type A: 0,5 Type B: 0,5 Type C: 0,4 Type D: 0,5											
Gefüge: / Microstructure: Austenit / austenitic											
Permeabilität / Permeability: max. 1,007 µr											
Die US-Prüfung nach SEP 1921 - 12/84, Prüfgruppe 3, Größenklasse D, Häufigkeitsklasse d wurde durchgeführt: ohne Beanstandung The UT examination acc. SEP 1921 - 12/84, examination class 3, dimension class D, frequency class d was done: without objection											
Anlagen Enc. Annexe US-Zeugnis / UT cert.						Lieu et date 21.07.2005			Abnahmebeauftragter Third Party Inspector Inspecteur de réception Langer		
Das Zeugnis wurde maschinell erstellt und ist auch ohne Unterschrift gültig.						This certificate was generated by data system it must not be signed for validity as well. Ce certificat a été établi sur système informatique et est valable sans signature aussi.					

I, the undersigned, exporter of the goods covered by this document declare that except where otherwise indicated, the goods meet the conditions to obtain originating status in preferential trade with: United States of America  
And that the country of origin of the goods is: THE EUROPEAN COMMUNITY

Göttingen, 17.08.2005, Anne Schürze  
Place, Date, full name signature, official stamp

Anne Schürze





Trinos Vakuum-Systeme GmbH · Anne-Vanderhoeck-Ring 44 · 37081 Göttingen

Major Tool & Machine, Inc.  
1458 E. 19th Street  
Indianapolis, IN 46218  
USA

**Certificate / Werksbescheinigung DIN EN ISO 10204 2.2:**

**Item:** 12 x 480 FBL 160-G-E, Weld Flange CF 8", thread  
**Bezeichnung:**

**We hereby confirm that the above described items are from:**  
**Hiermit bestätigen wir Ihnen, dass die Teile aus:**

**Order Number:** P.O. 5-04027 , AB-05-02356, RG 05-04280  
**Auftrags-Nr.:**

**Date:** ----- / 2. Aug. 2005 / 17. Aug 2005  
**Datum:**

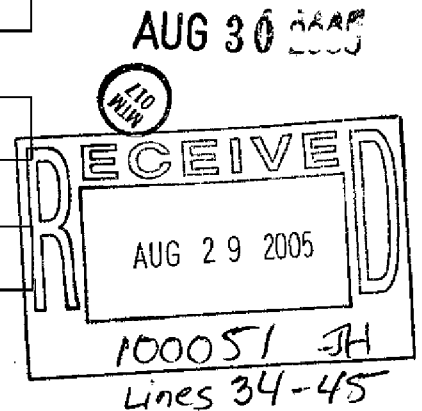
**Material:** 316 LN ESR , CERN SPECS  
**Werkstoff:**

**Supplier ID:** K10386  
**Lieferanten Nr.:**

**Batch ID :** 920 135  
**Chargen Nr.:**

**Other Specs:** Magnetic permeability better than 1.01 mμ  
**Andere Kennziffer:**

Göttingen, 19.Aug.2005



Geschäftsführende Gesellschafter:  
Betriebswirt Peter Spreitz  
Dipl.-Phys. Marcus Weinhausen

Bankverbindungen:

Sparkasse Göttingen  
Kreis-Sparkasse Northeim  
Dresdner Bank

BLZ: 260 500 01  
BLZ: 262 500 01  
BLZ 260 800 24

Konto-Nr670 59 41  
Konto-Nr.: 6 36 36  
Konto-Nr.: 9 238 232 00

Ust.-IDNr.:

DE 188 544 351  
Amtsgericht Göttingen  
HRB 3008

POS-04027

Erzeugnisform Product		Stab, rund, geschmiedet, geschält Round bars, forged, peeled									
Werkstoff / Quality		1.4429 X2CrNiMoN17-13-3 ESU									
Anforderungen Requirements		Kundenbestellung / customer order 1.4429 X 2 CrNiMoN 17-13- 3 ESU ,DIN 17440 09/98									
Besichtigung und Maßnachsichting Inspection and dimensional control Inspection et contrôle de dimension ohne Beanstandung without objection		Erschmelzung/Nachbehandlung Melting process/secondary refining Mode d'élaboration/traitement ultérieur ESU		Verwechslungsprüfung (spektroskopisch) Identification test (spectral-analyse) examen d'identification (analyse spectrale) ohne Beanstandung without objection							
Pos. Item	Anzahl Quantity	Abmessung Dimension		Gewicht kg Weight kg	Schmelz-Nr. Heat-No.						
3	4	210 mm rd. x 3200 - 3546 mm		3756	920135						
Schmelz- Heat %	C	Si	Mn	P	S	Cr	Mo	Ni	N2	Co	
920135	0,017	0,21	1,59	0,027	0,003	16,81	2,56	12,10	0,1510	0,051	
Wärmebehandlungszustand Condition of heat treatment Traitement thermique		Lösungsgelüht solution annealed 1050°C Wasser/water									
Probe-Nr. Test-No.	Lage Loc.	Temp. °C	Rp0,2 N/mm <sup>2</sup>	Rp1,0 N/mm <sup>2</sup>	Rm N/mm <sup>2</sup>	A5 %	Z %	Kerbschlagarbeit Impact value J	Prübanform Shape of test piece Charpy-V		Härte HB Hardness
Soll/Req.	Q	RT	>=295	>=330	>=580	>=30		>=55	RT		
430T1	Q	RT	355	446	664	45	75	296 296	294 RT		177-181
430T2	Q	RT	349	442	658	45	74	298 295	297 RT		
Korngröße nach ASTM E 112 : 4 Grain size acc. ASTM E 112: 4											
Reinheitssgrad nach DIN 50602 : K1 = 1,01 Degree of purity acc. DIN 50602: K1 = 1.01											
Permeabilität: 1,006 G/Oe Permeability : 1.006 G/Oe											
Die US-Prüfung nach SEP 1921 - 12/84, Prüfgruppe 3, Größenklasse D, Häufigkeiteklasse d wurde durchgeführt: ohne Beanstandung The UT-examination acc. SEP 1921 - 12/84, examination class 3, dimension class D, frequency class d was done: without objection											
Anlagen End Annex	[Redacted]				Ort und Datum Lieu et date 05 11 2004		Der Werkstoffverantwortliche Werkstoffprüfer L'expert de l'usine Langer				
Das Zeugnis wurde maschinell erstellt und ist auch ohne Unterschrift gültig.						This certificate was generated by data system it must not be signed for validity as well. Ce certificat a été établi sur système informatique et est valable sans signature aussi.					



AUG 30 2005

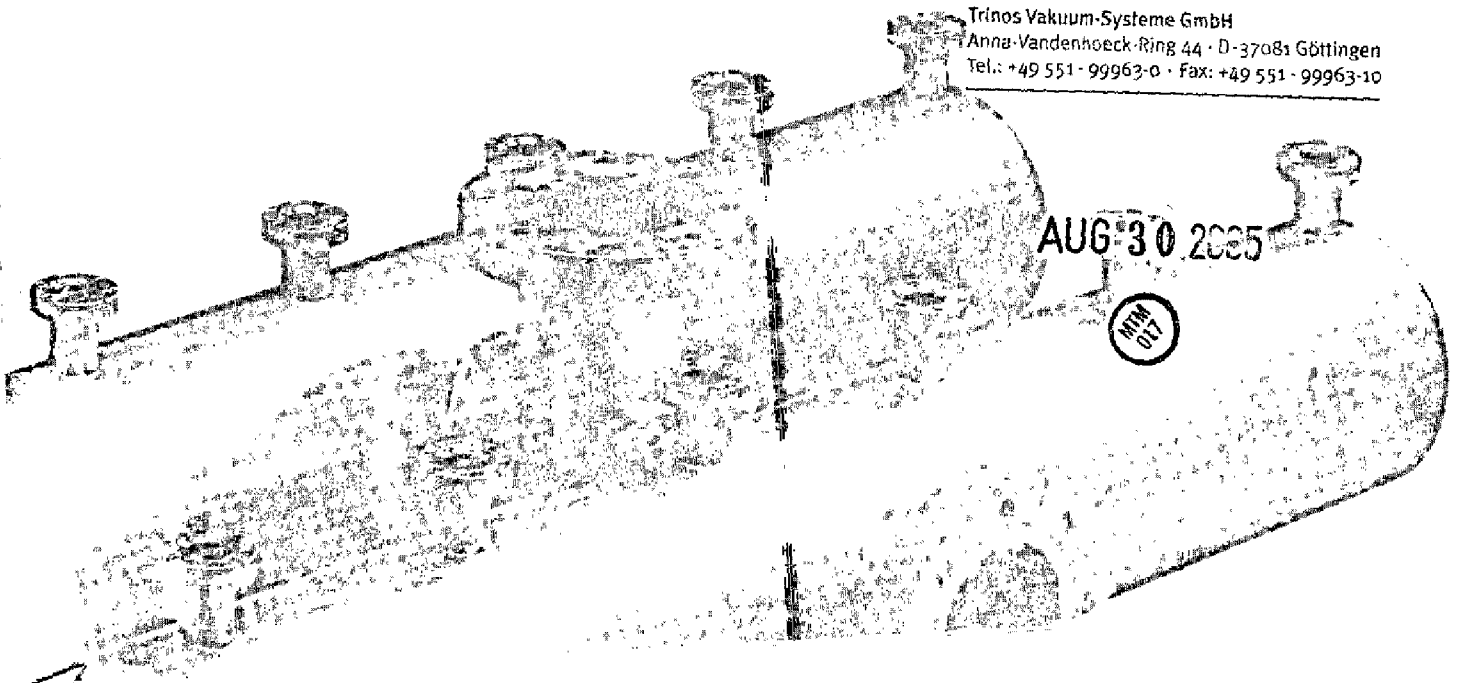


I, the undersigned, exporter of the goods covered by this document declare that except where otherwise indicated, the goods meet the conditions to obtain originating status in preferential trade with: United States of America  
And that the country of origin of the goods is: THE EUROPEAN COMMUNITY

Göttingen, 19.08.2005, Anne Schütze Anne Schütze  
(Place, date, full name signature, official stamp)



Trinos Vakuum-Systeme GmbH  
Anna-Vandenhoeck-Ring 44 · D-37081 Göttingen  
Tel.: +49 551-99963-0 · Fax: +49 551-99963-10







Trinos Vakuum-Systeme GmbH · Anna-Vandenhoeck-Ring 44 · 37081 Göttingen

Major Tool & Machine, Inc.  
 1458 E. 19th Street  
 Indianapolis, IN 46218  
 USA

**Certificate / Werksbescheinigung DIN EN ISO 10204 2.2:**

**Item:**  
**Bezeichnung:** 6 x 480 FBL 200-G-E, Weld Flange CF 10", thread

**We hereby confirm that the above described items are from:**  
**Hiermit bestätigen wir Ihnen, dass die Teile aus:**

**Order Number:**  
**Auftrags-Nr.:** P.O. 5-04027 , AB-05-02356, RG 05-04280

**Date:**  
**Datum:** ----- / 2. Aug. 2005 / 17. Aug 2005

**Material:**  
**Werkstoff:** 316 LN ESR , CERN SPECS

**Supplier ID:**  
**Lieferanten Nr:** K10386

**Batch ID :**  
**Chargen Nr:** 920 014

**Other Specs:**  
**Andere Kennziffer:** Magnetic permeability better than 1.01 mu

Göttingen, 19.Aug.2005

AUG 29 2005

**RECEIVED**  
 AUG 25 2005  
 99988 JH

Geschäftsführende Gesellschafter:	Bankverbindungen:			Ust.-IDNr. Lines 46-51
Betriebswirt Peter Spreitz	Sparkasse Göttingen	BLZ: 260 500 01	Konto-Nr670 59 41	DE 188 544 351
Dipl.-Phys. Marcus Weinhausen	Kreis-Sparkasse Northeim	BLZ: 262 500 01	Konto-Nr.: 6 36 36	Amtsgericht Göttingen
	Dresdner Bank	BLZ 260 800 24	Konto-Nr.: 9 238 232 00	HRB 3008




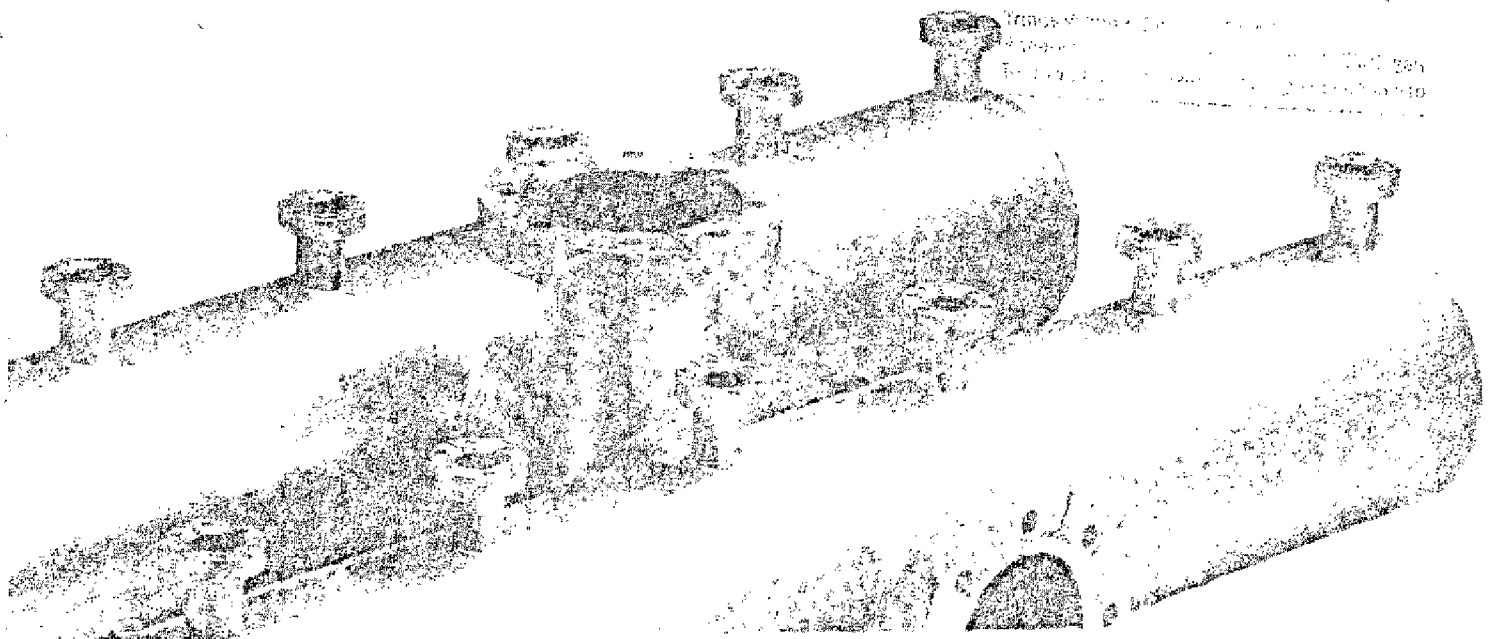
Erzeugnisform Produkt		Stab, rund, geschmiedet, gedreht Round bars, forged, turned										
Werkstoff / Quality		1.4429 X2CrNiMoN17-13-3 ESU										
Anforderungen Requirements		Kundenbestellung / customer order 1.4429 X2CrNiMoN17-13-3 ESU, DIN 17440 - 09/96										
Besichtigung und Maßprüfung Inspection and dimensional control Inspection et contrôle de dimension ohne Beanstandung without objection				Erschmelzung/Nachbehandlung Melting process/secondary refining Mode d'élaboration/traitement ultérieur ESU				Verwechslungsprüfung (spektroanalytisch) Identification test (spectral analysis) examenation d'identification (analyse spectrale) ohne Beanstandung without objection				
Pos. Item	Anzahl Quantity	Abmessung Dimension								Gewicht kg Weight kg	Schmelz-Nr. Heat-No.	
2	1	310 mm rd. x 4215 mm								2550	920014	
Schmelze Heat %	C	Si	Mn	P	S	Cr	Mo	Ni	N2	Co		
920014	0,020	0,30	1,89	0,023	0,002	16,80	2,53	11,75	0,1400	0,061		
Ni-Gehalt wurde akzeptiert. / Ni content was accepted.												
Wärmebehandlungszustand Condition of heat treatment Traitement thermique		Lösungsgeglüht solution annealed 1050°C Wasser/water										
Probe-Nr. Test-No. Soll/Req.	Lage Loc.	Temp. °C	Rp0,2 N/mm²	Rp1,0 N/mm²	Rm N/mm²	A5 %	Z %	Kerbschlagarbeit Impact value J	Probentform Shape of test piece Charpy-V		Härte HB Hardness	
	Q	+20	>=295	>=330	>=580	>=30		>=55			+20°C	
983C1	Q	+20	340	370	610	40	75	294 294	298	+20°C	175-180	
<p>Korngröße nach ASTM E 112 : 3 Grain size acc. ASTM E 112: 3</p> <p>Reinheitsgrad nach DIN 50602 : K1 = 1,13 Degree of purity acc. DIN 50602: K1 = 1.13</p> <p>Permeabilität: 1,007 G/Oe Permeability : 1.007 G/Oe</p> <p>Die US-Prüfung nach SEP 1921 - 12/84, Prüfgruppe 3, Größenklasse D, Häufigkeitsklasse d wurde durchgeführt: ohne Beanstandung The UT-examination acc. SEP 1921 - 12/84, examination class 3, dimension class D, frequency class d was done: without objection</p>												
Anlagen Encl. Annexe				Lieu of date 20.04.2004				Der Werkstoffverständige Works-inspector L'expert de fusine Langer				
Das Zeugnis wurde maschinell erstellt und ist auch ohne Unterschrift gültig.						This certificate was generated by data system it must not be signed for validity as well. Ce certificat a été établi sur système informatique et est valable sans signature aussi.						

I, the undersigned, exporter of the goods covered by this document declare that except where otherwise indicated, the goods meet the conditions to obtain originating status in preferential trade with: United States of America  
And that the country of origin of the goods is: THE EUROPEAN COMMUNITY

Gölküngen, 17.08.2005, Anne Schütze  
(Place, Date, full name signature, official stamp)

Anne Schütze

TRINOS   
VAKUUM





Trinos Vakuum-Systeme GmbH · Anna-Vandenhoeck-Ring 44 · 37081 Göttingen

Major Tool & Machine, Inc.  
1458 E. 19th Street  
Indianapolis, IN 46218  
USA

**Certificate / Werksbescheinigung DIN EN ISO 10204 2.2:**

**Item:** 15 x 480 FBL 250-G-E, Weld Flange CF 12",thread  
**Bezeichnung:**

**We hereby confirm that the above described items are from:**  
**Hiermit bestätigen wir Ihnen, dass die Teile aus:**

**Order Number:** P.O. 5-04027 , AB-05-02356, RG 05-04280  
**Auftrags-Nr.:**

**Date:** ----- / 2. Aug. 2005 / 17. Aug 2005  
**Datum:**

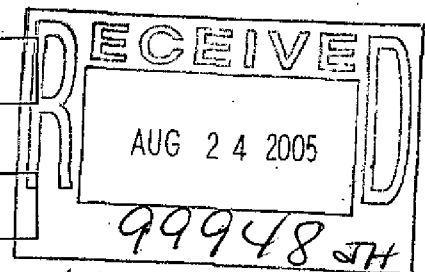
**Material:** 316 LN ESR , CERN SPECS  
**Werkstoff:**

**Supplier ID:** K10386  
**Lieferanten Nr.:**

**Batch ID :** 920 014  
**Chargen Nr.:**

**Other Specs:** Magnetic permeability better than 1.01 mμ  
**Andere Kennziffer:**

AUG 29 2005



Lines 52-66

Göttingen, 19.Aug.2005

Geschäftsführende Gesellschafter:	Bankverbindungen:		Ust.-IDNr.:
Betriebswirt Peter Spreitz	Sparkasse Göttingen	BLZ: 260 500 01	DE 188 544 351
Dipl.-Phys. Marcus Weinhausen	Kreis-Sparkasse Northeim	BLZ: 262 500 01	Amtsgericht Göttingen
	Dresdner Bank	BLZ 260 800 24	HRB 3008
		Konto-Nr: 670 59 41	
		Konto-Nr.: 6 36 36	
		Konto-Nr.: 9 238 232 00	



Erzeugnisform Product		Stab, rund, geschmiedet, gedreht Round bars, forged, turned									
Werkstoff / Quality		1.4429 X2CrNiMoN17-13-3 ESU									
Anforderungen Requirements		Kundenbestellung / customer order 1.4429 X2CrNiMoN17-13-3 ESU, DIN 17440 - 09/96									
Besichtigung und Maßprüfung Inspection and dimensional control Inspection et contrôle de dimension ohne Beanstandung without objection				Erschmelzung/Nachbehandlung Melting process/secondary refining Mode d'élaboration/traitement ultérieur RSU				Verwechslungsprüfung (Spektroskopisch) Identification test (spectral-analysis) examination d'identification (analyse spectrale) ohne Beanstandung without objection			
Pos. Item	Anzahl Quantity	Abmessung dimension							Gewicht kg Weight kg	Schmelz-Nr. Heat-No.	
2	1	310 mm rd. x 4215 mm							2550	920014	
Schmelze Heat %	C	Si	Mn	P	S	Cr	Mo	Ni	N2	Co	
920014	0,020	0,30	1,89	0,023	0,002	16,80	2,53	11,75	0,1400	0,061	
Ni-Gehalt wurde akzeptiert. / Ni content was accepted.											
Wärmebehandlungszustand Condition of heat treatment Traitement thermique		Lösungsgeglüht solution annealed 1050°C Wasser/water									
Probe-Nr. Test-No.	Lage Loc.	Temp. °C	Rp0,2 N/mm <sup>2</sup>	Rp1,0 N/mm <sup>2</sup>	Rm N/mm <sup>2</sup>	A5 %	Z %	Kerbschlagarbeit Impact value J	Probenform Shape of test piece Charpy-V	Härte HB Hardness	
Soll/Req.	Q	+20	>=295	>=330	>=580	>=30		>=55		+20°C	
383C1	Q	+20	340	370	610	40	75	294 294 298		+20°C 175-180	
Korngröße nach ASTM E 112 : 3 Grain size acc. ASTM E 112: 3											
Reinheitsgrad nach DIN 50602 : K1 = 1,13 Degree of purity acc. DIN 50602: K1 = 1.13											
Permeabilität: 1,007 G/Oe Permeability : 1.007 G/Oe											
Die US-Prüfung nach SEP 1921 - 12/84, Prüfgruppe 3, Größenklasse D, Häufigkeitsklasse d wurde durchgeführt: ohne Beanstandung The UT-examination acc. SEP 1921 - 12/84, examination class 3, dimension class D, frequency class d was done: without objection											
Anlagen Encl. Annexe		Lieu et date 20.04.2004					Der Werksechverständige Works-inspector L'expert de l'usine Langer				
Das Zeugnis wurde maschinell erstellt und ist auch ohne Unterschrift gültig.						This certificate was generated by data system it must not be signed for validity as well. Ce certificat a été établi sur système informatique et est valable sans signature aussi.					



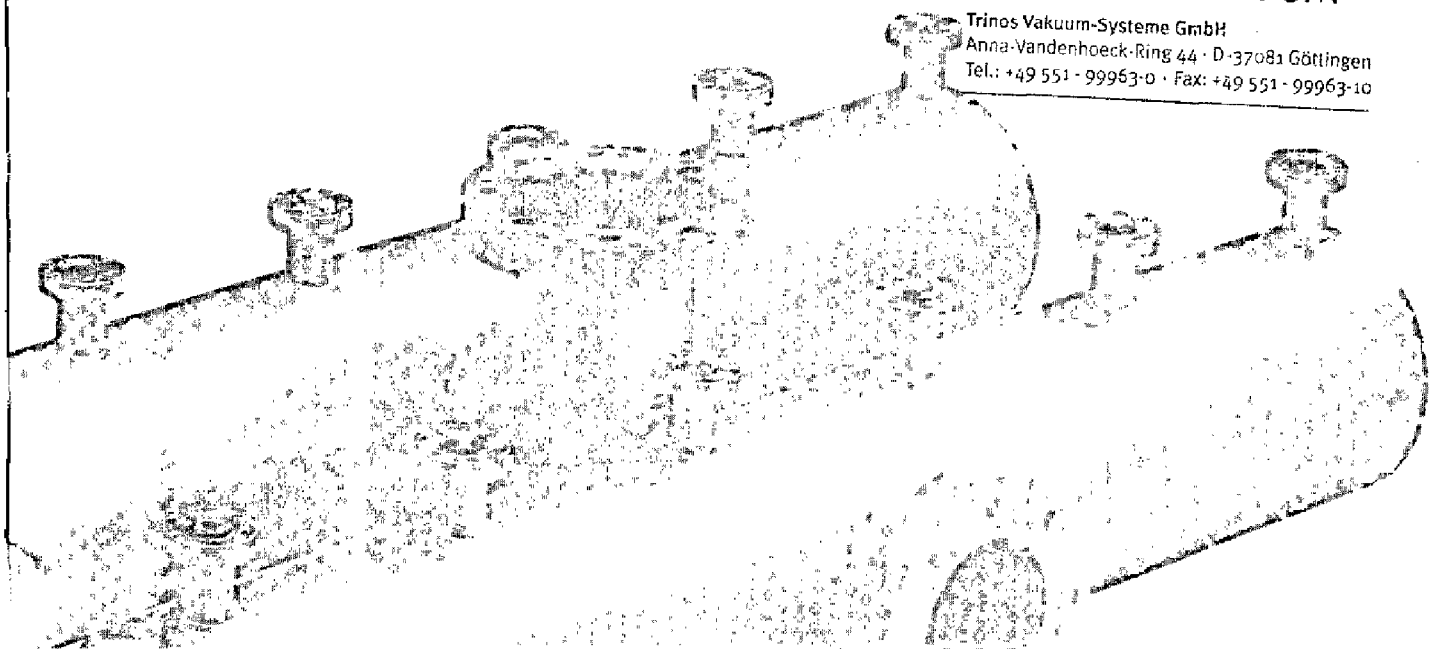
I, the undersigned, exporter of the goods covered by this document declare that except where otherwise indicated, the goods meet the conditions to obtain originating status in preferential trade with: United States of America  
And that the country of origin of the goods is: THE EUROPEAN COMMUNITY

Göttingen, 17.08.2005, Anne Schürze  
(Place, Date, full name signature, official stamp)

Anne Schürze



Trinos Vakuum-Systeme GmbH  
Anna-Vandenhoeck-Ring 44 · D-37081 Göttingen  
Tel.: +49 551-99963-0 · Fax: +49 551-99963-10





Trinos Vakuum-Systeme GmbH - Anna-Vanderhoeck-Ring 44 - 37081 Göttingen

Major Tool & Machine, Inc.  
1458 E. 19th Street  
Indianapolis, IN 46218  
USA

### Certificate / Werksbescheinigung DIN EN ISO 10204 2.2:

**Item:**  
**Bezeichnung:** 6 x 480 FBL 080, Blank Flange CF 4 5/8"

**We hereby confirm that the above described items are from:**  
**Hiermit bestätigen wir Ihnen, dass die Teile aus:**

**Order Number:**  
**Auftrags-Nr.:** P.O. 5-04027 , AB-05-02356, RG 05-04280

**Date:**  
**Datum:** ----- / 2. Aug. 2005 / 17. Aug 2005

**Material:**  
**Werkstoff:** 316 LN ESR , CERN SPECS

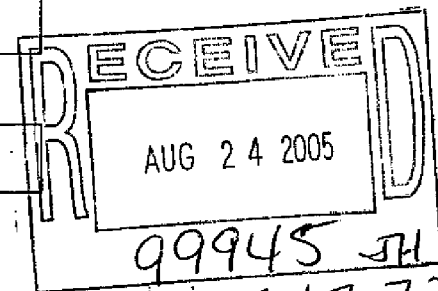
**Supplier ID:**  
**Lieferanten Nr.:** K10386

**Batch ID :**  
**Chargen Nr.:** 920 135

**Other Specs:**  
**Andere Kennziffer:** Magnetic permeability better than 1.01 mμ

Göttingen, 19.Aug.2005

AUG 29 2005



Geschäftsführende Gesellschafter:  
Betriebswirt Peter Spreitz  
Dipl.-Phys. Marcus Weinhausen

Bankverbindungen:

Sparkasse Göttingen

Kreis-Sparkasse Northeim

Dresdner Bank

BLZ: 260 500 01

BLZ: 262 500 01

BLZ 260 800 24

Konto-Nr670 59 41

Konto-Nr.: 6 36 36

Konto-Nr.: 9 238 232 00

Ust.-IDNr.:

DE 188 544 351

Amtsgericht Göttingen

HRB 3008



I, the undersigned, exporter of the goods covered by this document declare that except where otherwise indicated, the goods meet the conditions to obtain originating status in preferential trade with: United States of America

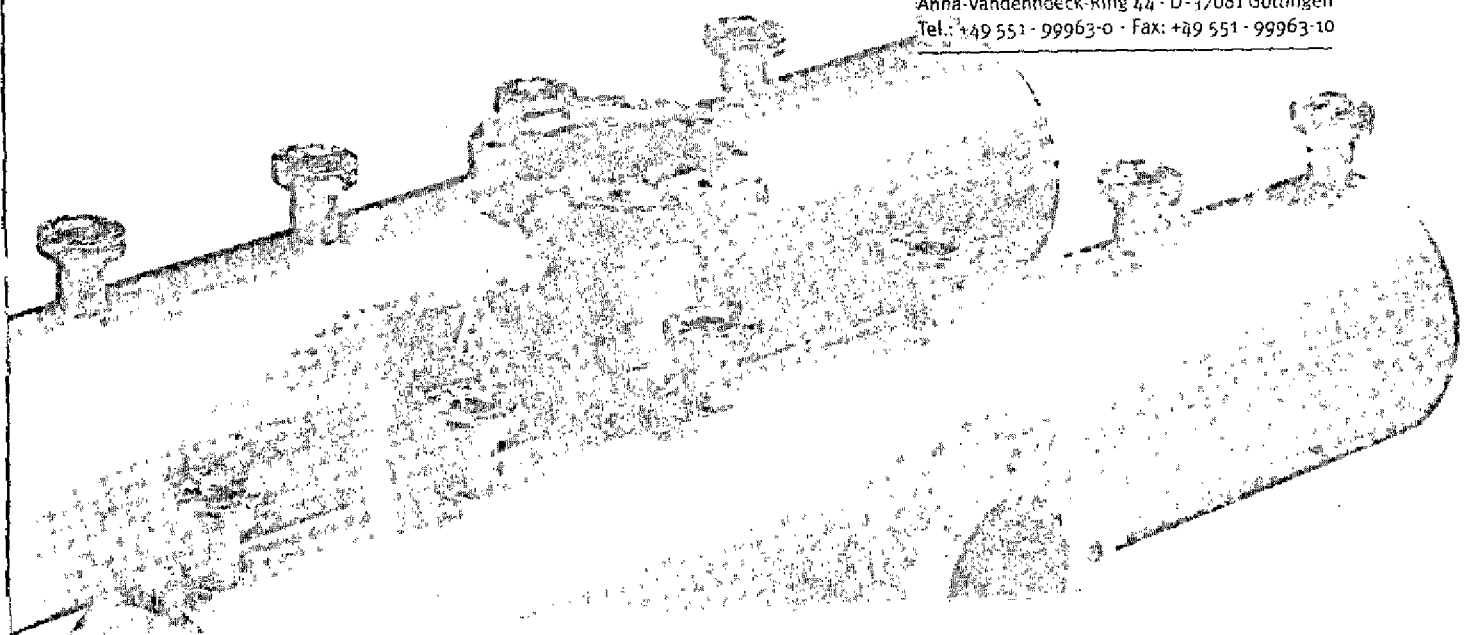
And that the country of origin of the goods is: THE EUROPEAN COMMUNITY

Göttingen, 17.08.2005, Anne Schulze  
(Place, Date, full name signature, official stamp)

Anne Schulze



Trinos Vakuum-Systeme GmbH  
Anna-Vandenhoeck-Ring 44 · D-37081 Göttingen  
Tel.: +49 551-99963-0 · Fax: +49 551-99963-10







Erzeugnisform Product		Stab, rund, geschmiedet, geschält Round bars, forged, peeled									
Werkstoff / Quality		1.4429 X2CrNiMoN17-13-3 ESU									
Anforderungen Requirements		Kundenbestellung / customer order 1.4429 X 2 CrNiMoN 17-13- 3 ESU ,DIN 17440 09/96									
Beschichtung und Maßnachprüfung Inspection and dimensional control Inspection et contrôle de dimension ohne Beanstandung without objection				Erschmelzung/Nachbelschmelzung Melting process/secondary refining Mode d'élaboration/traitement ultérieur ESU				Verwechslungsprüfung (spektralanalytisch) Identification test (spectral-analysis) examination of identification (analyse spectrale) ohne Beanstandung without objection			
Fos. Item	Anzahl Quantity	Abmessung Dimension						Gewicht kg Weight kg	Schmelz-Nr. Heat-No. II		
3	4	210 mm rd. x 3200 - 3546 mm						3756	920135		
Schmelz-Heat %	C	Si	Mn	P	S	Cr	Mo	Ni	N2	Co	
920135	0,017	0,21	1,59	0,027	0,003	16,81	2,56	12,10	0,1510	0,051	
Wärmebehandlungszustand Condition of heat treatment		Lösungsgeglüht solution annealed									
Traitement thermique		1050°C Wasser/water									
Probe-Nr. Test-No.	Lage Loc.	Temp. °C	Rp0,2 N/mm²	Rp1,0 N/mm²	Rm N/mm²	A5 %	Z %	Kerbschlagarbeit impact value J	Probenform Shape of test piece Charpy-V		Härte HB Hardness
Soll/Req.	Q	RT	>=295	>=330	>=580	>=30		>=55	RT		
430T1	Q	RT	355	446	664	45	75	296	296	294	177-181
430T2	Q	RT	349	442	658	45	74	296	295	297	
<p>Korngröße nach ASTM E 112 : 4 Grain size acc. ASTM E 112: 4</p> <p>Reinheitsgrad nach DIN 50602 : K1 = 1,01 Degree of purity acc. DIN 50602: K1 = 1.01</p> <p>Permeabilität: 1,006 G/Oe Permeability : 1.006 G/Oe</p> <p>Die US-Prüfung nach SEP 1921 - 12/84, Prüfgruppe 3, Größenklasse D, Häufigkeitsklasse d wurde durchgeführt: ohne Beanstandung The UT-examination acc. SEP 1921 - 12/84, examination class 3, dimension class D, frequency class d was done: without objection</p>											
Anlagen End. Annexe		[Redacted]						Der Werkssachverständige Works-Inspector L'expert de fusine Langer			
Das Zeugnis wurde maschinell erstellt und ist auch ohne Unterschrift gültig.						This certificate was generated by data system II, must not be signed for validity as well. Ce certificat a été créé sur système informatique et est valable sans signature aussi.					

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**HAYNES**  
**International**

Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

Product Description • Description Produit • Material Beschreibung

0.375 x 7 x 70  
DOME SKIRT MATERIAL  
HAYNES(R) 625 ALLOY PLATE  
Nadcap CERTIFICATE NUMBER 0089  
S400E, S1000 1/3/2005, EN 10204 3.1, AS9100

**CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS**

Sales Order No Bestellungs Nr 449646001-0	Date Entered Date De Commande 09/13/05	Customer Reference Reference Client Kundenbestellnummer P05-05307	Report No. Rapport No. Zeugnis Nr 20050915019	Pages of Pages Pages de Pages Anzahl der Seiten 1 Of 4
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Sold To • Client • Bestellanschrift <b>MAJOR TOOL AND MACHINE INC</b> 1458 E 19TH ST INDIANAPOLIS IN 46218 USA	Ship To • Destinataire • Bestellmenge <b>MAJOR TOOL AND MACHINE INC</b> 1458 E 19TH ST INDIANAPOLIS IN 46218 USA	Quantity Ordered Quantité Commandée Bestellmenge 4 PC	Quantity Shipped Quantité Expédiée Liefermenge 4 PC
--	--	--	--

Specification • Spécification • Spezifikation

ASTM-B-443, 00e1, UNSH N06625, Gr. 1; PS-489, E

**Chemical Analysis • Analyse Chimique • Chemische Analyse**

Heat Number Numero de Charge Charge Nr	Al	B	C	Co	Cr	Cu	Fe	Mn	Mo	Ni	P	S	Si	Ti	V	W	BUTT END #02	
2650 4 6771	0.213		0.021	0.2638	21.67	0.0581	4.8419	0.2641	8.53	59.82	0.0072	0.003	0.137	0.3317				
2650 4 6771	3.3944	Ta -0.05	Zr	Se	La	CONCAS	Pb	Mg	Y	Ag	N	Ca	Al-Ti	Ni-Co	Ni-Mo			BUTT END #02

Certified By • Certifié Par • Bescheinigt Durch: Amanda Aguirre  
Certification Technician

*Amanda Aguirre*

SEP 20 2005  
RECEIVED  
SEP 19 2005  
100740 JA  
Lines 1-4



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Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

**HAYNES**  
**International**

Product Description • Description Produit • Material Beschreibung

**0.375 x 7 x 70  
DOME SKIRT MATERIAL  
HAYNES(R) 625 ALLOY PLATE -  
Nadcap CERTIFICATE NUMBER 0089  
S400E, S1000 I/3/2005, EN 10204 3.1, AS9100**

**CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS**

Sales Order No Bestellungs Nr. 449646001-0	Date Entered Date De Commande 09/13/05	Customer Reference Reference Client Kundenbestelldaten P05-05307	Report No. Rapport No. Zeugnis Nr. 20050915019	Pages of Pages Page de Pages Anzahl der Seiten 2 Of 4
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Sold To • Client's Bestellanschrift <b>MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA</b>	Ship To • Destinataire • Bestellmenge <b>MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA</b>
---	---

Quantity Ordered Quantite Commandee Bestelmenge 4 PC	Quantity Shipped Quantite Expeditee Liefermenge 4 PC
---	---

Specification • Specification • Spezifikation

ASTM-B-443, 00e1, UNS# N06625, Gr. 1, PS-489, E

**Tensile Test at Room Temperature • Essai De Traction A Temp. Ambiante • Zugversuch Bei Raum Temp.**

Ultimate Zugfestigkeit	1% Yield Lim. Elast. A 1% 1% Streckgrenze	0.2% Yield Lim. Elast. A 0.2% 0.2% Streckgrenze	%Elong In % Allong EN % Dehnung	%RA
125000 PSI	60500 PSI	54 %	(1)(A)	

**Tensile Test at Elevated Temperature • Essai De Traction A Hte.Temp.**

Test Essai Versuch	Temp.	Ultimate Zugfestigkeit	1% Yield Lim. Elast. A 1% 1% Streckgrenze	0.2% Yield Lim. Elast. A 0.2% 0.2% Streckgrenze	%Elong In % Allong EN % Dehnung	%RA

**Stress Rupture Temperature • Essai A Charge De Rupture Zeitstandversuch**

Test Essai Versuch	Temp.	Stress Contrainte Spannung	Hours Heures Stunden	%Elong In % Allong EN % Dehnung	%RA

Certified By • Certifie Par • Bescheinigt Durch: Amanda Aguirre  
Certification Technician

9/15/2005 (1) 2742656901

*Amanda Aguirre*

THE DATA CONTAINED HEREIN WAS OBTAINED FROM SAMPLES THAT ARE REPRESENTATIVE OF THE PRODUCTS IN THE SUBJECT SHIPMENT. THIS MATERIAL MEETS THE REQUIREMENTS OF THE LISTED SPECIFICATIONS, MODIFIED BY ANY EXEMPTIONS OR PURCHASE ORDER EQUIVOCATIONS. THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A VIOLATION UNDER FEDERAL STATUTES INCLUDING FEDERAL LAW, TITLE 18, CHAPTER 47. THIS DOCUMENT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN CONSENT OF HAYNES INTERNATIONAL, INC. SPECIFICATION MARKING REQUIREMENTS MAY BE WAIVED ON ORDERS REQUIRING MULTIPLE MATERIAL SPECIFICATIONS.

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**HAYNES**  
**International**

Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

Product Description • Description Produit • Material Beschreibung  
**0.375 x 7 x 70**  
**HOME SKIRT MATERIAL**  
**HAYNES(R) 625 ALLOY PLATE**  
**Nadcap CERTIFICATE NUMBER 0089**  
**S400E, S1000 1/3/2005, EN 10204 3.1, AS9100**

**CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS**

Sales Order No Bestellungs Nr. 449646001-0	Date Entered Date De Commande 09/13/05	Customer Reference Reference Client Kundenbestellidaten P05-05307	Report No. Rapport No. Zeugnis Nr. 20050915019	Pages of Pages Page de Pages Anzahl der Seiten 3 Of 4
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Sold To • Client • Bestellanschrift <b>MAJOR TOOL AND MACHINE INC</b> <b>1458 E 19TH ST</b> <b>INDIANAPOLIS</b> <b>IN 46218 USA</b>	Ship To • Destinataire • Bestelldatung <b>MAJOR TOOL AND MACHINE INC</b> <b>1458 E 19TH ST</b> <b>INDIANAPOLIS</b> <b>IN 46218 USA</b>	Quantity Ordered Quantité Commandée Bestellemenge 4 PC	Quantity Shipped Quantité Expédiée Liefermenge 4 PC
---	--	---	--

Specification • Specification • Spezifikation  
ASTM-B-443, 00e1, UNS# N06625, Gr. 1; PS-489, E

Annealed Hardness Dureté Vieilli Gealtert Härte	Grain Size Grosser De Grain Korngrösse	IGA	Uniformity	Corrosion Rate		Oxidation Rate		Charpy Impact Test			Creep Rupture			
				Attack Depth	Test Method	Test Method	Test Method	Toughness Avg	Toughness 1	Toughness 2	Toughness 3	Test Essai Versuch	Stress Contrainte Spannung	Hours Heures Stunden
96 HRB	5.5			MPY				Fl. Lbs.	Fl. Lbs.	Fl. Lbs.	Fl. Lbs.	PSI		

Certified By • Certifié Par • Bescheinigt Durch: Amanda Aguirre  
Certification Technician  
9/15/2005 (1) 2742656901

*Amanda Aguirre*

THE DATA CONTAINED HEREIN WAS OBTAINED FROM SAMPLES THAT ARE REPRESENTATIVE OF THE PRODUCTS IN THE SUBJECT SHIPMENT. THIS MATERIAL MEETS THE REQUIREMENTS OF THE LISTED SPECIFICATIONS, MODIFIED BY ANY EXCEPTIONS OR PURCHASE ORDER REQUIREMENTS. THE RECORDING OF FAILS, REWORKS OR PRODUCTIONS THAT EXCEEDS OR DIFFERS FROM THIS DOCUMENT MAY BE PERMITTED. THIS DOCUMENT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN CONSENT OF HAYNES INTERNATIONAL, INC. SPECIFICATION MARKING REQUIREMENTS MAY BE WAITED ON ORDERS REQUIRING MULTIPLE MATERIAL SPECIFICATIONS.

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**HAYNES**  
**International**

Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

Product Description • Description Produit • Material Beschreibung

0.375 x 7 x 70

HOME SKIRT MATERIAL

HAYNES(R) 625 ALLOY PLATE -  
Nadcap CERTIFICATE NUMBER 0089

S400E, S1000 1/3/2005, EN 10204 3.1, AS9100

CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS

Sales Order No Reference Commande Bestellungs Nr 449646001-0	Date Entered Date De Commande Bestelldatum 09/13/05	Customer Reference Reference Client Kundenbezeichnung P05-05307	Report No Rapport No Zeugnis Nr 20050915019	Pages of Pages Page de Pages Anzahl der Seiten 4 Of 4
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Sold To • Client • Bestellauftragschrift <b>MAJOR TOOL AND MACHINE INC</b> 1458 E 19TH ST INDIANAPOLIS IN 46218 USA	Ship To • Destinataire • Bestellmenge <b>MAJOR TOOL AND MACHINE INC</b> 1458 E 19TH ST INDIANAPOLIS IN 46218 USA
---	--

Specification • Specification • Spezifikation ASTM-B-443, 00e1, UNS# N06625, Gr. 1, PS-489, E	Quantity Ordered Quantité Commandée Bestellmenge 4 PC	Quantity Shipped Quantité Expédiée Liefermenge 4 PC
--	--	--

All tests and inspections have been performed and results meet specification requirements.  
 THIS MATERIAL IS FREE FROM MERCURY, CADMIUM, RADIUM, AND ALPHA SOURCE CONTAMINATION.  
 THIS MATERIAL WAS MELTED AND MANUFACTURED IN THE UNITED STATES.  
 Material conforms to PS-483 Revision H as applicable.  
 Mill Orders Used: 2742656901 (4 PC)  
 (A) 1750 °F to 1950 °F

Certified By • Certifié Par • Bescheinigt Durch: **Amanda Aguirre**  
 Certification Technician  
*Amanda Aguirre*  
 9/15/2005

THE DATA CONTAINED HEREIN WAS OBTAINED FROM SAMPLES THAT ARE REPRESENTATIVE OF THE PRODUCTS IN THE SUBJECT SHIPMENT. THIS MATERIAL MEETS THE REQUIREMENTS OF THE LISTED SPECIFICATIONS, MODIFIED BY ANY EXCEPTIONS OR PURCHASE ORDER REQUIREMENTS.  
 THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FEDERAL STATUTES INCLUDING FEDERAL LAW, TITLE 18, CHAPTER 49. THIS DOCUMENT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN CONSENT OF HAYNES INTERNATIONAL, INC.  
 SPECIFICATION MARKING REQUIREMENTS MAY BE WAIVED ON ORDERS REQUIRING MULTIPLE MATERIAL SPECIFICATIONS.

Quality Assurance Documentation for Part ID: DOME SKIRT - Item: 79

Workorder: 65678/8-0 Sub:288 Op:30

**Part: DOME SKIRT - - DOME SKIRT**

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*				MFG		VISUAL	ROOT PASS OK	763-R.M	933-D.L	
(10)		VWI ROOT PASS WELD DSB		CWI				11-02-05	11-03-05	A
*				MFG		VISUAL	OK	307-D.J	933-D.L	
(40)		VWI EXTERIOR COVER PASS WELD DS		CWI				11-03-05	11-03-05	A
*				MFG		VISUAL	OK	307-D.J	933-D.L	
(50)		VWI INTERIOR COVER PASS WELD DSB		CWI				11-03-05	11-03-05	A

Quality Assurance Documentation for Part ID: DOME SKIRT - Item: 81

Workorder: 65678/8-0 Sub:289 Op:30

Part: DOME SKIRT - - DOME SKIRT

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*				MFG		VISUAL	ACCEPT	358-D.M	933-D.L	
(10)		VWI ROOT PASS WELD DSA		CWI				10-27-05	10-27-05	A
*				MFG		VISUAL	OK	093-M.S	933-D.L	
(40)		VWI EXTERIOR COVER PASS WELD DS		CWI				10-28-05	10-28-05	A
*				MFG		VISUAL	OK	093-M.S	933-D.L	
(50)		VWI INTERIOR COVER PASS WELD DS		CWI				10-28-05	10-28-05	A

Quality Assurance Documentation for Part ID: PORT DOME - Item: 82

Workorder: 65678/8-0 Sub:4 Op:22

Part: PORT DOME - -

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*				MFG		VISUAL	OK	093-M.S	933-D.L	
(10)		VWI ROOT PASS WELD DA		CWI				11-02-05	11-02-05	A
*				MFG		VISUAL	OK PER SPEC.	093-M.S	933-D.L	
(40)		VWI EXTERIOR COVER PASS WELD DA		CWI				11-07-05	11-08-05	A
*				MFG		VISUAL	OK PER SPEC.	093-M.S	933-D.L	
(50)		VWI INTERIOR COVER PASS WELD DA		CWI				11-07-05	11-08-05	A



4959

10520 Chester Road  
Woodlawn, Ohio 45215



CLIENT Major Tool + Machine		RADIOGRAPHER Robert Weaver		JOB NO. 13850291	P.O. NO. N/A	DATE 11/28/05
ISOTOPE XRAY IR192		FILM PROCESSING Auto		FILM TYPE Kodak AA	FILM TECHNIQUE Double	PER SCREENS .010"
WELD PROCESS GTAW		TIME 8:05"		SHIM N/A	ACCEPTANCE STANDARD ASME VIII, Div. 1, UW-51	
DESCRIPTION 60678/8.0/4/24/818 Port Dome A		MATERIAL THICKNESS .375"		ASTM ASTM 1B	REMARKS Densitometer-12105 cal. due 8/2/06	
INTERPRETER LEVEL Robert Weaver/II		SFD 9"		MATERIAL DIAMETER 18"		
FOCAL SPOT SIZE .142"		MATERIAL SPEC. 625 Incone1				
DIA. X LENKIV .118 x .079"		CURIES/MA 59				

FITTING SEAM OR FITTING	FILM INTERVAL NUMBER	WELDER IDENTIFICATION	PENETRANT		SLAG	POROSITY	POROSITY WITH TAIL	CRACK	LACK OF PEN	LACK FUSION	INTERNAL CONVEXITY	INTERNAL CONCAVITY	TUNGSTEN	MELT-THROUGH	BURN-THROUGH	CRATER-PT	OXIDATION	INTERNAL UNDERCUT	EXTERNAL UNDERCUT	ALIGNED INDICATIONS	WELD CONTOUR	MIS-MATCH	FILM ARTIFACT	VISUAL CONCERNS	FILM DENSITY	SEE REMARKS	ACCEPT	REJECT	
			SIZE	QUALITY LEVEL																									
circ.	0-1	N/A	1B	.010"																									
	1-2																												
	2-3																												
	3-4																												
	4-0																												
vert	0-1																												

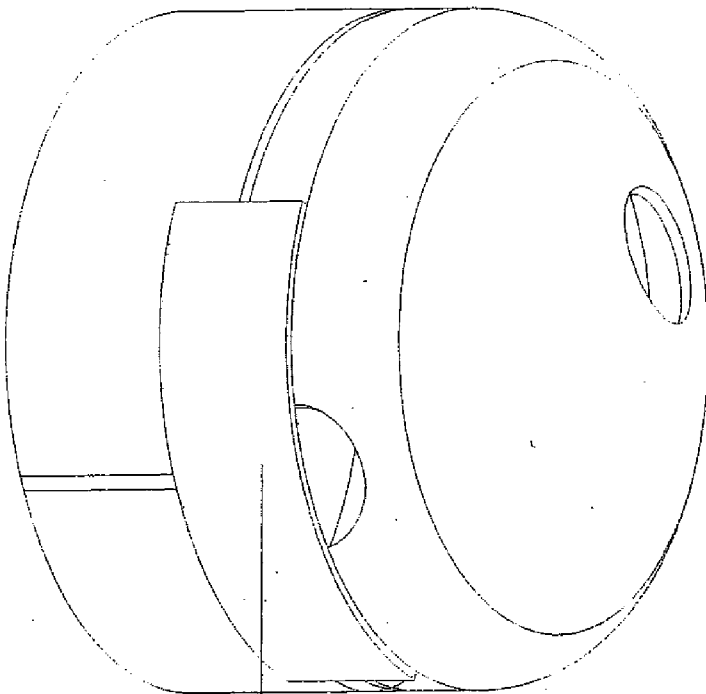


- P Penetrometer
- S Shim
- L Location Marker
- ( ) OTHER

Robert Weaver 655514/II  
Cooperheat-MCS Signature

*[Signature]*  
Customer Representative Signature

11/28/05  
Date



Rev	By	Date	Description
01	LAK	12.2.05	First issued

65678/8 / 4/24/818  
SE120-004 Dome SKIT-A  
11-28-05

Item No.	Film Number	Location	Comment

**CDCP, Inc.**  
 Dome XRay Mcip  
 Form Issue No. C15120-004-042X-AMP 01  
 Scale: 1/12" = 1'-0"

Quality Assurance Documentation for Part ID: PORT DOME - Item: 85

Workorder: 65678/8-0 Sub:5 Op:22

Part: PORT DOME - -

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*				MFG		VISUAL	OK PER SPEC.	093-M.S	581-D.E		A
(10)		VWI ROOT PASS WELD DB		CWI				11-14-05	11-14-05		
*				MFG		VISUAL	OK PER SPEC.	093-M.S	933-D.L		
(40)		VWI EXTERIOR COVER PASS WELD DB		CWI				11-15-05	11-18-05		A
*				MFG		VISUAL	OK PER SPEC.	093-M.S	933-D.L		A
(50)		VWI INTERIOR COVER PASS WELD DB		CWI				11-15-05	11-18-05		

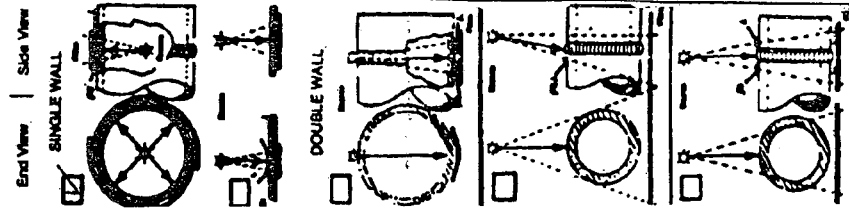
4959

10520 Chester Road  
Woodlawn, Ohio 45215



CLIENT Major Tool & Machine		RADIOGRAPHER Robert Weaver / II Robert Weaver		JOB NO. 13850291		P.O. NO. NA		DATE 11/29/05	
ISOTOPE RAY SIR192		DIA. X LEN. X CURIES MA 118" x .079" x 59		FILM PROCESSING Auto		FILM TYPE Kodak AA Double		FILM TECHNIQUE PB SCREENS	
WELD PROCESS GTAW		MATERIAL SPEC. 625 Inconel		SFD 9"		SHIM NA		ACCEPTANCE STANDARD ASME VIII, Div 1, UW-51	
DESCRIPTION 65678/8.0/5/24/818 Port Dome B page 1 of 1		MATERIAL THICKNESS .375		PENETRATOR ASTM IB		TIME 8.625"		DENSITOMETER ASTM IB	
FITTING, SEAM OR FITTING circ 0-1 1-2 2-3 3-4 4-0 vert 0-1		WELDER IDENTIFICATION NA		CRACK		INTERNAL UNDERCUT		EXTERNAL UNDERCUT	
FILM INTERVAL NUMBER 0-1 1-2 2-3 3-4 4-0		PENETRATOR SIZE IB		CRACK OF PEN		INTERNAL UNDERCUT		EXTERNAL UNDERCUT	
SLAG		PENETRATOR QUALITY LEVEL .910"		LACK OF FUSION		INTERNAL UNDERCUT		EXTERNAL UNDERCUT	
POROSITY WITH TAIL		LACK OF FUSION		LACK OF PEN		INTERNAL UNDERCUT		EXTERNAL UNDERCUT	
POROSITY		LACK OF FUSION		LACK OF PEN		INTERNAL UNDERCUT		EXTERNAL UNDERCUT	
TUNGSTEN		LACK OF FUSION		LACK OF PEN		INTERNAL UNDERCUT		EXTERNAL UNDERCUT	
MELT-THROUGH		LACK OF FUSION		LACK OF PEN		INTERNAL UNDERCUT		EXTERNAL UNDERCUT	
BURN-THROUGH		LACK OF FUSION		LACK OF PEN		INTERNAL UNDERCUT		EXTERNAL UNDERCUT	
CRATER-FIT		LACK OF FUSION		LACK OF PEN		INTERNAL UNDERCUT		EXTERNAL UNDERCUT	
OXIDATION		LACK OF FUSION		LACK OF PEN		INTERNAL UNDERCUT		EXTERNAL UNDERCUT	
INTERNAL UNDERCUT		LACK OF FUSION		LACK OF PEN		INTERNAL UNDERCUT		EXTERNAL UNDERCUT	
EXTERNAL UNDERCUT		LACK OF FUSION		LACK OF PEN		INTERNAL UNDERCUT		EXTERNAL UNDERCUT	
ALIGNED INDICATIONS		LACK OF FUSION		LACK OF PEN		INTERNAL UNDERCUT		EXTERNAL UNDERCUT	
WELD CONTOUR		LACK OF FUSION		LACK OF PEN		INTERNAL UNDERCUT		EXTERNAL UNDERCUT	
MIS-MATCH		LACK OF FUSION		LACK OF PEN		INTERNAL UNDERCUT		EXTERNAL UNDERCUT	
FILM ARTIFACT		LACK OF FUSION		LACK OF PEN		INTERNAL UNDERCUT		EXTERNAL UNDERCUT	
VISUAL CONCERNS		LACK OF FUSION		LACK OF PEN		INTERNAL UNDERCUT		EXTERNAL UNDERCUT	
FILM DENSITY		LACK OF FUSION		LACK OF PEN		INTERNAL UNDERCUT		EXTERNAL UNDERCUT	
SEE REMARKS		LACK OF FUSION		LACK OF PEN		INTERNAL UNDERCUT		EXTERNAL UNDERCUT	
ACCEPT		LACK OF FUSION		LACK OF PEN		INTERNAL UNDERCUT		EXTERNAL UNDERCUT	
REJECT		LACK OF FUSION		LACK OF PEN		INTERNAL UNDERCUT		EXTERNAL UNDERCUT	

REMARKS  
Densitometer ~ 12105 cal. due 2/20/06  
NCR-18750

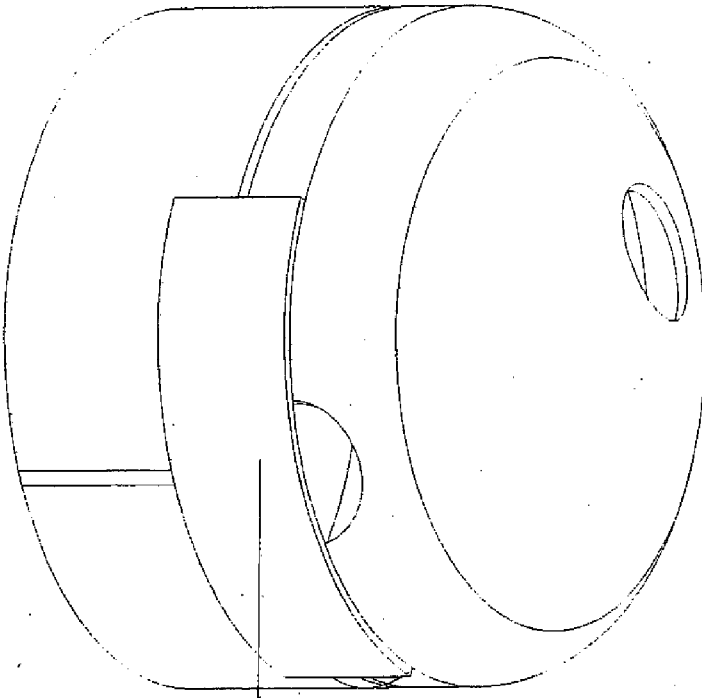


End View | Side View  
SINGLE WALL  
DOUBLE WALL  
Penetrant  
Shim  
Location Marker  
OTHER

Robert Weaver 655514/II  
Cooperheat-MGS Signature

Raybo D. Edwards  
Customer Representative Signature

11/29/05  
Date



1

65576/89/5/24/1818  
SE120-004 Dome SKIRT B  
11-29-05

REV	BY	DATE	DESCRIPTION
01	LAK	12.205	First Issued

Item No.	Firm Number	Location	Comment

CDCP, Inc.

Project: Dome XRAY MOP

Contract No: SE120-00-4-017X.mjh (1)

Scale: 1/2" = 1'-0"

Issue: 01

Approved: \_\_\_\_\_

Checked: \_\_\_\_\_

Drawn: \_\_\_\_\_

DATE: \_\_\_\_\_

1



4959  
10520 Cheater Road  
Woodlawn, Ohio 45215

MC121427.TIF1

CLIENT: Major Tool + Machine  
 INTERPRETER: Robert Weaver / II Robert Weaver  
 JOB NO: 13850091  
 P.O. NO: N/A  
 DATE: 11/29/05

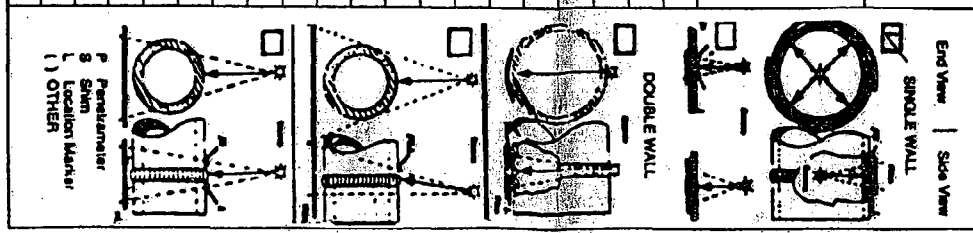
ISO PRACTICE: ER192  
 DIAL X LENS: 118" x .079"  
 CURRAN: 59  
 FOCAL SPOT SIZE: .142"  
 SPD: 9"  
 SOD: 8.625"  
 RODOGRAPHER: Robert Weaver

WELD PROCESS: GTAW  
 MATERIAL SPEC: 625 Inconel  
 MATERIAL QUANTITY: 18"  
 MATERIAL THICKNESS: .375"  
 PENETRAMETER: ASTM 1B  
 SHIM: N/A  
 ACCEPTANCE STANDARD: ASME VIII, Div 1, UN-51

DESCRIPTION: 65678/8.0/5/24/818 / 65678/8.0/297/10/818  
 Part Dome B  
 Shot 100% on original  
 Page 1 of 1  
 Job #

REMARKS: Density meter - 12105 cal. due 2/2/06  
 NCR - 18750

FITTING, SEAM OR FITTING	FILM INTERVAL NUMBER	WELDER IDENTIFICATION	PENETRAMETER		SLAG	POROSITY	POROSITY WITH TAIL	CRACK	LACK OF PEN	LACK FUSION	INTERNAL CONVEXITY	INTERNAL CONCAVITY	TUNGSTEN	MELT-THROUGH	BURN-THROUGH	CRATER-PIT	OXIDATION	INTERNAL UNDERCUT	EXTERNAL UNDERCUT	ALIGNED INDICATIONS	WELD CONTOUR	MIS-MATCH	FILM ARTIFACT	VISUAL CONCERNS	FILM DENSITY	SEE REMARKS	ACCEPT	REJECT			
			SIZE	QUALITY LEVEL																											
Circ 0-1		WA	1B	200"																											
	1-2																														
	2-3																														
	3-4																														
	4-0																														
Vert 0-1																															



Robert Weaver 655512/HIT  
 Cooperheat-IGS Signature

Angelo D. Zluanda  
 Customer Representative Signature

11/29/05  
 Date

4959

10520 Chester Road  
Woodlawn, Ohio 45215



CLIENT	MAJOR TOOL & MACHINE	INTERPRETER/LEVEL	RADIOGRAPHER	JOB NO	P.O. NO	DATE
ISOTOPE/RAY	DIA. X LEN/V	SFD	SCD	FILM TYPE	FILM TECHNIQUE	PR SCREENS
WELD PROCESS	MATERIAL SPEC.	MATERIAL DIAMETER	MATERIAL THICKNESS	SHIM	ACCEPTANCE STANDARD	
DESCRIPTION						

JOB NO: 13850291, P.O. NO: N/A, DATE: 12/8/05  
 RADIOGRAPHER: Robert Weaver, INTERPRETER/LEVEL: Robert Weaver / II  
 FILM TYPE: Kodak AA Double, FILM TECHNIQUE: Double  
 SCOD: 8.605", SFD: 9", MATERIAL DIAMETER: 18", MATERIAL THICKNESS: .375"  
 SHIM: N/A, ACCEPTANCE STANDARD: ASME VIII, Div I, UW-51  
 PENETRANT: K.S.H. 1B, SIZE: .010", QUALITY LEVEL:   
 WELD PROCESS: GTAW, MATERIAL SPEC.: 605 INcone1  
 DESCRIPTION: 65678/80/297/30/818 part Dome B  
 Penetrant: P Penetrant, S Shim, L Location Marker, ( ) OTHER  
 End View | Side View  
 SINGLE WALL  
 DOUBLE WALL

FITTING	SEAM OR FITTING	FILM INTERVAL	WELDER IDENTIFICATION	PENETRANT SIZE	PENETRANT QUALITY LEVEL	SLAG	POROSITY	POROSITY WITH TML	CRACK	LACK OF PEN	LACK FUSION	INTERNAL CONCAVITY	INTERNAL CONVEXITY	TUNGSTEN	MELT-THROUGH	BURN-THROUGH	CRATER/PIT	OXIDATION	INTERNAL UNDERCUT	EXTERNAL UNDERCUT	ALIGNED INDICATIONS	WELD CONTOUR	MIS-MATCH	FILM ARTIFACT	VISUAL CONCERNS	FILM DENSITY	SEE REMARKS	ACCEPT	REJECT	
3-4			K.S.H. 1B	.010"																										

REMARKS: Densitometer - 12/05  
Cal. due - 2/2/06

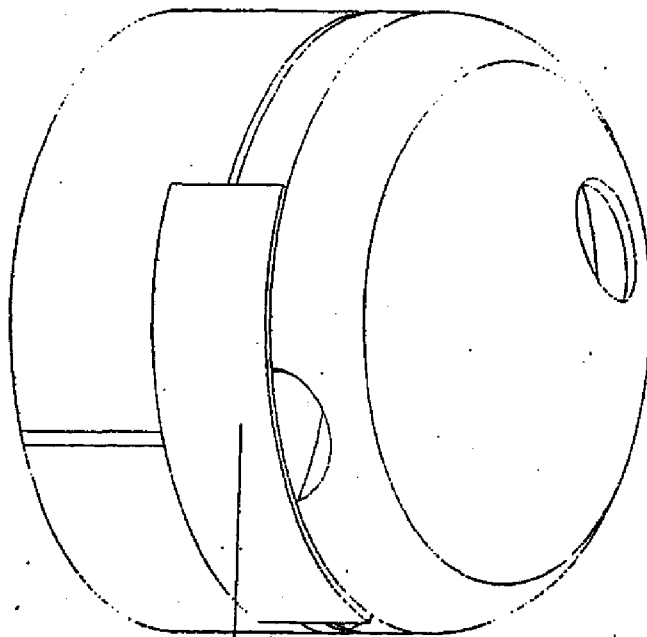
Robert Weaver 65554 / II  
Cooperheat-MGS Signature

Signature

Customer Representative Signature

12/8/05

Date



1

65578/8944/30416  
SE100-004 Home Skirt B  
12-8-05

Item No.	Part Number	Location	Comment

CDCCP, Inc. Dome XRay Mop	
1410000-002-001 01	01

Item No. or Lot	Date Received	Description



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**Customer: PRINCETON PLASMA PHYSICS LAB**

Contact: Frank Malinowski

E-Mail: [fmalinowski@pppl.gov](mailto:fmalinowski@pppl.gov)

Telephone: 609-243-2441

Fax: 609-243-2021

**Part: /SE120-004-23 (CF 6" Flange)**

Drawing ID: SE120-004

Revision: 1

Customer P.O.: S005243-F

Serial No./Qty: N/A

Reported By: DOUG MCCORKLE

E-Mail: [dMcCorkle@MajorTool.com](mailto:dMcCorkle@MajorTool.com)

Telephone: 317-636-6433

Fax: 317-634-9420

Problem: Magnetic Permeability required to be 1.02 Max

Parts Check >1.05 but < 1.1

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**Proposed Disposition:**

CUSTOMER DISPOSITION REQUIRED

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Number of additional pages: 0

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**Customer Disposition:**     Use As Is     Rework     Repair     Scrap     Replace

**Technical Contact Approval:** \_\_\_\_\_

**Title:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Buyer Approval:** \_\_\_\_\_

**Title:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Major Tool Implemented By:** \_\_\_\_\_

**Title:** \_\_\_\_\_ **Date:** \_\_\_\_\_



Welding Products Company  
 1401 Burris Road  
 Newton, NC 28658  
 704-465-0352

# Certified Material Test Report

No: 74817



**QUALITY SYSTEMS**

Date : 15-Dec-98  
 Purchase Order No: P9806221  
 Mark Order No:  
 Product Number: N625-035-30SS02  
 Description of Material: INCONEL Filler Metal 625 .035 x 30Spl

Certificate 3.1.B as in EN 10 204  
 Material Manufactured in accordance with a quality management system certified to ISO 9002 by ABS-QE (Certificate No. 30125)

**Chemical  
 Analysis**  
 (Wt. %)

Order Wt.  
 UNS #: N06625

Specifications:

ANSI AWS A 5.14M-97 Class ERNiCrMo-3  
 ASME SFA 5.14 1995 Edition 96 Addenda Class ERNiCrMo-3

Heat/Lot: VX3417AK

		Unit
Ni	64.66	%
Cr	21.67	%
Mo	8.94	%
NbTa	3.55	%
Fe	.58	%
Others <	.50	%
Al	.27	%
Ti	.21	%
Si	.05	%
Co	.04	%
C	.01	%
Mn	< .01	%
Cu	.01	%
P	.003	%
S	.001	%
Nb	.00	%

DEC 18  
 28042

Visual and dimensional examination:  
 Satisfactory  
 Material, when shipped is free from contamination by mercury, radium, alpha source, and low melting point elements.

This is to certify that all required samplings, inspections and tests have been performed in accordance with the specification requirements. The test report represents the actual attributes of the material furnished and the values shown are correct and true. The material described by this certificate is in full compliance with all order and inspection requirements. We hereby certify that the above data are in accordance with the specification requirements.

*B.G. Taylor*

Authorized quality assurance representative: BJ Taylor

Quality Certification Representative

--The trademark and trade name 'INCO' or 'Inco' is owned by Inco Limited and is used by permission.  
 The Inco Alloys International group of Companies and Inco Limited are unaffiliated and independent Companies--

**ARCOS INDUSTRIES, LLC**  
**ONE ARCOS DRIVE**  
**Mt. Carmel, PA 17851**



DATE 06/16/05

**ACTUAL  
 CERTIFICATION OF TESTS**

GRADE 625  
 LOT/ALLOY NO. XB8273  
 HEAT NO. 112155  
 SIZE .035"  
 CLASS ERNiCrMo-3  
 SPECIFICATION AWS A5.14/A5.14M-97  
ASME SFA 5.14, Section II, Part C

**CHEMICAL ANALYSIS:**

**ACTUAL WIRE**

C	Mn	Si	S	P	Cr	Ni	Mo	Ta	Cb+Ta
0.03	0.05	0.06	0.001	0.01	22.3	64.2	9.1	0.01	3.56
	Ti	Al	Co	Cu	Fe		Total Others		
	0.21	0.14	0.05	0.00	0.3		< 50		

*OK*

Ferrite: N/A

UNS NO. N06625

Lot Classification - S1

Intensity of Testing - Schedule F

**MATERIAL MADE IN THE USA.**

THIS MATERIAL IS FREE FROM MERCURY, RADIUM OR ALPHA PARTICLE CONTAMINATION.

We hereby affirm that the reported results on this certification are correct and accurate. All test and results and operations performed by Arcos or its subcontractors are in compliance with the applicable material/customer specification.

**ARCOS**

*06.20.05*  
*97307*  
*line 1*

*APR 040*  
*AKH*

GIB GRATTI, QUALITY ASSURANCE MANAGER  
**QUALITY ASSURANCE DEPARTMENT**

**ARCOS INDUSTRIES, LLC**  
**ONE ARCOS DRIVE**  
**Mt. Carmel, PA 17851**

mc094944.pdf



DATE 11/26/03

## CERTIFICATION OF TESTS

SOLD TO: MAJOR TOOL & MACHINE, INC.  
 1458 EAST 19TH STREET  
 INDIANAPOLIS, IN 46218

SHIP TO: SAME

ARCOS S.O.	CUSTOMER ORDER NO.	CONSIGNEE ORDER NO.	DATE SHIPPED
79388	P03-04749	N/A	11/26/03
ITEM	SIZE	GRADE	QUANTITY
1	1/16 X 36"	ARCOS 625	30#

**SPECIFICATION:** AWS A5.14/A5.14M-97. CLASS ERNiCrMo-3  
 ASME SFA 5.14 ASME SECTION II, PART C, 2001 EDITION.  
 AND ALL PARAS AND ADDENDA THRU 2002.

CHEMICAL ANALYSIS: WIRE									
C	Mn	Si	S	P	Cr	Ni	Mo	Cb	Cb + Ta
0.02	0.01	0.06	0.001	0.01	22.2	64.3	9.1		3.56
Ta	Ti	Al	Co	Cu	Fe	V	Total Others		
	0.22	0.12	0.03	0.01	0.4		<.50		

ADDITIONAL TEST RESULTS	TENSILE	As Welded	Heat Treated
Ferrite - NB2433.1-1: _____	Yield	_____	_____
Magna Gage: _____	Tensile	_____	_____
X-Ray: _____	Elongation	_____	_____
Bends: _____	Red. of Area	_____	_____
Hardness: _____			

**OTHER INFORMATION:**

LOT CLASSIFICATION - S1  
 INTENSITY OF TESTING - Schedule F

THIS MATERIAL IS FREE FROM MERCURY, RADIUM OR ALPHA PARTICLE CONTAMINATION.

We hereby affirm that the reported results on this certification are correct and accurate. All test and results and operations performed by Arcos or its subcontractors are in compliance with the applicable material/customer specification.

**ARCOS**

*Eileen Zerby* Q.A. CLERK  
 QUALITY ASSURANCE DEPARTMENT

81505  
 Line 1  
 R. 7

12/5/03

ARCOS INDUSTRIES, LLC  
 ONE ARCOS DRIVE  
 Mt. Carmel, PA 17851

mc095279



DATE 12/19/03

## CERTIFICATION OF TESTS

SOLD TO:

MAJOR TOOL & MACHINE, INC.  
 1458 EAST 19TH STREET  
 INDIANAPOLIS, IN 46218

SHIP TO:

MAJOR TOOL & MACHINE  
 1452 EAST 19th Street  
 Indianapolis, IN 46218

ARCOS S.O.		CUSTOMER ORDER NO.		CONSIGNEE ORDER NO.		DATE SHIPPED			
79533		P03-05170		N/A		12/19/03			
ITEM	SIZE	GRADE		LOT NO./ALLOY NO.		QUANTITY			
1	1/16 X 36"	ARCOS 625		AV8128		30#			
<b>SPECIFICATION:</b> AWS A5.14/A5.14M-97. CLASS ERNiCrMo-3 ASME SFA 5.14 ASME SECTION II, PART C, 2001 EDITION. AND ALL PARAS AND ADDENDA THRU 2003.									
<b>CHEMICAL ANALYSIS: WIRE</b>									
C	Mn	Si	S	P	Cr	Ni	Mo	Cb	Cb + Ta
0.03	0.05	0.08	0.004	0.00	21.8	64.6	9.1		3.77
Ta	Ti	Al	Co	Cu	Fe	V	Total Others		
	0.24	0.26	0.01	0.02	0.1		<.50		

**ADDITIONAL TEST RESULTS**

Ferrite - NB2433.1-1: \_\_\_\_\_  
 Magna Gage: \_\_\_\_\_  
 X-Ray: \_\_\_\_\_  
 Bends: \_\_\_\_\_  
 Hardness: \_\_\_\_\_

<b>TENSILE</b>	<b>As Welded</b>	<b>Heat Treated</b>
Yield	_____	_____
Tensile	_____	_____
Elongation	_____	_____
Red. of Area	_____	_____

**OTHER INFORMATION:**

LOT CLASSIFICATION - S1  
 INTENSITY OF TESTING - Schedule F

THIS MATERIAL IS FREE FROM MERCURY, RADIUM OR ALPHA PARTICLE CONTAMINATION.

We hereby affirm that the reported results on this certification are correct and accurate. All test and results and operations performed by Arcos or its subcontractors are in compliance with the applicable material/customer specification.

**ARCOS**

12/23/03

81947  
line 1

Q.A. MANAGER  
 QUALITY ASSURANCE DEPARTMENT

**ARCOS INDUSTRIES, LLC**  
**ONE ARCOS DRIVE**  
**Mt. Carmel, PA 17851**

MC094945



DATE 11/26/03

**CERTIFICATION OF TESTS**

SOLD TO: MAJOR TOOL & MACHINE, INC.  
 1458 EAST 19TH STREET  
 INDIANAPOLIS, IN 46218

SHIP TO: SAME

ARCOS S.O.	CUSTOMER ORDER NO.	CONSIGNEE ORDER NO.	DATE SHIPPED
79388	P03-04749	N/A	11/26/03
ITEM	SIZE	GRADE	LOT NO./ALLOY NO.
2	3/32 X 36"	ALLOY 625	CV8061
			QUANTITY
			30#

SPECIFICATION: AWS A5.14/A5.14M-97. CLASS ERNiCrMo-3  
 ASME SFA 5.14 ASME SECTION II, PART C, 2001 EDITION.  
 AND ALL PARAS AND ADDENDA THRU 2002.

CHEMICAL ANALYSIS: WIRE

C	Mn	Si	S	P	Cr	Ni	Mo	Cb	Cb + Ta
0.03	0.02	0.13	0.004	0.00	21.5	64.6	9.0		3.75
Ta	Ti	Al	Co	Cu	Fe	V	Total Others		
	0.29	0.24	0.02	0.11	0.2		<.50		

ADDITIONAL TEST RESULTS	TENSILE	
	As Welded	Heat Treated
Ferrite - NB2433.1-1: _____	Yield	_____
Magna Gage: _____	Tensile	_____
X-Ray: _____	Elongation	_____
Bends: _____	Red. of Area	_____
Hardness: _____		

OTHER INFORMATION:

LOT CLASSIFICATION - S1  
 INTENSITY OF TESTING - Schedule F

THIS MATERIAL IS FREE FROM MERCURY, RADIUM OR ALPHA PARTICLE CONTAMINATION.

We hereby affirm that the reported results on this certification are correct and accurate. All test and results and operations performed by Arcos or its subcontractors are in compliance with the applicable material/customer specification.

**ARCOS**



12/5/03

*Eileen Zerby*  
 Q.A. CLERK

QUALITY ASSURANCE DEPARTMENT

81506  
 Line 2 R.I.

BRANFORD WIRE & MFG  
P O BOX 677  
MOUNTAIN HOME, NC  
PHONE 828-692-5791  
FAX# 828-697-9818

NU 188 P 3

CERTIFICATE OF COMPLIANCE / TEST REPORT

4/06/05

27133

BUYER HAYNES INTERNATIONAL  
P O BOX 9013  
1020 WEST PARK AVE  
KOKOMO, IN  
46904-9013

CUSTOMER P O NBR 1429  
ORD/LN NBR 025988/02  
CUSTOMER PART NBR 326504200240000

PROD DESC WELDING / METALLIZING WIRE  
SIZE 093X36"

TYPE INC625  
QTY LBS 772

SPECIFICATION  
AWS A5.14-97/ERNICRMO-3

CHEMICAL ANALYSIS

HEAT NBR	C	MN	P	S	SI	NI	CR	MO	CU
K48859	10 019	0 030	< 005	0 006	< 0 05	145 00120	52108	36	0 020

Y	TA	TI	NE	AL	N	CO	FE	W	V	B
10 020	0 019	0 03 43	0 220			10 130	01 91			

MECHANICAL PROPERTIES

TENSILE	YIELD	ELONGATION	HARDNESS	BREAKING
(LBS/SQ INCH)	(LBS/SQ INCH)	%		%

WRAP TEST	UNIFORM TEST	MANDREL TEST	GRAIN SIZE	PERMEABILITY

OTHER TEST(S) AND/OR REQUIREMENTS

(MATERIAL IS FREE OF MERCURY CONTAMINATION)

THIS IS TO CERTIFY THAT MATERIAL SHIPPED COMPLIES WITH SPECIFICATION ON P 8

4/18/05  
95358 Line 2 WA



COUNTRY OF ORIGIN  
GERMANY

REPRESENTATIVE  
*[Signature]*

DATE SIGNED  
4/06/05

IF INITIALED AND DATED HERE THIS IS AN AMENDED CERTIFICATION

BRANFORD WIRE & MFG.  
 P.O. BOX 677  
 MOUNTAIN HOME, NC  
 PHONE: 828-692-5791  
 FAX#: 828-697-9818

CERTIFICATE OF COMPLIANCE / TEST REPORT

3/21/05

27038

BUYER: HAYNES INTERNATIONAL  
 P.O. BOX 9013  
 1020 WEST PARK AVE.  
 KOKOMO, IN  
 46904-9013

CUSTOMER P.O. NBR: 1423  
 ORD/LN NBR: 025982/02  
 CUSTOMER PART NBR: 326506200240000

PROD. DESC: WELDING / METALLIZING WIRE  
 SIZE: .093X36"

TYPE: INC625  
 QTY LBS: 550

SPECIFICATION  
 AWSA5.14-97/ERNICRMQ-3

CHEMICAL ANALYSIS

HEAT NBR.	C	MN	P	S	SI	NI	CR	MO	CU
K48859	10.019	10.030	<.005	.0006	<.05	165.00	20.82	108.36	10.020

Y	TA	TI	NB	AL	N	CO	FE	W	V	B
	10.020	10.019	103.43	10.220		10.130	101.91			

MECHANICAL PROPERTIES

TENSILE	YIELD	ELONGATION	HARDNESS	BREAK	ROA
LBS/SQ. INCH	LBS/SQ INCH	%			%
1/4HRD					

WRAP TEST	UNIFORM TEST	MANDREL TEST	GRAIN SIZE	PERMEABILITY

MAY 24 2005  
 96405 Line 3 BJ


OTHER TEST(S) AND/OR REQUIREMENTS:

(MATERIAL IS FREE OF MERCURY CONTAMINATION)

THIS IS TO CERTIFY THAT MATERIAL SHIPPED COMPLIES WITH SPECIFICATION ON P.O.

COUNTRY OF ORIGIN  
 GERMANY

Q. Q. REPRESENTATIVE  
*Dayle Chang*

*Skulor*  


DATE SIGNED  
 3/21/05

IF INITIALED AND DATED HERE



**CUSTOMER COPY**

Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902



Product Description • Description Produit • Material Beschreibung

**0.500 x 38 x 52  
SE120-004 REV:1  
HAYNES(R) 625 ALLOY PLATE  
Nadcap CERTIFICATE NUMBER 0089  
S400E,S1000E, EN 10204 3.1.B, AS9100**

**CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIE • WERKSZEUGNIS**

Pages of Pages  
Page de Pages  
Anzahl der Seiten  
1 Of 4

Report No.  
Rapport No  
Zeugnis Nr  
20050525089

Date Entered  
Date De Commande  
Bestelldatum  
04/04/05

Ship To • Destinataire • Bestellmenge  
**MAJOR TOOL AND MACHINE INC  
1458 E 19TH ST  
INDIANAPOLIS  
IN 46218 USA**

Sold To • Client • Besteltranschrift  
**MAJOR TOOL AND MACHINE INC  
1458 E 19TH ST  
INDIANAPOLIS  
IN 46218 USA**

Quantity Shipped  
Quantite Expedie  
Liefermenge  
6 PC

Quantity Ordered  
Quantite Commandee  
Bestellmenge  
6 PC

Specification • Spezifikation  
PS-489, E; PS-489, E

Heat Number Numero de Cuete Charge Nr	Chemical Analysis • Analyse Chimique • Chemische Analyse											Butt End *02						
	Al	B	C	Ch-Ta (Nb+Ta)	Co	Cr	Cu	Fe	Mn	Mo	Ni		N	P	S	Si	Ti	V
2650 5 6805	0.21		0.028	3.3	0.2066	21.97	0.1637	4.7452	0.2713	8.67	59.49	0.007	0.004	0.21	0.3211			
2650 5 6805	3.2994	Ta <0.05	Zr	Bi	Se	La	Pb except		Mg	Y	Ag		Ca	Al+Ti	Ni+Co	Ni+Mo		BUTT END *02

Certified By • Certifie Par • Bescheinigt Durch: Tammy Shepherd  
Certification Technician

5/25/2005

JUN 15 2005  
97115  
D8  
Anno 1-6

T. Shepherd

JUN 15 2005



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CUSTOMER COPY

Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

**HAYNES**  
**International**

Product Description • Description Produit • Material Beschreibung

0.500 x 38 x 52  
SE120-004 REV:1  
HAYNES(R) 625 ALLOY PLATE -  
Nadcap CERTIFICATE NUMBER 0089  
S400E,S1000E, EN 10204 3.1.B, AS9100

CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS			
Invoice No. No. De Facture Rechnungs Nr. 437960001-0	Date Entered Date De Commande Bestelldatum 04/04/05	Customer Reference Reference Client Kundenbestellnr P05-01369	Report No. Rapport No. Zeugnis Nr. 20050525089
Ship To • Client • Bestellanschrift MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA		Ship To • Destinataire • Bestelldenge MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA	
Specification • Specification • Spezifikation PS-489, E; PS-489, E		Quantity Ordered Quantite Commandees Bestelldmenge 6 PC	Quantity Shipped Quantite Expediee Liefermenge 6 PC
Tensile Test at Room Temperature • Essai De Traction A Temp. Ambiante • Zugversuch Bei Raum Temp.			
Ultimate Zugfestigkeit 127000 PSI	1% Yield Lim. Elast. A 1% 1% Streckgrenze	0.2% Yield Lim. Elast. A 0.2% 0.2% Streckgrenze	% Elong In % Allong EN % Dehnung
	61000 PSI	53 %	(1)(A)
Tensile Test at Elevated Temperature • Essai De Traction A Hte. Temp. Warm Zugversuch			
	Ultimate Zugfestigkeit	1% Yield Lim. Elast. A 1% 1% Streckgrenze	0.2% Yield Lim. Elast. A 0.2% 0.2% Streckgrenze
			% Elong In % Allong EN % Dehnung
			%RA %RA
Stress Rupture Temperature • Essai A Charge De Rupture Zeistandversuch			
	Test Essai Versuch Temp.	Stress Contrainte Spannung	Hours Heures Stunden
			% Elong In % Allong EN % Dehnung
			% RA % RA

Certified By • Certifie Par • Bescheinigt Durch: Tammy Shepherd  
Certification Technician

*T. Shepherd*

JUN 15 2005



THE DATA CONTAINED HEREIN WAS OBTAINED FROM SAMPLES THAT ARE REPRESENTATIVE OF THE PRODUCTS IN THE SUBJECT SUPPLEMENT. THIS MATERIAL MEETS THE REQUIREMENTS OF THE LISTED SPECIFICATIONS, MODIFIED BY ANY EXCEPTIONS OR PURCHASE ORDER REQUIREMENTS. THE REWORKING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FEDERAL STATUTES INCLUDING FEDERAL LAW, TITLE 18, CHAPTER 47. THIS DOCUMENT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN CONSENT OF HAYNES INTERNATIONAL, INC. SPECIFICATION MARKING REQUIREMENTS MAY BE VARYED ON ORDERS REQUIRING MULTIPLE MATERIAL SPECIFICATIONS.

CUSTOMER COPY

Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

**HAYNES**  
**International**

Product Description • Description Produit • Material Beschreibung

**0.500 x 38 x 52**  
**SE120-004 REV:1**  
**HAYNES(R) 625 ALLOY PLATE**  
**Nadcap CERTIFICATE NUMBER 0089**  
**S400E,S1000E, EN 10204 3.1.B, AS9100**

<b>CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIE • WERKSZEUGNIS</b>	
Invoice No. No. De Facture Rechnungs Nr 437960001-0	Customer Reference Reference Client Kundenbestellidatn POS-01369
Date Entered Date De Commande Bestellidatum 04/04/05	Report No. Rapport No Zeugnis Nr 20050525089
Pages of Pages Page de Pages Anzahl der Seiten 3 Of 4	

Sold To • Client • Bestellauschrift <b>MAJOR TOOL AND MACHINE INC</b> <b>1458 E 19TH ST</b> <b>INDIANAPOLIS</b> <b>IN 46218 USA</b>	Ship To • Destinataire • Bestellmenge <b>MAJOR TOOL AND MACHINE INC</b> <b>1458 E 19TH ST</b> <b>INDIANAPOLIS</b> <b>IN 46218 USA</b>
---	---

Quantity Ordered Quantite Commandee Bestellmenge 6 PC	Quantity Shipped Quantite Expediee Liefermenge 6 PC
--	--

Specification • Specification • Spezifikation PS-489, E; PS-489, E	IGA	Uniformity	Corrosion Rate	Oxidation Rate	Creep Rupture
	Attack Depth	Corrosion	Test Method	Toughness	Test
	MPY			Toughness	Essai
				Toughness	Versuch
				Toughness	Temp.
				Toughness	Stress
				Toughness	Constraine
				Toughness	Spannung
				Toughness	PSI
				Toughness	Hours
				Toughness	Heures
				Toughness	Standard
				Toughness	% Elong @
				Toughness	15 Hrs
				Toughness	% Allong EN
				Toughness	% Deformation

Certified By • Certifie Par • Bescheinigt Durch: **Tammy Shepherd**  
Certification Technician

5/25/2005

(1) 2742657051

*T Shepherd*  
**JUN 15 2005**



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**HAYNES**  
**International**

Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

Product Description • Description Produit • Material Beschreibung

0.500 x 38 x 52  
SE120-004 REV:1  
HAYNES(R) 625 ALLOY PLATE -  
Nadcap CERTIFICATE NUMBER 0089  
S400E,S1000E, EN 10204 3.1.B, AS9100

CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS			
Invoice No No. De Facture Rechnungs Nr 437960001-0	Date Entered Date De Commande Bestelldatum 04/04/05	Customer Reference Reference Client Kundenreferenzdaten P05-01369	Report No. Rapport No Zeugnis Nr 20050525089
Sold To • Client • Bestellanschrift MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA		Ship To • Destinataire • Bestellmenge MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA	
Specification • Specification • Spezifikation		Quantity Ordered Quantité Commandée Bestellmenge 6 PC	Quantity Shipped Quantité Expédiée Liefermenge 6 PC
PS-489, E; PS-489, E			

All tests and inspections have been performed and results meet specification requirements.  
THIS MATERIAL IS FREE FROM MERCURY, CADMIUM, RADIUM, AND ALPHA SOURCE CONTAMINATION.  
Material conforms to PS-483 Revision H as applicable.  
Mill Orders Used: 2742657051 (6 PC)  
(A) 1750 °F to 1950 °F

Certified By • Certifié Par • Bescheinigt Durch: Tammy Shepherd  
Certification Technician

5/25/2005

*T. Shepherd*



JUN 15 2005

THE DATA OBTAINED HEREIN WAS OBTAINED FROM SOURCES THAT ARE REPUTABLE. THE SUBJECT SUPPLIER, THIS MATERIAL MEETS THE REQUIREMENTS OF THE LISTED SPECIFICATIONS, MODIFIED BY ANY EXCEPTIONS OR PURCHASE ORDER REQUIREMENTS. THIS DOCUMENT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN CONSENT OF HAYNES INTERNATIONAL INC. SPECIFICATION MARKING REQUIREMENTS MAY BE WAIVED ON ORDERS REQUESTING MULTIPLE MATERIAL SPECIFICATIONS.

JUN 15 2005

Magnetic Permeability Test Witness

Haynes observed Mr. Edwards of Major Tool test the orders listed below for Magnetic Permeability on June 10, 2005, using a Severn Engineering Permeability Indicator #6763, identified as gauge J-1165 in Major Tool's calibration system. The gauge was in calibration and was due for recalibration on December 27, 2005. All items tested below were <1.01 magnetic permeability.

## Heats Tested

2650-5-6801  
2650-5-6796  
2650-5-6805  
2650-5-6808  
2650-5-6820

## Purchase Order Numbers

P05-01369  
P05-01372  
P05-01373  
P05-01374  
P05-01377  
P05-01378  
P05-01379

Best Regards,

Marlin C. Losch III

FIRST METALS & PLASTICS TECHNOLOGIES, INC.

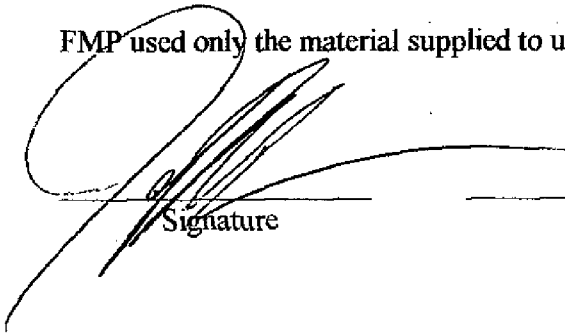

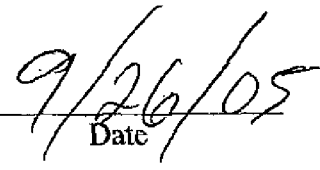
CERTIFICATE OF CONFORMANCE

Part Number \_\_\_\_\_ Port 12 \_\_\_\_\_

We do hereby certify that the material shipped on Purchase Order PO5-04709 conforms to all specification requirements called out or referenced on the above purchase order.

The above items were processed and/or manufactured in accordance with the template and/or gauge, which has supplied to FMP by the customer.

FMP used only the material supplied to us by the customer.

\_\_\_\_\_  
 Signature Title Date

9.27.05  
100997 WA  
line 37.48



OCT 05 2005



CUSTOMER COPY

Haynes International  
 1020 West Park Avenue  
 PO Box 9013  
 Kokomo, Indiana, 46902

**HAYNES**  
**International**

Product Description • Description Produit • Material Beschreibung  
 0.500 x 26 x 52  
 SE120-004-36MTM REV: 1A  
 HAYNES(R) 625 ALLOY PLATE  
 Nadcap CERTIFICATE NUMBER 0089  
 S400E,S1000E, EN 10204 3.1.B, AS9100

CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS	
Invoice No. No. De Facture Rechnungs Nr. 437972001-0	Customer Reference Reference Client Kundenbestellidat P05-01372
Date Entered Date De Commande Bestelldatum 04/04/05	Report No. Rapport No. Zeugnis Nr. 20050525093
Sold To • Client • Bestellanschrift MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA	Ship To • Destinaaire • Bestellmenge MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA

Quantity Ordered Quantite Commandee Bestelmenge	Quantity Shipped Quantite Expeditee Liefermenge
6 PC	6 PC

Heat Number Numero De Corder Charge Nr.	Chemical Analysis • Analyse Chimique • Chemische Analyse																	
	Al	B	C	Cl <sub>2</sub> (Nb/Ta)	Co	Cr	Cu	Fe	Mn	Mo	Ni	P	S	Si	Ti	V	W	
2650 5 6805	0.21		0.028	3.3	0.2066	21.97	0.1637	4.7452	0.2713	8.67	59.49	0.007	0.004	0.21	0.3211			BUTT END *02
2650 5 6805	3.2994	Ta <0.05	Zr	Bi	Sc	La	Pb	Ag	Mg	Y	Ni	N	Ca	Al+Ti	Ni+Co	Ni+Mo		BUTT END *02

Certified By • Certifie Par • Bescheinigt Durch: Tammy Shepherd  
 Certification Technician

5/25/2005

JUN 15 2005

97113 DA

1-6

THE DATA CONTAINED HEREIN WAS OBTAINED FROM SAMPLES THAT ARE REPRESENTATIVE OF THE PRODUCTS IN THE SUBJECT SUPPLY. THIS MATERIAL MEETS THE REQUIREMENTS OF THE LISTED SPECIFICATIONS AS AUTHORIZED BY ANY EXCEPTIONS OR PURCHASE ORDER REQUIREMENTS. TITLE 18, CHAPTER 42, THIS DOCUMENT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN CONSENT OF HAYNES INTERNATIONAL, INC.



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**International**

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1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

<b>CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS</b>	
Invoice No. Rechnungs Nr. 437972001-0	Date Entered Date De Commande Bestelldatum 04/04/05
Customer Reference Référence Client Kundenbestellnum. P05-01372	Report No. Rapport No. Zeugnis Nr. 20050525093
Pages of Pages Page de Pages Anzahl der Seiten 2 Of 4	

**Sold To • Client • Bestellanrscbrift**  
**MAJOR TOOL AND MACHINE INC**  
**1458 E 19TH ST**  
**INDIANAPOLIS**  
**IN 46218 USA**

**Ship To • Destinataire • Bestellmenge**  
**MAJOR TOOL AND MACHINE INC**  
**1458 E 19TH ST**  
**INDIANAPOLIS**  
**IN 46218 USA**

**Specification • Spezifikation**  
**PS-489, E**

<b>Tensile Test at Room Temperature • Essai De Traction A Temp. Ambiante • Zugversuch Bei Raum Temp.</b>		<b>Quantity Ordered Quantité Commandée Bestellmenge</b> 6 PC		<b>Quantity Shipped Quantité Expédiée Liefermenge</b> 6 PC	
Ultimate Zugfestigkeit	1% Yield Lim. Elong. A 1% 1% Streckgrenze	0.2% Yield Lim. Elong. A 0.2% 0.2% Streckgrenze	% Elong In % Allong EN % Dehnung	%RA	%RA
127000 PSI	61000 PSI	53 %	(1)(A)		

<b>Tensile Test at Elevated Temperature • Essai De Traction A Hte. Temp.</b>		<b>Warm Zugversuch</b>			
Ultimate Zugfestigkeit	1% Yield Lim. Elong. A 1% 1% Streckgrenze	0.2% Yield Lim. Elong. A 0.2% 0.2% Streckgrenze	% Elong In % Allong EN % Dehnung	%RA	%RA

**Stress Rupture Temperature • Essai A Charge De Rupture Zeitstandversuch**

Test Essai Versuch	Stress Contrainte Spannung	Hours Heures Stunden	% Elong In % Allong EN % Dehnung	% RA
Temp:				

**Certified By • Certifié Par • Bescheinigt Durch: Tammy Shepherd**  
Certification Technician

(1) 2742657051

5/25/2005

*T. Shepherd*

APR 15 2005



THE DATA CONTAINED HEREIN WAS OBTAINED FROM SAMPLES THAT ARE REPRESENTATIVE OF THE PRODUCTS IN THE SUBJECT SUPPLY. THIS MATERIAL MEETS THE REQUIREMENTS OF THE LISTED SPECIFICATIONS. REPRODUCED BY ANY EXCEPTIONS OR PURCHASE ORDER REQUIREMENTS. THE RECORDING OF FALSE, MISLEADING OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FEDERAL STATUTES INCLUDING FEDERAL LAW, TITLE 18, CHAPTER 47. THIS DOCUMENT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN CONSENT OF HAYNES INTERNATIONAL, INC. SPECIFICATION MARKING REQUIREMENTS MAY BE WAIVED ON ORDERS REQUIRING MULTIPLE MATERIAL SPECIFICATIONS.

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Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

**HAYNES**  
International

Product Description • Description Produit • Material Beschreibung  
**0.500 x 26 x 52**  
**SE120-004-36MTM REV: 1A**  
**HAYNES(R) 625 ALLOY PLATE**  
**Nadcap CERTIFICATE NUMBER 0089**  
**S400E,S1000E, EN 10204 3.1.B, AS9100**

**CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS**

Invoice No Rechnungs Nr 437972601-0	Date Entered Date De Commande Bestelldatum 04/04/05	Customer Reference Reference Client Kundenbestellidatn P05-01372	Report No. Rapport No Zeugnis Nr 20050525093	Pages of Pages Page de Pages Anzahl der Seiten 3 Of 4
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Sold To • Client • Bestellaufschrit <b>MAJOR TOOL AND MACHINE INC</b> <b>1458 E 19TH ST</b> <b>INDIANAPOLIS</b> <b>IN 46218 USA</b>	Ship To • Destinataire • Bestelldung <b>MAJOR TOOL AND MACHINE INC</b> <b>1458 E 19TH ST</b> <b>INDIANAPOLIS</b> <b>IN 46218 USA</b>
---	--

Specification • Specification • Spezifikation  
PS-489, E

Quantity Ordered Quantite Commandee Bestellmenge 6 PC	Quantity Shipped Quantite Expediee Liefermenge 6 PC
--	--

Annealed Hardness Durete Vieilli Gealtert Haerte	Grain Size Grosser De Grain Korngrösse	Aged Hardness Durete Vieilli Gealtert Haerte	Grain Size Grosser De Grain Korngrösse	Uniformity	Corrosion Rate	Oxidation Rate	Charpy Impact Test			Creep Rupture				
							Toughness Avg Fl. Lbs.	Toughness 1 Fl. Lbs.	Toughness 2 Fl. Lbs.	Toughness 3 Fl. Lbs.	Stress Concentrate Spawning PSI	Hours Heures Stunden	% Elong In % Allong EN % Dehnung	% Elong @ 15 Hrs
93 HRB	(1)(A)	6	6	MPY	MPY									

Certified By • Certifie Par • Bescheinigt Durch: **Tammy Shepherd**  
Certification Technician

5/25/2005 (1) 2742657051

*T. Shepherd*

MTM 016 JUN 15 2005

THE DATA CONTAINED HEREIN WAS OBTAINED FROM SAMPLES THAT ARE REPRESENTATIVE OF THE PRODUCTS IN THE SUBJECT SHIPMENT. THIS MATERIAL MEETS THE REQUIREMENTS OF THE LISTED SPECIFICATIONS AS MODIFIED BY ANY EXCEPTIONS OR PURCHASE ORDER REQUIREMENTS. THE RECORDING OF FAILURE, FURTIONS OR TRANSLUCENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A VIOLATION OF FEDERAL LAW. TITLE 18, CHAPTER 47. THIS DOCUMENT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN CONSENT OF HAYNES INTERNATIONAL, INC. SPECIFICATION MARKING REQUIREMENTS MAY BE WAIVED ON ORDERS REQUIRING MULTIPLE MATERIAL SPECIFICATIONS.

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**HAYNES**  
International  
Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

Product Description • Description Produit • Material Beschreibung  
**0.500 x 26 x 52  
SE120-004-36MTM REV: 1A  
HAYNES(R) 625 ALLOY PLATE -  
Nadcap CERTIFICATE NUMBER 0089  
S400E,S1000E, EN 10204 3.1.B, AS9100**

CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS			
Invoice No No. de Facture Rechnungs Nr 437972001-0	Date Entered Date de Commande Bestelldatum 04/04/05	Customer Reference Reference Client Kundenbestellnr P05-01372	Report No. Rapport No. Zeugnis Nr 20050525093
Sold To • Client • Bestellauftrag <b>MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA</b>		Ship To • Destinataire • Bestelmenge <b>MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA</b>	
Specification • Spezifikation PS-489, E		Quantity Ordered Quantité Commandée Bestelmenge 6 PC	Quantity Shipped Quantité Expédiée Liefermenge 6 PC
<p>All tests and inspections have been performed and results meet specification requirements.  <b>THIS MATERIAL IS FREE FROM MERCURY, CADMIUM, RADIUM, AND ALPHA SOURCE CONTAMINATION.</b>                      Material conforms to PS-483 Revision H as applicable.                      Mill Orders Used: 2742657051 (6 PC)                      (A) 1750 °F to 1950 °F</p>			
<p>Certified By • Certifié Par • Bescheinigt Durch: <b>Tammy Shepherd</b>                      Certification Technician</p> <p style="text-align: right;"><i>T. Shepherd</i></p>			

5/25/2005



MAY 15 2005



JUN 15 2005

Magnetic Permeability Test Witness

Haynes observed Mr. Edwards of Major Tool test the orders listed below for Magnetic Permeability on June 10, 2005, using a Severn Engineering Permeability Indicator #6763, identified as gauge J-1165 in Major Tool's calibration system. The gauge was in calibration and was due for recalibration on December 27, 2005. All items tested below were  $<1.01$  magnetic permeability.

## Heats Tested

2650-5-6801

2650-5-6796

2650-5-6805

2650-5-6808

2650-5-6820

## Purchase Order Numbers

P05-01369

P05-01372

P05-01373

P05-01374

P05-01377

P05-01378

P05-01379

Best Regards,

Marlin C. Losch III

FILE COPY 2

**HAYNES**  
**International**

Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

Product Description • Description Produit • Material Beschreibung  
**0.500 x 32 x 43**  
**SE120-004-10MTM REF:1A**  
**HAYNES(R) 625 ALLOY PLATE**  
**Nadcap CERTIFICATE NUMBER 0089**  
**S400E,S1000E, EN 10204 3.1.B, AS9100**

**CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS**

Invoice No. / No. De Facture: 437985001-0  
Date Entered / Date De Commande: 04/04/05  
Customer Reference / Référence Client: P05-01373  
Report No. / Rapport No: 20050526077  
Pages of Pages / Page de Pages / Anzahl der Seiten: 1 Of 4

Sold To • Client • Bestellanschrift:  
**MAJOR TOOL AND MACHINE INC**  
**1458 E 19TH ST**  
**INDIANAPOLIS**  
**IN 46218 USA**

Ship To • Destinataire • Bestellmenge:  
**MAJOR TOOL AND MACHINE INC**  
**1458 E 19TH ST**  
**INDIANAPOLIS**  
**IN 46218 USA**

Quantity Ordered / Quantité Commandée / Bestellmenge: 6 PC  
Quantity Shipped / Quantité Expédiée / Lieferung: 6 PC

Heat Number Numero de Coque Charge Nr	Chemical Analysis • Analyse Chimique • Chemische Analyse																	
	Al	B	C	Ch-Ta (BSP-ID)	Co	Cr	Cu	Fe	Mn	Mo	Ni	P	S	Si	Ti	V	W	
2650 5 6805	0.21		0.028	3.3	0.2066	21.97	0.1637	4.7452	0.2713	8.67	59.49	0.007	0.004	0.21	0.3211			BUTT END *02
2650 5 6805	3.2994	Ta <0.05	Zr	Bi	Se	La	Pb		Mg	Y	Ag	N	Ca	Al-Ti	Ni+Mo			BUTT END *02

Certified By • Certifié Par • Bescheinigt Durch: **Amanda Aguirre**  
Certification Technician

5/26/2005

**JUN 15 2005**

*Amanda Aguirre*

**JUN 15 2005**

97110 DJY  
L-1

Series 1-6



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FILE COPY 2

**HAYNES**  
International  
Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

Product Description • Description Produit • Material Beschreibung  
0.500 x 32 x 43  
SE120-004-10MTM REF:1A  
HAYNES(R) 625 ALLOY PLATE -  
Nadcap CERTIFICATE NUMBER 0089  
S400E,S100E, EN 10204 3.1.B, AS9100

Invoice No Rechnungs Nr 437985001-0	Date Entered Date De Commande 04/04/05	Customer Reference Reference Client Kundenbestelldaten P05-01373	Report No Rapport No Zeugnis Nr 20050526077	Pages of Pages Page de Pages Anzahl der Seiten 2 Of 4
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Sold To • Client • Bestellanschrift  
**MAJOR TOOL AND MACHINE INC**  
1458 E 19TH ST  
INDIANAPOLIS  
IN 46218 USA

Ship To • Destinataire • Bestellmenge  
**MAJOR TOOL AND MACHINE INC**  
1458 E 19TH ST  
INDIANAPOLIS  
IN 46218 USA

Specification • Specification • Spezifikation		Quantity Ordered Quantité Commandée Bestellemenge 6 PC	Quantity Shipped Quantité Expédiée Liefermenge 6 PC
---	--	---	--

Tensile Test at Room Temperature • Essai De Traction A Temp. Ambiante • Zugversuch Bei Raum Temp.		Tensile Test at Elevated Temperature • Essai De Traction A Hic Temp. Warm Zugversuch	
Ultimate Zugfestigkeit	1% Yield Lim. Elast. A 1% 1% Streckgrenze	0.2% Yield Lim. Elast. A 0.2% 0.2% Streckgrenze	0.2% Yield Lim. Elast. A 0.2% 0.2% Streckgrenze
130000 PSI	61000 PSI	48 %	(1)(A)
		% Elong in % Allong EN % Dehnung	% Elong in % Allong EN % Dehnung
		%RA	%RA
		Stress Concentration Spannung	Hours Heures Stunden
		Test Essai Versuch	Temp.

Certified By • Certifié Par • Bescheinigt Durch: Amanda Aguirre  
Certification Technician  
5/26/2005  
(1) 2743540351

*Amanda Aguirre*

MTM 016  
JUN 15 2005

THE DATA OBTAINED HEREIN WAS OBTAINED FROM SAMPLES THAT REPRESENTATIVE OF THE PROPERTIES IN THE FURNACE TREATMENT. THIS MATERIAL MEETS THE REQUIREMENTS OF THE APPLICABLE SPECIFICATIONS, AS NOTED BY ANY EXCEPTIONS OR PURCHASE ORDER REQUIREMENTS. THE RECORDING OF FALSE, MISLEADING OR UNTRUE STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PENALIZED AS A VIOLATION OF FEDERAL STATUTES INCLUDING FEDERAL LAW TITLE 18, CHAPTER 47. THIS DOCUMENT SHALL NOT BE REPRODUCED, EITHER IN FULL OR PART, WITHOUT THE WRITTEN CONSENT OF HAYNES INTERNATIONAL, INC. SPECIFICATION MARKING REQUIREMENTS MAY BE WAIVED ON ORDERS REQUIRING MULTIPLE MATERIAL SPECIFICATIONS.

FILE COPY 2

Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

**HAYNES**  
**International**

Product Description • Description • Produit • Material Bestreilbung

0.500 x 32 x 43  
SE120-004-10MTM REF:1A  
HAYNES(R) 625 ALLOY PLATE  
Nadcap CERTIFICATE NUMBER 0089  
S400E,S1000E, EN 10204 3.1.B, AS9100

Invoice No No. de Facture Rechnungs Nr 437985001-0	Date Entered Date de Commande Bestelldatum 04/04/05	Customer Reference Reference Client Kundenbestellkdaten P05-01373	Report No. Report No Zeugnis Nr 20050526077	Pages of Pages Page de Pages Anzahl der Seiten 3 Of 4
---	--	--	--	--

Sold To • Client • Bestellanschrift <b>MAJOR TOOL AND MACHINE INC</b> 1458 E 19TH ST INDIANAPOLIS IN 46218 USA	Ship To • Destinataire • Bestellmeingee <b>MAJOR TOOL AND MACHINE INC</b> 1458 E 19TH ST INDIANAPOLIS IN 46218 USA
--	--

Specification • Specification • Spezifikation PS-489, E	Quantity Ordered Quantite Commandee Bestellmenge 6 PC	Quantity Shipped Quantite Expeditee Liefermenge 6 PC
--	--	---

Annealed Hardness Durete Vieilli Gealtert Haerte	Aged Hardness Durete Vieilli Gealtert Haerte	Grain Size Grosseur De Grain Korngrösse		IGA	Uniformity	Corrosion Rate	Oxidation Rate	Charpy Impact Test			Creep Rupture								
		Predomant Grain Size	Unary. Grain %					Attack Dpth	Corrosion	Test Method	Toughness Avg	Toughness 1	Toughness 2	Toughness 3	Test Essai Versueb	Temp	Stress Constrainting Spannung	Hours Stunden	% Elong In % Allong EN % Dehnung
94 HRB	(D)(A)	5				MPY													

Certified By • Certifie Par • Bescheinigt Durch: Annanda Aguirre  
Certification Technician

(1) 2743540351

5/26/2005

*Annanda Aguirre*

**JUN 15 2005**

THE DATA CONTAINED HEREIN WAS OBTAINED FROM SAMPLES THAT ARE REPRESENTATIVE OF THE PRODUCTS IN THIS SUBJECT SHIPMENT. THIS MATERIAL MEETS THE REQUIREMENTS OF THE LISTED SPECIFICATIONS, AS MODIFIED BY ANY EXCEPTIONS OR PURCHASE ORDER REQUIREMENTS. THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FEDERAL STATUTES INCLUDING FEDERAL LAW, TITLE 18, CHAPTER 49. THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT AS FULLY ATTRIBUTED TO THE WRITERS, CONSULTANTS OF HAYNES INTERNATIONAL, INC. IDENTIFICATION NUMBERING REQUIREMENTS MAY BE VIEWED ON ORDERS REQUIRING MULTIPLE MATERIAL SPECIFICATION.

FILE COPY 2

Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

**HAYNES**  
**International**

Product Description • Description Produit • Material Beschreibung

0.500 x 32 x 43  
SE120-004-10MTM REF:1A  
HAYNES(R) 625 ALLOY PLATE  
Nadcap CERTIFICATE NUMBER 0089  
S400E,S1000E, EN 10204 3.1.B, AS9100

<b>CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS</b>				
Invoice No Rechnungs Nr 437985001-0	Date Entered Date De Commande Bestelldatum 04/04/05	Customer Reference Reference Client Kundenbestellkenn P05-01373	Report No. Rapport No Zeugnis Nr 20050526077	Pages of Pages Page de Pages Anzahl der Seiten 4 Of 4
Sold To • Client • Bestellanschrift <b>MAJOR TOOL AND MACHINE INC</b> <b>1458 E 19TH ST</b> <b>INDIANAPOLIS</b> <b>IN 46218 USA</b>		Ship To • Destinataire • Bestellmenge <b>MAJOR TOOL AND MACHINE INC</b> <b>1458 E 19TH ST</b> <b>INDIANAPOLIS</b> <b>IN 46218 USA</b>		
Specification • Spezifikation PS-489, E		Quantity Ordered Quantité Commandée Bestellmenge 6 PC	Quantity Shipped Quantité Expédiée Liefermenge 6 PC	

All tests and inspections have been performed and results meet specification requirements.  
 THIS MATERIAL IS FREE FROM MERCURY, CADMIUM, RADIUM, AND ALPHA SOURCE CONTAMINATION.  
 Material conforms to PS-483 Revision H as applicable.  
 Mill Orders Used: 2743540351 (6 PC)  
 (A) 1750 °F to 1950 °F

Certified By • Certifié Par • Bescheinigt Durch: Amanda Aguirre  
 Certification Technician

5/26/2005

*Amanda Aguirre*

JUN 15 2005



THE DATA CONTAINED HEREIN WAS OBTAINED FROM SAMPLES THAT ARE REPRESENTATIVE OF THE PRODUCTS IN THE SUBJECT SHIPMENT. THIS MATERIAL MEETS THE REQUIREMENTS OF THE LISTED SPECIFICATIONS, MODIFIED BY ANY EXCEPTED OR PURCHASE ORDER REQUIREMENTS. THE REWORKING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR EXTRA ON THIS DOCUMENT MAY BE PUNISHED BY FEDERAL LAWS. THIS DOCUMENT IS THE PROPERTY OF HAYNES INTERNATIONAL, INC. IT IS TO BE USED ONLY FOR THE PURPOSES SPECIFIED HEREIN. REPRODUCTION OR TRANSMISSION OF THIS DOCUMENT WITHOUT THE WRITTEN CONSENT OF HAYNES INTERNATIONAL, INC. IS PROHIBITED.



FIRST METALS & PLASTICS TECHNOLOGIES, INC.

CERTIFICATE OF CONFORMANCE

Part Numbers :

SE120-004 65678-124/8 & 124/9

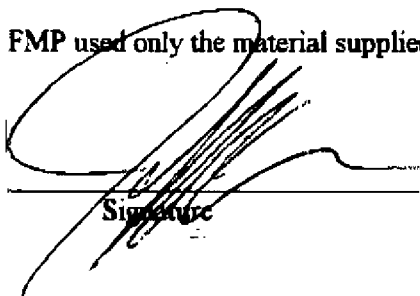
SE120-004 65678-139/8 & 139/9

SE120-004 65678-140/9

We do hereby certify that the material shipped on Purchase Order 5-04709 conforms to all specification requirements called out or referenced on the above purchase order.

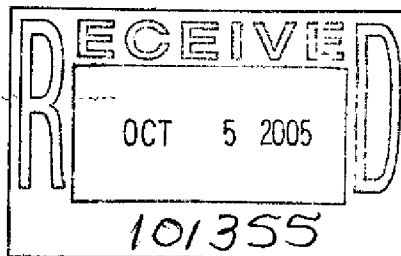
The above items were processed and/or manufactured in accordance with the template and/or gauge, which have been supplied to FMP by the customer.

FMP used only the material supplied to us by the customer.

  
Signature

Q.A.  
Title

10/05/2005  
Date



Lines 2, 3, 6, 20, 21



OCT 05 2005

**Production Part Approval -  
Dimensional Results**

SUPPLIER METALS and PLASTIC TECHNOLOGIES, INC.		PART NUMBER		SE120-004 65678-124/8 & 124/9 SE120-004 65678-139/8 & 139/9 SE120-004 65678-140/9					PO# 05-04709	
NAME OF INSPECTION FACILITY		PART NAME							n/a	
FIRST METALS and PLASTIC TECHNOLOGIES, INC.										
ITEM	DIMENSIONS/SPECIFICATION	<i>Template</i>	SUPPLIER MEASUREMENT RESULTS					OK	REJ	
			1	2	3	4	5			
1	The above items were processed and/or manufactured in accordance with the template and/or gauge, which have been supplied to FMP by the customer.							x		

SIGNATURE *[Handwritten Signature]* TITLE Q.A. DATE 10/05/2005

MTM 016  
OCT 05 2005

FIRST METALS & PLASTICS TECHNOLOGIES, INC.

CERTIFICATE OF CONFORMANCE

Part Number N/A Neutral Port Fitting

We do hereby certify that the parts shipped on 09-02-2005

conforms to all specification requirements requested by Major Tool.

The above items were processed and/or manufactured in accordance with applicable drawings

And/or specifications unless otherwise noted. See the following insert;

There were no drawings supplied for the individual parts. Therefore First Metals used the weld fixture as a template and the request of Major Tool to fit the parts within 0.090 inches to the contour of the fixture.

3 pairs, or 6 parts were made to fit the fixture shown on the attached print. The parts conform to the tolerance of .090 inches gap or less after being clamped to the fixture.

Major Tool & Machine, Inc supplied the material used.

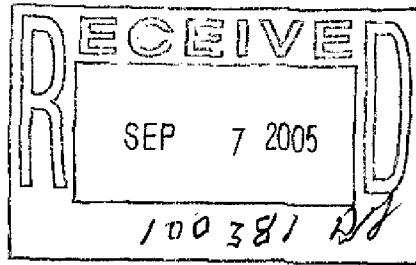
*[Handwritten Signature]*  
Signature

QA  
Title

9/7/05  
Date



SEP 12 2005



*less 1.6*



FILE COPY 2

Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

**HAYNES**  
**International**

Product Description • Description Produit • Material Beschreibung  
**0.500 x 29 x 44**  
**SE120-004-11M1M-REV:1A**  
**HAYNES(R) 625 ALLOY PLATE**  
**Nadcap CERTIFICATE NUMBER 0089**  
**S400E,S1000E, EN 10204 3.1.B, AS9100**

**CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS**

Invoice No No. De Facture Rechnungs Nr 437974001-0	Date Entered Date De Commande Bestelldatum 04/04/05	Customer Reference Référence Client Kundenbestelldaten P05-01374	Report No. Rapport No Zeugnis Nr 20050610030	Pages of Pages Page de Pages Anzahl der Seiten 1 Of 4
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Sold To • Client • Bestellauftrag  
**MAJOR TOOL AND MACHINE INC**  
**1458 E 19TH ST**  
**INDIANAPOLIS**  
**IN 46218 USA**

Ship To • Destinataire • Bestelldunge  
**MAJOR TOOL AND MACHINE INC**  
**1458 E 19TH ST**  
**INDIANAPOLIS**  
**IN 46218 USA**

Specification • Specification • Spezifikation  
PS-489, E

Quantity Ordered Quantité Commandée Bestellmenge 6 PC	Quantity Shipped Quantité Expédiée Liefermenge 6 PC
--	--

Heat Number Numero De Charge Charge Nr	Chemical Analysis • Analyse Chimique • Chemische Analyse															
	Al	B	C	Co	Cr	Cu	Fe	Mn	Mo	Ni	P	S	Si	Ti	V	W
2650 5 6805	0.21		0.028	3.3	21.97	0.1637	4.7452	0.2713	8.67	59.49	0.007	0.004	0.21	0.3211		BUTT END *02
2650 5 6805	3.2994	Ta <0.05	Zr	Bi	Se	Pb	Mg	Y	Ag	N	Ca	Al+Ti	Ni+Co	Ni+Mo		BUTT END *02

Certified By • Certifié Par • Bescheinigt Durch: **Amanda Aguirre**  
Certification Technician

6/10/2005

JUN 15 2005

97109 PA

Lenox 1.6

THE DATA CONTAINED HEREIN WAS OBTAINED FROM SAMPLES THAT ARE REPRESENTATIVE OF THE PRODUCTS IN THE SUBJECT SHIPMENT. THIS MATERIAL MEETS THE REQUIREMENTS OF THE LISTED SPECIFICATIONS AS REQUIRED BY ANY EXCEPTIONS OR PURCHASE ORDER REQUIREMENTS. THE RECORDING OF FALSE, FRAUDULENT STATEMENTS OR ERRORS ON THIS DOCUMENT MAY BE PENALIZED AS A VIOLATION OF FEDERAL STATUTES INCLUDING FEDERAL LAWS 18 CHAPTER 48. THIS IS A LIMITED WARRANTY. THIS IS NOT A CONTRACT. THE BUYER SHALL NOT BE RESPONSIBLE, EXCEPT IN FULL, WITHOUT THE WRITTEN CONSENT OF HAYNES INTERNATIONAL, INC. SPECIFICATION REQUIREMENTS MAY BE VARYING OR CHANGING MULTIPLE NATIONAL SPECIFICATIONS.

FILE COPY 2

Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

**HAYNES**  
**International**

Product Description • Description Produit • Material Beschreibung  
**0.500 x 29 x 44**  
**SE120-004-11MTM-REV:1A**  
**HAYNES(R) 625 ALLOY PLATE**  
**Nadcap CERTIFICATE NUMBER 0089**  
**S400E,S1000E, EN 10204 3.1.B, AS9100**

<b>CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZUEUGNIS</b>	
Invoice No No. De Facture Rechnungs Nr 437974001-0	Date Entered Date De Commande Bestelldatum 04/04/05
Customer Reference Reference Client Kundenbestelldaten P05-01374	Report No. Rapport No Zeugnis Nr 20050610030
Pages of Pages Page de Pages Anzahl der Seiten 2 Of 4	

Sold To • Client • Bestellarnschrift <b>MAJOR TOOL AND MACHINE INC</b> <b>1458 E 19TH ST</b> <b>INDIANAPOLIS</b> <b>IN 46218 USA</b>	Ship To • Destinataire • Bestellmenge <b>MAJOR TOOL AND MACHINE INC</b> <b>1458 E 19TH ST</b> <b>INDIANAPOLIS</b> <b>IN 46218 USA</b>
--	---

Specification • Spezifikation <b>PS-489, E</b>	Quantity Ordered Quantite Commandee Bestellmenge <b>6 PC</b>	Quantity Shipped Quantite Expedite Liefermenge <b>6 PC</b>
---	---	---

Tensile Test at Room Temperature • Essai De Traction A Temp. Ambiante • Zugversuch Bei Raum Temp.		Tensile Test at Elevated Temperature • Essai De Traction A Hic. Temp. Warm Zugversuch		Stress Rupture Temperature • Essai A Charge De Rupture Zeilstandversuch	
Ultimate Zugfestigkeit	1% Yield Lim. Elast. A 1% 1% Streckgrenze	0.2% Yield Lim. Elast. A 0.2% 0.2% Streckgrenze	1% Yield Lim. Elast. A 1% 1% Streckgrenze	0.2% Yield Lim. Elast. A 0.2% 0.2% Streckgrenze	% Elong In % Allong EN % Dehnung
<b>130000 PSI</b>					
<b>61000 PSI</b>					
<b>48 %</b>					
<b>(1)(A)</b>					

Certified By • Certifié Par • Bescheinigt Durch: <b>Amanda Aguirre</b> Certification Technician	<b>(1) 2743540351</b>
<i>Amanda Aguirre</i>	<b>6/10/2005</b>

**JUN 15 2005**

THE DATA CONTAINED HEREIN WAS OBTAINED FROM SAMPLES THAT ARE REPRESENTATIVE OF THE PRODUCTS IN THE SUBJECT SHIPMENT. THIS MATERIAL MEETS THE REQUIREMENTS OF THE LIST OF JUSTIFICATIONS, MODIFIED BY ANY EXCEPTIONS OR PURCHASE ORDER REQUIREMENTS. THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FEDERAL STATUTES INCLUDING FEDERAL LAW, TITLE 18, CHAPTER 49. THIS DOCUMENT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN CONSENT OF HAYNES INTERNATIONAL, INC. SPECIFICATION MARKING REQUIREMENTS MAY BE WAIVED ON ORDERS SIGNIFYING MULTIPLE MATERIAL SPECIFICATIONS.

FILE COPY 2

Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902



Product Description • Description Produit • Material Beschreibung  
**0.500 x 29 x 44**  
**SE120-004-11MTM-REV:1A**  
**HAYNES(R) 625 ALLOY PLATE**  
**Nadcap CERTIFICATE NUMBER 0089**  
**S400E,S1000E, EN 10204 3.1.B, AS9100**

CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS			
Invoicer No. No. De Facture Rechnungs Nr. 437974001-0	Date Entered Date De Commande Bestelldatum 04/04/05	Customer Reference Reference Client Kundenbestellnummer P05-01374	Report No. Rapport No. Zeugnis Nr. 20050610030
Sold To • Client • Bestellausschrift <b>MAJOR TOOL AND MACHINE INC</b> <b>1458 E 19TH ST</b> <b>INDIANAPOLIS</b> <b>IN 46218 USA</b>		Ship To • Destinataire • Bestellmenge <b>MAJOR TOOL AND MACHINE INC</b> <b>1458 E 19TH ST</b> <b>INDIANAPOLIS</b> <b>IN 46218 USA</b>	
Quantity Ordered Quantite Commandee Bestellmenge 6 PC		Quantity Shipped Quantite Expediee Liefermenge 6 PC	

Specification • Specification • Spezifikation  
**PS-489, E**

Annealed Hardness Durete Recuit Gezeichnete Haerte	Aged Hardness Durete Vieilli Gealtert Haerte	Grain Size Grosneur De Grain Korngrösse		IGA	Corrosion Rate Corrosion	Oxidation Rate	Charpy Impact Test			Creep Rupture									
		Grain Size Prodominant Grain Size	Recry. Grain Uniformity Grain %				ALA P&W Figure Number	Attack Depth	Corrosion	Test Method	Toughness Avg	Toughness 1	Toughness 2	Toughness 3	Temp	Stress Constatante Spannung	Hours Heures Stunden	% Elong In % Allong EN % Dehnung	% Elong @ 15 Hrs
<b>94 HRB</b>	<b>(1)(A)</b>	<b>5</b>			MPY														

6/10/2005 (1) 2743540351

Certified By • Certifie Par • Bescheinigt Durch: Amanda Aguirre  
Certification Technician

*Amanda Aguirre*  
JUN 15 2005



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FILE COPY 2

**HAYNES International**  
 Haynes International  
 1020 West Park Avenue  
 PO Box 9013  
 Kokomo, Indiana, 46902

**HAYNES International**

Product Description • Description: Produkt • Material Beschreibung

0.500 x 29 x 44  
 SE120-004-11MTM-REV:IA  
 HAYNES(R) 625 ALLOY PLATE  
 Nadcap CERTIFICATE NUMBER 0089  
 S400E,S1000E, EN 10204 3.1.B, AS9100

<b>CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS</b>	
Invoice No. No. De Facture Rechnungs Nr 437974001-0	Date Entered Date De Commande Bestelldatum 04/04/05
Customer Reference Référence Client Kundenbestelldaten P05-01374	Report No. Rapport No Zeugnis Nr 20050610030
Sold To • Client • Bestellauschrift <b>MAJOR TOOL AND MACHINE INC</b> 1458 E 19TH ST INDIANAPOLIS IN 46218 USA	Slip To • Destinataire • Bestellmenge <b>MAJOR TOOL AND MACHINE INC</b> 1458 E 19TH ST INDIANAPOLIS IN 46218 USA
Specification • Spezifikation PS-489, E	Quantity Ordered Quantité Commandée Bestellmenge 6 PC
Quantity Shipped Quantité Expédiée Lieferung 6 PC	

All tests and inspections have been performed and results meet specification requirements.  
 THIS MATERIAL IS FREE FROM MERCURY, CADMIUM, RADIUM, AND ALPHA SOURCE CONTAMINATION.  
 Material conforms to PS-483 Revision H as applicable.  
 Mill Orders Used: 2743540351 (6 PC)  
 (A) 1750 °F to 1950 °F

Certified By • Certifié Par • Bescheinigt Durch: Amanda Aguirre  
 Certification Technician  
 6/10/2005

*Amanda Aguirre*



JUN 15 2005

THE RECORDING OF THESE TESTS WAS OBTAINED FROM SAMPLES THAT ARE REPRESENTATIVE OF THE PRODUCTS IN THE SUBJECT SHIPMENT. THIS MATERIAL MEETS THE REQUIREMENTS OF THE LISTED SPECIFICATIONS, MONITORED BY ASNT, EXCEPT AS PURCHASE ORDER REQUIREMENTS SPECIFY. THE RECORDING OF THESE TESTS IS OUR ESTIMATION. THIS DOCUMENT MAY BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN CONSENT OF HAYNES INTERNATIONAL INC.



JUN 15 2005

Magnetic Permeability Test Witness

Haynes observed Mr. Edwards of Major Tool test the orders listed below for Magnetic Permeability on June 10, 2005, using a Severn Engineering Permeability Indicator #6763, identified as gauge J-1165 in Major Tool's calibration system. The gauge was in calibration and was due for recalibration on December 27, 2005. All items tested below were <1.01 magnetic permeability.

## Heats Tested

2650-5-6801  
2650-5-6796  
2650-5-6805  
2650-5-6808  
2650-5-6820

## Purchase Order Numbers

P05-01369  
P05-01372  
P05-01373  
P05-01374  
P05-01377  
P05-01378  
P05-01379

Best Regards,

Marlin C. Losch III

FIRST METALS & PLASTICS TECHNOLOGIES, INC.

CERTIFICATE OF CONFORMANCE

Part Number Port 12

We do hereby certify that the material shipped on Purchase Order 5-04709 conforms to all specification requirements called out or referenced on the above purchase order.

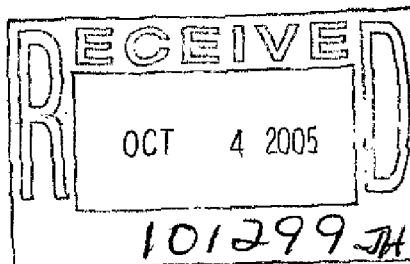
The above items were processed and/or manufactured in accordance with the template and/or gauge, which have been supplied to FMP by the customer.

FMP used only the material supplied to us by the customer.

[Signature] QA 10/04/2005  
Signature Title Date




OCT 06 2005



Lines 1,4,5,7,8,9,10,11,12, 19,22,23,24,25,26,27,28,29,30

### Production Part Approval - Dimensional Results

SUPPLIER FIRST METALS and PLASTIC TECHNOLOGIES, INC.			PART NUMBER Part 4								
NAME OF INSPECTION FACILITY FIRST METALS and PLASTIC TECHNOLOGIES, INC.			PART NAME Part 12								
ITEM	DIMENSION/SPECIFICATION	Tolerance	SUPPLIER MEASUREMENT RESULTS						OK	REV	
			1	2	3	4	5	6			
1	The above items were processed and/or manufactured in accordance with the template and/or gauge, which have been supplied to FMP by the customer.									X	

SIGNATURE  TITLE Q.A. DATE 10/4/2005

  
OCT 06 2005

FIRST METALS & PLASTICS TECHNOLOGIES, INC.

CERTIFICATE OF CONFORMANCE

Part Number N/A Neutral Port Fitting

We do hereby certify that the parts shipped on 09-02-2005

conforms to all specification requirements requested by Major Tool.

The above items were processed and/or manufactured in accordance with applicable drawings

And/or specifications unless otherwise noted. See the following insert;

There were no drawings supplied for the individual parts. Therefore First Metals used the weld fixture as a template and the request of Major Tool to fit the parts within 0.090 inches to the contour of the fixture.

3 pairs, or 6 parts were made to fit the fixture shown on the attached print. The parts conform to the tolerance of .090 inches gap or less after being clamped to the fixture.

Major Tool & Machine, Inc supplied the material used.

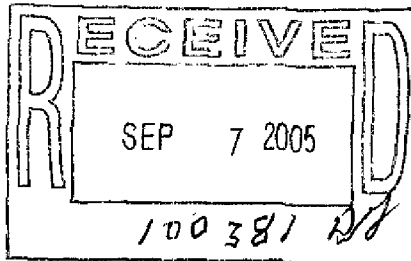
*[Handwritten Signature]*  
Signature

QA  
Title

9/7/05  
Date



SEP 12 2005



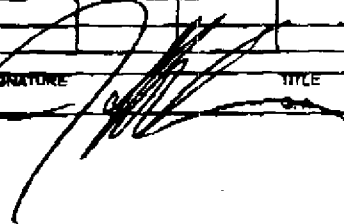
*less 1.6*

**Production Part Approval - Dimensional Results**

SUPPLIER FIRST METALS and PLASTIC TECHNOLOGIES, INC.			PART NUMBER						N/A	
NAME OF INSPECTION FACILITY FIRST METALS and PLASTIC TECHNOLOGIES, INC.			PART NAME						Neutral Port Fitting	
ITEM	DIMENSION/SPECIFICATION	TOLERANCE	SUPPLIER MEASUREMENT RESULTS						OK	REJ
			1	2	3	4	5	6		
1	Gap to Fixture (customer supplied)	Less Than 0.06	100% Gauged Okay	100% Gauged Okay	100% Gauged Okay	100% Gauged Okay	100% Gauged Okay	100% Gauged Okay	X	



SEP 12 2005

SIGNATURE  TITLE DATE 9/2/2005

CUSTOMER COPY

Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

**HAYNES**  
**International**

Product Description • Description Produit • Material Beschreibung  
**0.500 x 20 x .44**  
**SE120-004-12MTM REV:1A**  
**HAYNES(R) 625 ALLOY PLATE**  
**Nadcap CERTIFICATE NUMBER 0089**  
**S400E,S1000E, EN 10204 3.1.B, AS9100**

CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS	
Invoice No No. De Facture Rechnungs Nr 437987001-0	Report No. Rapport No Zeugnis Nr 20050525041
Date Entered Date De Commande Bestelldatum 04/04/05	Pages of Pages Page de Pages Anzahl der Seiten 1 OF 4
Customer Reference Reference Client Kundenbestelldaten P05-01375	Quantity Shipped Quantité Expédiée Liefermenge 6 PC
Ship To • Client • Bestellanschrift MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA	Quantity Ordered Quantité Commandée Bestellmenge 6 PC

Ship To • Destinataire • Bestellmenge	
MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA	Quantity Shipped Quantité Expédiée Liefermenge 6 PC

Specification • Specification • Spezifikation

PS-489, E

Heat Number Numéro De Coûtes Charge Nr	Chemical Analysis • Analyse Chimique • Chemische Analyse														
	Al	B	C	Cr	Cu	Fe	Mn	Mo	Ni	P	S	Si	Ti	V	W
2650 4 6737	0.22		0.03	22.06	0.13	3.94	0.26	8.72	59.8	0.006	0.003	0.17	0.26		BUTT END *03
2650 4 6737	3.61	<0.05													BUTT END *03

Certified By • Certifié Par • Bescheinigt Durch: Amanda Aguirre  
Certification Technician

5/25/2005

MAY 31 2005

96529

1-6 B.A.

THE DATA CONTAINED HEREIN WAS OBTAINED FROM SAMPLES THAT ARE REPRESENTATIVE OF THE PRODUCTS IN THE SUBJECT SHIPMENT. THIS MATERIAL MEETS THE REQUIREMENTS OF THE LISTED SPECIFICATIONS, AS PROVIDED BY ANY EXCEPTIONS OR PURCHASE ORDER REQUIREMENTS. THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FEDERAL STATUTES INCLUDING FEDERAL LAWS, TITLE 18, CHAPTER 17. THIS DOCUMENT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN CONSENT OF HAYNES INTERNATIONAL, INC. SPECIFICATION ADDRESSING REQUIREMENTS MAY BE VIEWED ON OUR WEBSITE AT: WWW.HAYNES.COM

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Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

**HAYNES**  
**International**

Product Description • Description Produit • Material Beschreibung  
**0.500 x 20 x 44**  
**SE120-004-12MTM REV:1A**  
**HAYNES(R) 625 ALLOY PLATE**  
**Nadcap CERTIFICATE NUMBER 0089**  
**S400E, S1000E, EN 10204 3.1.B, AS9100**

**CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS**

Invoice No. No. De Facture Rechnungs Nr. 437987001-0	Date Entered Date De Commande Bestellfaktor 04/04/05	Customer Reference Référence Client Kundenbestellnummern P05-01375	Report No. Rapport No. Zeugnis Nr. 20050525041	Pages of Pages Page de Pages Anzahl der Seiten 2 Of 4
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Sold To • Client • Bestellanschrift  
**MAJOR TOOL AND MACHINE INC**  
**1458 E 19TH ST**  
**INDIANAPOLIS**  
**IN 46218 USA**

Ship To • Destinataire • Bestellmenge  
**MAJOR TOOL AND MACHINE INC**  
**1458 E 19TH ST**  
**INDIANAPOLIS**  
**IN 46218 USA**

Quantity Ordered Quantité Commandée Bestellmenge 6 PC	Quantity Shipped Quantité Expédiée Liefermenge 6 PC
--	--

**Specification • Spécification • Spezifikation**

PS-489, E

Tensile Test at Room Temperature • Essai De Traction A Temp. Ambiante • Zugversuch		Tensile Test at Elevated Temperature • Essai De Traction A Hte. Temp.		Stress Rupture Temperature • Essai A Charge De Rupture Zeitstandversuch	
Ultimate Zugfestigkeit	1% Yield Lim. Elast. A 1% 1% Streckgrenze	0.2% Yield Lim. Elast. A 0.2% 0.2% Streckgrenze	1% Yield Lim. Elast. A 1% 1% Streckgrenze	0.2% Yield Lim. Elast. A 0.2% 0.2% Streckgrenze	% Elong In % Allong EN % Dehnung
133000 PSI	67000 PSI	50 %	(1)(A)		

Certified By • Certifié Par • Bescheinigt Durch: Amanda Aguirre  
Certification Technician

*Amanda Aguirre*

(1) 2741771301

5/25/2005



MAY 31 2005

THE DATA CONTAINED HEREIN WAS OBTAINED FROM SAMPLES THAT ARE REPRESENTATIVE OF THE PRODUCTS IN THE SUBJECT SHIPMENT. THIS MATERIAL MEETS THE REQUIREMENTS OF THE LISTED SPECIFICATIONS, MODIFIED BY ANY EXCEPTIONS OR PURCHASE ORDER REQUIREMENTS. THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FEDERAL STATUTES INCLUDING FEDERAL LAW, TITLE 18, CHAPTER 49. THIS DOCUMENT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN CONSENT OF HAYNES INTERNATIONAL, INC. SPECIFICATION MARKING REQUIREMENTS MAY BE WAIVED ON ORDERS REQUIRING MULTIPLE MATERIAL SPECIFICATIONS.

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1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

**HAYNES**  
**International**

Product Description • Description Produit • Material Beschreibung  
**0.500 x 20 x 44**  
**SE120-004-12MTM REV:1A**  
**HAYNES(R) 625 ALLOY PLATE**  
**Nadcap CERTIFICATE NUMBER 0089**  
**S400E, S1000E, EN 10204 3.1.B, AS9100**

**CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIE • WERKSZEUGNIS**

Invoice No Rechnungs Nr 437987001-0	Date Entered Date De Commande Bestelldatum 04/04/05	Customer Reference Référence Client Kundenbestellnr P05-01375	Report No. Rapport No Zeugnis Nr 20050525041	Pages of Pages Page de Pages Anzahl der Seiten 3 Of 4
---	--	--	---	--

Sold To • Client • Bestellanschrift  
**MAJOR TOOL AND MACHINE INC**  
**1458 E 19TH ST**  
**INDIANAPOLIS**  
**IN 46218 USA**

Ship To • Destinataire • Bestellmenge  
**MAJOR TOOL AND MACHINE INC**  
**1458 E 19TH ST**  
**INDIANAPOLIS**  
**IN 46218 USA**

Quantity Ordered  
Quantité Commandée  
Bestellmenge  
6 PC


Quantity Shipped  
Quantité Expédiée  
Liefermenge  
6 PC

Specification • Specification • Spezifikation		Grain Size Grossueur De Grain Korngrösse		ICG		Uniformity		Corrosion Rate		Oxidation Rate		Charpy Impact Test		Creep Rupture				
Annealed Hardness Dureté Result Geändert Härte	Aged Hardness Dureté Vieilli Geändert Härte	Grain Size Grossueur De Grain Korngrösse	Prevalent Grain Size	Unvary. Grain %	ALG	P&W Figure Number	Attack Depth	Corrosion	Test Method	Toughness Avg	Toughness 1	Toughness 2	Toughness 3	Temp.	Stress Constraine Spannung	Hours Heures Stunden	% Elong In % Allong EN % Dehnung	% Elong @ 15 Hrs
97 HRB	(1)(A)	8.5						MPY										

Certified By • Certifié Par • Bescheinigt Durch: Amanda Aguirre  
Certification Technician

5/25/2005 (1) 2741771301

*Amanda Aguirre*



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**HAYNES**  
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Product Description • Description Produit • Material Beschreibung

0.500 x 20 x 44  
SE120-004-12MTM REV:1A  
HAYNES(R) 625 ALLOY PLATE -  
Nadcap CERTIFICATE NUMBER 0089  
S400E,S1000E, EN 10204 3.1.B, AS9100

CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS

Invoice No No. De Facture Rechnungs Nr. 437987001-0	Date Entered Date De Commande Bestelldatum 04/04/05	Customer Reference Reference Client Kundenbestelldaten POS-01375	Report No. Rapport No. Zeugnis Nr. 20050525041	Pages of Pages Page de Pages Anzahl der Seiten 4 Of 4
Sold To • Client • Bestellanschrift MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA		Ship To • Destinaire • Bestellmenge MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA		
Specification • Spezifikation PS-489, E		Quantity Ordered Quantité Commandée Bestellmenge 6 PC	Quantity Shipped Quantité Expédiée Liefermenge 6 PC	

All tests and inspections have been performed and results meet specification requirements.  
THIS MATERIAL IS FREE FROM MERCURY, CADMIUM, RADIUM, AND ALPHA SOURCE CONTAMINATION.  
Material conforms to PS-483 Revision H as applicable.  
Mill Orders Used: 2741771301 (6 PC)  
(A) 1750 \*P to 1950 \*F

Certified By • Certifié Par • Bescheinigt Durch: Amanda Aguirre  
Certification Technician

*Amanda Aguirre*

5/25/2005



MAY 31 2005

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1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

Product Description • Description Produit • Material Beschreibung

0.500 x 17 x 44  
SE120-004-13MTM REV:1A  
HAYNES(R) 625 ALLOY PLATE  
Nadcap CERTIFICATE NUMBER 0089  
S400E,S1000E, EN 10204 3.1.B, AS9100

<b>CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS</b>	
Invoice No. No. De Facture Rechnungs Nr. 437998001-0	Customer Reference Reference Client Kundenbestelldaten POS-01376
Date Entered Date De Commande Bestelldatum 04/04/05	Report No. Rapport No Zeugnis Nr 20050325044
Pages of Pages Page de Pages Anzahl der Seiten 1 Of 4	

Sold To • Client • Bestellauschrift <b>MAJOR TOOL AND MACHINE INC</b> 1458 E 19TH ST INDIANAPOLIS IN 46218 USA	Ship To • Destinataire • Bestellinenge <b>MAJOR TOOL AND MACHINE INC</b> 1458 E 19TH ST INDIANAPOLIS IN 46218 USA
--	---

Quantity Ordered Quantité Commandée Bestellemenge 6 PC	Quantity Shipped Quantité Expédiée Liefermenge 6 PC
---	--

Heat Number Numero De Coudée Charge Nr.	Chemical Analysis • Analyse Chimique • Chemische Analyse															
	Al	B	C	Co	Cr	Cu	Fe	Mn	Mo	Ni	P	Si	Ti	V	W	
2650 4 6737	0.22		0.03	3.62	0.46	22.06	0.13	3.94	0.26	8.72	0.006	0.003	0.17	0.26		BUTT END *03
2650 4 6737	3.61	<0.05														BUTT END *03

Certified By • Certifié Par • Bescheinigt Durch: Amanda Aguirre  
Certification Technician

*Amanda Aguirre*

MAY 31 2005

MAY 31 2005

96530  
F-6 B.1

5/25/2005

ALL DATA CONTAINED HEREIN WAS OBTAINED FROM SAMPLES THAT ARE REPRESENTATIVE OF THE PRODUCTION OF THE SUBJECT EQUIPMENT. THIS IS A FINAL AS-RECEIVED REPORT. THE LISTED SPECIFICATIONS MAY VARY FROM THE LISTED SPECIFICATIONS. ANY EXCEPTIONS OR PURCHASE REQUIREMENTS SHOULD BE INDICATED IN THE COMMENTS SECTION OF THIS DOCUMENT. THIS IS A FINAL AS-RECEIVED REPORT. THE LISTED SPECIFICATIONS MAY VARY FROM THE LISTED SPECIFICATIONS. ANY EXCEPTIONS OR PURCHASE REQUIREMENTS SHOULD BE INDICATED IN THE COMMENTS SECTION OF THIS DOCUMENT. THIS IS A FINAL AS-RECEIVED REPORT. THE LISTED SPECIFICATIONS MAY VARY FROM THE LISTED SPECIFICATIONS. ANY EXCEPTIONS OR PURCHASE REQUIREMENTS SHOULD BE INDICATED IN THE COMMENTS SECTION OF THIS DOCUMENT.

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PO Box 9013  
Kokomo, Indiana, 46902

**HAYNES**  
**International**

Product Description • Description Produit • Material Beschreibung  
0.500 x 17 x 44  
SE120-004-13MTM REV:1A  
HAYNES(R) 625 ALLOY PLATE -  
Nadcap CERTIFICATE NUMBER 0089  
S400E,S1000E, EN 10204 3.1.B, AS9100

**CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS**  
Report No. / Rapport No. / Zeugnis Nr. / 20050525044  
Pages of Pages / Page de Pages / Anzahl der Seiten / 2 Of 4

Ship To • Destinataire • Bestellmenge  
**MAJOR TOOL AND MACHINE INC**  
1458 E 19TH ST  
INDIANAPOLIS  
IN 46218 USA

Customer Reference / Référence Client / Kundenbestellblatt / P05-01376

Date Entered / Date De Commande / Bestelldatum / 04/04/05

Invoice No. / No. De Facture / Rechnungs Nr. / 437998001-0

Quantity Ordered / Quantité Commandée / Bestellmenge / 6 PC  
Quantity Shipped / Quantité Expédiée / Liefermenge / 6 PC

Tensile Test at Room Temperature • Essai De Traction A Temp. Ambiante • Zugversuch Bei Raum Temp.		Tensile Test at Elevated Temperature • Essai De Traction A Hte.Temp. Warm. Zugversuch		Stress Rupture Temperature • Essai A Charge De Rupture Zeilstandversuch				
Ultimate / Zugfestigkeit	1% Yield / Lim. Elong. A 1% / 1% Streckgrenze	0.2% Yield / Lim. Elong. A 0.2% / 0.2% Streckgrenze	1% Yield / Lim. Elong. A 1% / 1% Streckgrenze	Test / Essai / Versuch	Stress / Contrainte / Spannung	Hours / Heures / Stunden	% Elong In / % Allong EN / % Dehnung	% RA
133000 PSI	67000 PSI	50 %	(U)(A)					

Certified By • Certifié Par • Bescheinigt Durch: Amanda Aguirre  
Certification Technician

*Amanda Aguirre*  
MAY 31 2005  
NITA 05

(1) 2741771301

5/25/2005

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PO Box 9013  
Kokomo, Indiana, 46902

**HAYNES**  
**International**

Product Description • Description Produit • Material Beschreibung  
**0.500 x 17 x 44**  
**SE120-004-13MTM REV:1A**  
**HAYNES(R) 625 ALLOY PLATE**  
**Nadcap CERTIFICATE NUMBER 0089**  
**S400E,S1000E, EN 10204 3.1.B, AS9100**

**CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS**

Invoice No No. De Facture Rechnungs Nr 437998001-0	Date Entered Date De Commande Bestelldatum 04/04/05	Customer Reference Référence Client Kundenbestelldaten P05-01376	Report No. Rapport No Zeugnis Nr 20050525044	Pages of Pages Page de Pages Anzahl der Seiten 3 Of 4
Sold To • Client • Bestellaranschrift <b>MAJOR TOOL AND MACHINE INC</b> <b>1458 E 19TH ST</b> <b>INDIANAPOLIS</b> <b>IN 46218 USA</b>		Ship To • Destinataire • Bestellmenge <b>MAJOR TOOL AND MACHINE INC</b> <b>1458 E 19TH ST</b> <b>INDIANAPOLIS</b> <b>IN 46218 USA</b>		
Specification • Specification • Spezifikation PS-489, E		Quantity Ordered Quantité Commandée Bestellmenge 6 PC	Quantity Shipped Quantité Expédiée Liefermenge 6 PC	

Aged Hardness Dureté Vieilli Gealtert Härte	Grain Size Grossueur De Grain Korngrösse	Grain Size Reary. Grain Grain %	Prehmann Grain Size	IGA	Uniformity	Corrosion Rate	Oxidation Rate	Charpy Impact Test			Creep Rupture								
								Toughness Avg PL. Lbs.	Toughness 2 PL. Lbs.	Toughness 3 PL. Lbs.	Stress Constrainte Spannung PSI	Hours Hours Stunden	% Elong In % Allong EN % Dehnung						
97 HRB	(D)(A)	8.5																	

Certified By • Certifié Par • Bescheinigt Durch: **Amanda Aguirre**  
Certification Technician  
*Amanda Aguirre*

5/25/2005 (1) 2741771301  
**MAY 31 2005**  
MTM US

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**International**

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PO Box 9013  
Kokomo, Indiana, 46902

<b>CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS</b>	
Invoice No. No. De Facture Rechnungs Nr. 437998001-0	Date Entered Date De Commande Bestelldatum 04/04/05
Customer Reference Référence Client Kundenbestelldaten P05-01376	Report No. Rapport No. Zeugnis Nr. 20050525044
Ship To • Client • Bestellantrag MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA	Ship To • Destinaataire • Bestellmenge MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA
Specification • Spécification • Spezifikation PS-489, E	Quantity Ordered Quantité Commandée Bestellmenge 6 PC
	Quantity Shipped Quantité Expédiée Liefermenge 6 PC
Product Description • Description Produit • Material Beschreibung 0.500 x 17 x 44 SE120-00413MTM REV:1A HAYNES(R) 625 ALLOY PLATE - Nadcap CERTIFICATE NUMBER 0089 S400E,S1000E, EN 10204 3.1.B, AS9100	

All tests and inspections have been performed and results meet specification requirements.  
 THIS MATERIAL IS FREE FROM MERCURY, CADMIUM, RADIUM AND ALPHA SOURCE CONTAMINATION.  
 Material conforms to PS-483 Revision H as applicable.  
 Mill Orders Used: 2741771301 (6 PC)  
 (A) 1750 °F to 1950 °F

5/25/2005

Certified By • Certifié Par • Bescheinigt Durch: Amanda Aguirre  
 Certification Technician

*Amanda Aguirre*

MAY 31 2005



FILE COPY 2

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1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

**HAYNES**  
International

Product Description • Description Produit • Material Beschreibung  
**0.500 x 0/0 x 0/0**  
**SE120-004-14MTM REV: 1A**  
**HAYNES(R).625 ALLOY PLATE**  
**Nadcap CERTIFICATE NUMBER 0089**  
**S400E,S1000E, EN 10204 3.1.B, AS9100**

CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS			
Invoice No No. De Facture Rechnungs Nr 439603001-0	Date Entered Date De Commande Bestelldatum 04/25/05	Customer Reference Reference Client Kundenbestelldaten P05-01377	Report No. Rapport No Zeugnis Nr 20050610028
Sold To • Client • Besteltraumschrift <b>MAJOR TOOL AND MACHINE INC</b> <b>1458 E 19TH ST</b> <b>INDIANAPOLIS</b> <b>IN 46218 USA</b>		Ship To • Destinataire • Bestellmenge <b>MAJOR TOOL AND MACHINE INC</b> <b>1458 E 19TH ST</b> <b>INDIANAPOLIS</b> <b>IN 46218 USA</b>	

Quantity Ordered Quantité Commandée Bestellmenge 6 PC	Quantity Shipped Quantité Expeditee Liefermenge 6 PC
Specification • Specification • Spezifikation	

Heat Number Numero De Charge Charge Nr	Chemical Analysis • Analyse Chimique • Chemische Analyse																
	Al	B	C	Ch-In (Nbr-Tn)	Co	Cr	Cu	Fe	Mn	Mo	Ni	P	S	Si	Ti	V	W
2650 5 6796	0.23	0.032	3.72	0.1655	21.78	0.0551	3.9177	0.2854	8.77	59.93	0.007	0.002	0.3	0.3282			BUTT END *03
2650 5 6796	3.7198	<0.05															BUTT END *03

6/10/2005

Certified By • Certifié Par • Bescheinigt Durch: Amanda Aguirre  
Certification Technician

*Amanda Aguirre*

JUN 15 2005



JUN 15 2005  
97108 DM  
Lavis 1-6

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1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

**HAYNES**  
**International**

Product Description • Description Produit • Material Beschreibung  
**0.500 x 0/0 x 0/0**  
**SE120-004-14MTM REV: 1A**  
**HAYNES(R) 625 ALLOY PLATE**  
**Nadcap CERTIFICATE NUMBER 0089**  
**S400E,S100E, EN 10204 3.1.B, AS9100**


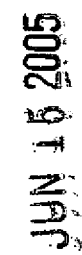

<b>CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS</b>	
Invoice No Rechnungs Nr 439603001-0	Date Entered Date De Commande Bestelldatum 04/25/05
Customer Reference Références Client Kundenbestellnummern P05-01377	Report No. Rapport No. Zeugnis Nr. 20050610028
Pages of Pages Page de Pages Anzahl der Seiten 2 Of 4	

Sold To • Client • Bestellanschrift  
**MAJOR TOOL AND MACHINE INC**  
**1458 E 19TH ST**  
**INDIANAPOLIS**  
**IN 46218 USA**

Ship To • Destinataire • Bestellmenge  
**MAJOR TOOL AND MACHINE INC**  
**1458 E 19TH ST**  
**INDIANAPOLIS**  
**IN 46218 USA**

Specification • Specification • Spezifikation  
PS-489, E

Tensile Test at Room Temperature • Essai De Traction A Temp. Ambiante • Zugversuch Bei Raum Temp.		Tensile Test at Elevated Temperature • Essai De Traction A Hte. Temp. Warm Zugversuch	
Ultimate Zugfestigkeit	1% Yield Lim. Elast. A 1% 1% Streckgrenze	0.2% Yield Lim. Elast. A 0.2% 0.2% Streckgrenze	% Elong In % Along EN % Dehnung
132000 PSI	64000 PSI	46 %	(1)(A)
Quantity Ordered Quantité Commandée Bestellmenge 6 PC		Quantity Shipped Quantité Expédiée Liefermenge 6 PC	

Stress Rupture Temperature • Essai A Charge De Rupture Zeitstandversuch	
Test Essai Versuch	Temp.
Stress Contrainte Spannung	Hours Heures Stunden
% Elong In % Along EN % Dehnung	% RA % RA
Certified By • Certifié Par • Bescheinigt Durch: Amanda Aguirre Certification Technician	
  	
(1) 2743702401	

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FILE COPY 2

Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902



Product Description • Description Produit • Material Beschreibung

0.500 x 0/0 x 0/0  
SE120-004-14MTM REV: 1A  
HAYNES(R) 625 ALLOY PLATE  
Nadcap CERTIFICATE NUMBER 0089  
S400E,S1000E, EN 10204 3.1.B, AS9100

Invoice No No. De Facture Rechnungs Nr 439603001-0	Date Entered Date De Commande Bestelldatum 04/25/05	Customer Reference Reference Client Kundenbestelldaten P05-01377	Report No. Rapport No. Zeugnis Nr 20050610028	Pages of Pages Page de Pages Anzahl der Seiten 3 Of 4
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Sold To • Client • Bestellanwärter MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA	Ship To • Destinaire • Bestelleunge MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA	Quantity Ordered Quantite Commandee Bestellmenge 6 PC	Quantity Shipped Quantite Expediee Liefermenge 6 PC
--	---	--	--

Specification • Specification • Spezifikation  
PS-489, E

Annealed Hardness Durete Vieilli Gelegt Haerte	Aged Hardness Durete Vieilli Gelegt Haerte	Grain Size Grosser Die Grain Korngrösse			IGA	Uniformity	Corrosion Rate		Oxidation Rate	Charpy Impact Test			Creep Rupture						
		Predominant Grain Size	Reqs. Grain	Unex. Grain %			ALA	P&W Figure Number		Attack Depth	Test Method	Toughness Avg	Toughness 1	Toughness 2	Toughness 3	Test Essai Versuch	Temp	Stress Contrainte Spannung	Hours Stunden
99 HRB	(1)(A)	6					MPY												

(1) 2743702401

6/10/2005

Certified By • Certifie Par • Bescheinigt Durch: Amanda Aguirre  
Certification Technician

*Amanda Aguirre*

JUN 15 2005



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FILE COPY 2

Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

**HAYNES**  
**International**

Product Description • Description Produit • Material Beschreibung

0.500 x 0/0 x 0/0  
SE120-004-14MTM REV: 1A  
HAYNES(R) 625 ALLOY PLATE  
Nadcap CERTIFICATE NUMBER 0089  
S400E,S1000E, EN 10204 3.1.B, AS9100

<p><b>CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUCNIS</b></p>	
<p>Invoice No Rechnungs Nr 439603001-0</p>	<p>Date Entered Date De Commande Bestelldatum 04/25/05</p>
<p>Customer Reference Reference Client Kundenbestellidation P05-01377</p>	<p>Report No. Zeugnis Nr 20050610028</p>
<p>Sold To • Client • Bestellanrschrift MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA</p>	<p>Ship To • Destinataire • Bestellneunge MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA</p>

<p>Specification • Spezifikation PS-489, E</p>	<p>Quantity Ordered Quantite Commandee Bestellmenge 6 PC</p>	<p>Quantity Shipped Quantite Expeditee Liefermenge 6 PC</p>
--	--	---

All tests and inspections have been performed and results meet specification requirements.  
THIS MATERIAL IS FREE FROM MERCURY, CADMIUM, RADIUM, AND ALPHA SOURCE CONTAMINATION.  
Material conforms to PS-483 Revision H as applicable.  
Mill Orders Used: 2743702401 (6 PC)  
(A) 1750 °F to 1950 °F

6/10/2005

Certified By • Certifie Par • Bescheinigt Durch: Amanda Aguirre  
Certification Technician

*Amanda Aguirre*



JUN 15 2005

JUN 7 2005

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JUN 15 2005

**Magnetic Permeability Test Witness**

Haynes observed Mr. Edwards of Major Tool test the orders listed below for Magnetic Permeability on June 10, 2005, using a Severn Engineering Permeability Indicator #6763, identified as gauge J-1165 in Major Tool's calibration system. The gauge was in calibration and was due for recalibration on December 27, 2005. All items tested below were  $< 1.01$  magnetic permeability.

## Heats Tested

2650-5-6801

2650-5-6796

2650-5-6805

2650-5-6808

2650-5-6820

## Purchase Order Numbers

POS-01369

POS-01372

POS-01373

POS-01374

POS-01377

POS-01378

POS-01379

Best Regards,

Marlin C. Losch III

FILE COPY 2  
Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

**HAYNES**  
**International**

Product Description • Description Produit • Material Beschreibung

0.500 x 0/0 x 0/0  
SE120-004-14MTM REV: 1A  
HAYNES(B) 625 ALLOY PLATE  
Nadcap CERTIFICATE NUMBER 0089  
S400E,S1000E, EN 10204 3.1.B, AS9100

**CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS**

Invoice No. / No. de Facture: 439603001-0  
Date Entered / Date de Commande: 04/25/05  
Customer Reference / Référence Client: P05-01377  
Report No. / Rapport No.: 20050610028  
Pages of Pages / Page de Pages / Anzahl der Seiten: 1 Of 4

Sold To / Client • Bestellanschrift: MAJOR TOOL AND MACHINE INC  
1458 E 19TH ST  
INDIANAPOLIS  
IN 46218 USA  
Ship To / Destinataire • Bestimmung: MAJOR TOOL AND MACHINE INC  
1458 E 19TH ST  
INDIANAPOLIS  
IN 46218 USA

Quantity Ordered / Quantité Commandée: 6 PC  
Quantity Shipped / Quantité Expédiée / Exportslieferung: 6 PC

Specifications • Spécification • Spezifikation

Heat Number / Numéro de Caillebotte / Charge Nr.	Chemical Analysis • Analyse Chimique • Chemische Analyse																				
	Al	B	C	Cr	Cu	Fe	Min	Mo	Ni	P											
2650 5 6796	0.23		0.032	21.78	0.0551	3.9177	0.2854	8.77	59.93	0.007	0.002	0.3	0.3282							BUTT END *03	
2650 5 6796	3.7198																				BUTT END *03

6/10/2005

Certified By • Certifié Par • Bescheinigt Durch: Amanda Aguirre  
Certification Technician

*Amanda Aguirre*

JUN 15 2005

HTM 016

JUN 15 2005  
97108 DM  
Leino 1-6

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FILE COPY 2  
Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

**HAYNES**  
International

CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEJUGNIS

Invoice No.  
No. De Facture  
Rechnungs Nr  
439603001-0

Date Entered  
Date De Commande  
Bestelldatum  
04/25/05

Customer Reference  
Référence Client  
Kundenscheidnummer  
P05-01377

Pages of Report  
Page de Pages  
Auszahl der Seiten  
2 Of 4

Ship To • Destinataire • Bestellanschrift  
**MAJOR TOOL AND MACHINE INC**  
1458 E 19TH ST  
INDIANAPOLIS  
IN 46218 USA

Ship To • Destinataire • Bestellanschrift  
**MAJOR TOOL AND MACHINE INC**  
1458 E 19TH ST  
INDIANAPOLIS  
IN 46218 USA

Product Description • Description Produits • Material Beschreibung  
0.500 x 0/0 x 0/0  
SE120-004-14MTM REV: 1A  
HAYNES(R) 625 ALLOY PLATE -  
Nadcap CERTIFICATE NUMBER 0089  
S400E.S1000E, EN 10204 3.1.B, AS9100

Product Description • Description Produits • Material Beschreibung  
0.500 x 0/0 x 0/0  
SE120-004-14MTM REV: 1A  
HAYNES(R) 625 ALLOY PLATE -  
Nadcap CERTIFICATE NUMBER 0089  
S400E.S1000E, EN 10204 3.1.B, AS9100

Specification • Spécification

Quantity Ordered  
Quantité Commandée  
Bestellmenge  
6 PC

Quantity Shipped  
Quantité Expédiée  
Liefermenge  
6 PC

MS-489, E

Tensile Test at Room Temperature • Essai De Traction A Temp. Ambiante • Zugversuch

Tensile Test at Elevated Temperature • Essai De Traction A Hie.Temp.

Stress Rupture Temperature • Essai A Charge De Rupture Zeltanschnitt

Ultimate Zugfestigkeit	15 Yield Lim. Elong. A 0.2% 1% Strain 0.2% Strain	0.2% Yield Lim. Elong. A 0.2% 0.2% Strain	% Elong. In % Allong. EN % Dehnung	MSA	MSA
132000 PSI	64000 PSI	46 %	(LXA)		

Ultimate Zugfestigkeit	15 Yield Lim. Elong. A 0.2% 1% Strain 0.2% Strain	0.2% Yield Lim. Elong. A 0.2% 0.2% Strain	% Elong. In % Allong. EN % Dehnung	MSA	MSA

Yield Elong. Verzug	Stress Charge Spannung	% Elong. In % Allong. EN % Dehnung	% RA

Certified By • Certifié Par • Bescheinigt Durch: Amanda Aguirre  
Certification Technician

6/10/2005

(1) 2743702401

*Amanda Aguirre*  
JUN 16 2005  
MTR 026

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Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

**HAYNES**  
International

Product Description • Description Produit • Material Bezeichnung

0.500 x 0/0 x 0/0  
SE120-004-14MTM REV: 1A  
HAYNES(R) 625 ALLOY PLATE  
Nadcap CERTIFICATE NUMBER 0089  
S400E,S1000E, EN 10204 3.1.B, AS9100

CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS

Invoice No / Numéro de Facture: 439603001-0  
Date of Order / Date de Commande: 04/25/05  
Customer Reference / Référence Client: P05-01377  
Report No. / Numéro de Rapport: 20050610028  
Pages of Pages / Page de Pages / Anzahl der Seiten: 3 Of 4

Ship To • Destinataire • Bestellanschrift: MAJOR TOOL AND MACHINE INC, 1458 E 19TH ST, INDIANAPOLIS IN 46218 USA  
Quantity Ordered / Quantité Commandée / Bestellmenge: 6 PC  
Quantity Shipped / Quantité Expédiée / Liefermenge: 6 PC

Specification • Spécification • Spezifikation: PS-489, E

Annealed Hardness / Dureté Recuit / Gefüge Härte	Grain Size / Taille de Grain / Korngröße	IGA	Uniformity	Corrosion Rate	Oxidation Rate	Charpy Impact Test			Creep Report													
						Toughness Avg. / R. Lbs. / Ft. Lbs.	Toughness 1 / Ft. Lbs.	Toughness 2 / Ft. Lbs.	Toughness 3 / Ft. Lbs.	Test Result / Versuch. Temp.	Strain / Déformation / Spreading	PSI	Hours / Durée / Stunden	St. Bar / E. / Along EN / % Deformation	% Elong. / % Elong.							
99 HRB	(0XA) 6																					

Certified By • Certifié Par • Bescheinigt Durch: Amanda Aguirre  
Certification Technician  
6/10/2005 (1) 2743 702401

*Amanda Aguirre*

JUN 15 2005



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Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

**HAYNES**  
**International**

Product Description • Description Produit • Material Bezeichnung

0.500 x 0/0 x 0/0

SE120-004-14MTM REV: 1A

HAYNES(R) 625 ALLOY PLATE

Nadcap CERTIFICATE NUMBER 0089

S400E,S1000E, EN 10204 3.1.B, AS9100

CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS

Invoice No. No. de Facture 439603001-0	Date Entered Date de Commande 04/25/05	Customer Reference Référence Client Kundenscheidlinien P05-01377	Report No. Rapport No. Zeugnis Nr. 20050610028	Pages of Pages Page de Pages Anzahl der Seiten 4 Of 4
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Sold To • Client • Bestelldatenschritt  
**MAJOR TOOL AND MACHINE INC**  
**1458 E 19TH ST**  
**INDIANAPOLIS**  
**IN 46218 USA**

Ship To • Destinataire • Bestelldatenschritt  
**MAJOR TOOL AND MACHINE INC**  
**1458 E 19TH ST**  
**INDIANAPOLIS**  
**IN 46218 USA**

Specification • Specification	Quantity Ordered Quantité Commandée Bestellmenge 6 PC	Quantity Shipped Quantité Expédiée Liefermenge 6 PC
-------------------------------	--	--

All tests and inspections have been performed and results meet specification requirements.  
THIS MATERIAL IS FREE FROM MERCURY, CADMIUM, RADIUM, AND ALPHA SOURCE CONTAMINATION.

Material conforms to PS-483 Revision H as applicable.

Mill Orders Used: 2743702401 (6 PC)

(A) 1750 °F to 1950 °F

Certified By • Certifié Par • Bezeichnet Durch: Amanda Aguirre  
Certification Technician

6/10/2005

*Amanda Aguirre*



JUN 15 2005

JUN 13 2005

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JUN 15 2005

**Magnetic Permeability Test Witness**

Haynes observed Mr. Edwards of Major Tool test the orders listed below for Magnetic Permeability on June 10, 2005, using a Severn Engineering Permeability Indicator #6763, identified as gauge J-1165 in Major Tool's calibration system. The gauge was in calibration and was due for recalibration on December 27, 2005. All items tested below were <1.01 magnetic permeability.

**Items Tested**

2650-5-6801

2650-5-6796

2650-5-6805

2650-5-6808

2650-5-6820

**Purchase Order Numbers**

P05-01369

P05-01372

P05-01373

P05-01374

P05-01377

P05-01378

P05-01379

Best Regards,

Marlin C. Losch III

FILE COPY 2

**HAYNES International**  
 Haynes International  
 1020 West Park Avenue  
 PO Box 9013  
 Kokomo, Indiana, 46902

**HAYNES International**

Product Description • Beschreibung Produkt • Material Beschreibung  
**0.500 x 12 x 50**  
**SE120-004-4MTM REV:1A**  
**HAYNES(R) 625 ALLOY PLATE**  
**Nadcap CERTIFICATE NUMBER 0089**  
**S400E,S1000E, EN 10204 3.1.B, AS9100**

CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKZEUGZEUGNIS  
 Pages of Pages  
 Page de Pages  
 Anzahl der Seiten  
**1 OF 4**

Request No.  
 Numéro de Demande  
**20050526076**

Customer Reference  
 Référence Client  
 Kundenbestellung  
**F05-01379**

Date Entered  
 Date de Commande  
 Bestelldatum  
**06/04/05**

Invoice No.  
 No. De Facture  
 Rechnungs Nr.  
**438000001-0**

Ship To • Destinataire • Beschreibung  
**MAJOR TOOL AND MACHINE INC**  
**1458 E 19TH ST**  
**INDIANAPOLIS**  
**IN 46218 USA**

Sold To • Client • Bestellanweisung  
**MAJOR TOOL AND MACHINE INC**  
**1458 E 19TH ST**  
**INDIANAPOLIS**  
**IN 46218 USA**

Quantity Ordered  
 Quantité Commandée  
 Bestellmenge  
**6 PC**

Quantity Shipped  
 Quantité Expédiée  
 Liefernmenge  
**6 PC**

Specification • Spécification • Spezifikation  
**PS-489, E**

Heat Number Numéro de Charge Charge Nr.	AI	B	C	C	Cr	Cu	Pb	Mn	Mo	Ni	N	Co	Ni+Mo	Si	Ti	V	W	BUTT END *02
2650 S 6820	0.2		0.027	3.44	22.33	0.0685	4.9097	0.3096	8.54	59.05	0.008	0.003		0.14	0.2713			
2650 S 6820	3.4331	<0.05																BUTT END *02

S/26/2005

Certified By • Certifié Par • Bescheinigt Durch: **Amanda Aguirre**  
 Certification Technician

JUN 16 2005

*Amanda Aguirre*

**JUN 16 2005**



977/48 RIV  
 Area 1-6

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FILE COPY 2

Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

**HAYNES**  
International

Product Description • Description Produit • Material Bezeichnung

0.500 x 12 x 50  
SE120-004-4MTM REV:JA  
HAYNES(R) 625 ALLOY PLATE  
Nadcap CERTIFICATE NUMBER 0089  
S400E,S1000E, EN 10204 3.1.B, AS9100

Invoice No. No. De Facture Rechnung Nr. 438020001-0	Date Entered Date De Commande Bestelldatum 04/04/05	Customer Reference Référence Client Kundenbestellnr. P05-01379	Report No. Zuschrift Nr. 20050526076	Pages of Pages Page de Pages Anzahl der Seiten 2 Of 4
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Sold To • Client • Bestellaufschrift  
**MAJOR TOOL AND MACHINE INC**  
1458 E 19TH ST  
INDIANAPOLIS  
IN 46218 USA

Ship To • Destinataire • Bestelldemung  
**MAJOR TOOL AND MACHINE INC**  
1458 E 19TH ST  
INDIANAPOLIS  
IN 46218 USA

Specification • Spécification • Spezifikation  
PS-489, E

Quantity Ordered Quantité Commandée Bestellmenge 6 PC	Quantity Shipped Quantité Expédiée Liefermenge 6 PC
--	--

Tensile Test at Room Temperature • Essai De Traction A Temp. Ambiante • Zugversuch Bei Raum Temp.		Tensile Test at Elevated Temperature • Essai De Traction A Hie Temp. • Zugversuch bei Erhöhter Temp.	
Ullimate Zugfestigkeit	% Elong % Dehnung	Ullimate Zugfestigkeit	% Elong % Dehnung
133000 PSI	45 %	(1)(A)	

Certified By • Certifié Par • Bestätigt Durch: Amanda Aguirre  
Certification Technician

*Amanda Aguirre*

MTM 016 JUN 16 2005

(1) 2043612691

5/26/2005

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FILE COPY 2

**HAYNES**  
**International**

Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

Product Description • Description Produit • Material Beschreibung  
0.500 x 12 x 50  
SE120-004-4M/TM REV:1A  
HAYNES(R) 625 ALLOY PLATE  
Nadcap CERTIFICATE NUMBER 0089  
S409E,S1000E, EN 10204 3.1.B, AS9100

CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS		Report No. Rapport Nr	Pages of Pages Page de Pages Anzahl der Seiten
Date Covered Date de Couverture Relevings Nr	Customer Reference Référence Client Kundenbestellnummer	Ordering No. Commande Nr	3 Of 4
Client • Bestellanweisung MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA	Ship To • Destinataire • Bestellempfänger MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA	Quantity Ordered Quantité Commandée Bestellmenge	Quantity Shipped Quantité Expédiée Livré
Service No. No. De Service Relevings Nr	Customer Reference Référence Client Kundenbestellnummer	6 PC	6 PC
438000001-0	P03-01379	6 PC	6 PC
<p>98 HRB</p> <p>(DXA) 7.5</p>			
<p>Grain Size Grossier De Grain Korngrösse</p> <p>ALA ASTM Design F&amp;W Figure Number</p> <p>Core/Case Test Method NPT</p> <p>Charpy Impact Test Toughness Avg P. Lb. Toughness 1 P. Lb. Toughness 2 P. Lb. Toughness 3 P. Lb.</p> <p>Creep Rupture Stress Corrosion Spanning PSI Test Equiv Veransch Tempe</p> <p>% Elong In U Min % Elong In % Along DR % Distort Heart Harden Strength</p>			

(1) 2043612691

5/26/2005

Certified By • Certifié Par • Bescheinigt Durch: Amanda Aguirre  
Certification Technician

*Amanda Aguirre*



JUN 16 2005

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FILE COPY 1

HAYNES International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

**HAYNES**  
International

Product Description • Description Produkt • Material Beschreibung

0.500 x 12 x 50  
SE120-004-AMJM REV:1A  
HAYNES(R) 625 ALLOY PLATE  
Nacrap CERTIFICATE NUMBER 0089  
S400E,S1000E, EN 10204 3.1.B, AS9100

CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS

Invoice No. No. de facture Rechnung Nr. 43800001-0	Date Entered Date de Comanda Bestelldatum 04/04/05	Customer Reference Reference Client Kundenbestellungen P05-01379	Report No. Rapport Nr. Zeugnis Nr. 20030526076	Pages of Pages Page de Pages Anzahl der Seiten 4 Of 4
Sold To • Client • Bezugsfirma/nr MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA		Ship To • Destinataire • Bestimmung MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA		Quantity Shipped Quantité Expédiée Liefermenge 6 PC
Specification • Specification PS-489-E		Quantity Ordered Quantité Commandée Bestellmenge 6 PC		Quantity Shipped Quantité Expédiée Liefermenge 6 PC

All tests and inspections have been performed and results meet specification requirements.  
 THIS MATERIAL IS FREE FROM MERCURY, CADMIUM, RADIUM, AND ALPHA SOURCE CONTAMINATION.  
 Material conforms to PS-483 Revision H as applicable.  
 Mill Orders Used: 2043612691 (6 PC)  
 (A) 1750 °F to 1950 °F

Certified By • Certifié Par • Bescheinigt Durch: Amanda Aguirre  
 Certification Technicien

*Amanda Aguirre*

5/26/2005

MMN 0016 . 111N 1 6 2005

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<b>Invoice No</b> No. De Facture Rechnungs Nr 438000001-0	<b>Date Entered</b> Date De Commande Bestelldatum 04/04/05	<b>Customer Reference</b> Reference Client Kundenbestelldaten P05-01379	<b>Report No.</b> Rapport No Zeugnis Nr 20050526076	<b>Pages of Pages</b> Page de Pages Anzahl der Seiten 1 Of 4
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**Sold To • Client • Bestelldatumschrift**  
**MAJOR TOOL AND MACHINE INC**  
 1458 E 19TH ST  
 INDIANAPOLIS  
 IN 46218 USA

**Ship To • Destinataire • Bestelldatumschrift**  
**MAJOR TOOL AND MACHINE INC**  
 1458 E 19TH ST  
 INDIANAPOLIS  
 IN 46218 USA

**Specification • Specification • Spezifikation**  
 PS-489, E

**Quantity Ordered**  
Quantite Commandee  
Bestellmenge  
6 PC

**Quantity Shipped**  
Quantite Expeditee  
Liefermenge  
6 PC

**FILE COPY 2**

**HAYNES International**

Haynes International  
 1020 West Park Avenue  
 PO Box 9013  
 Kokomo, Indiana, 46902

**Product Description • Description Produit • Material Beschreibung**  
 0.500 x 12 x 50  
 SE120-004-4MTM REV:1A  
 HAYNES(R) 625 ALLOY PLATE  
 Nadcap CERTIFICATE NUMBER 0089  
 S400E,S1000E, EN 10204 3.1.B, AS9100

Heat Number Numero De Cauda Charge Nr	Chemical Analysis • Analyse Chimique • Chemische Analyse											Butt End *02					
	Al	B	C	Cr	Cu	Fe	Mn	Mo	Ni	P	S		Si	Ti	V	W	
2650 5 6820	0.2		0.027	3.44	0.3649	22.33	0.0685	4.9097	0.3096	8.54	59.05	0.008	0.003	0.14	0.2713		
2650 5 6820	3.4331	<0.05															BUTT END *02

**Certified By • Certifié Par • Bescheinigt Durch:** Amanda Aguirre  
 Certification Technician

*Amanda Aguirre*

**DATE**  
016  
JUN 16 2005

JUN 16 2005

97148 016

Area 1.6

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**CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEJEGNIS**

FILE COPY 2

Invoice No. No. De Facture Rechnungs Nr. 43800001-0	Date Entered Date De Commande Bestelldatum 04/04/05	Customer Reference Reference Client Kundenbestelldaten P05-01379	Report No. Rapport No. Zeugnis Nr. 20050526076	Pages of Pages Page de Pages Anzahl der Seiten 2 Of 4
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**HAYNES**  
**International**

Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

Sold To • Client • Bestelldatenschritt  
**MAJOR TOOL AND MACHINE INC**  
1458 E 19TH ST  
INDIANAPOLIS  
IN 46218 USA

Ship To • Destinataire • Bestelldatenschritt  
**MAJOR TOOL AND MACHINE INC**  
1458 E 19TH ST  
INDIANAPOLIS  
IN 46218 USA

Product Description • Description Produit • Material Beschreibung  
0.500 x 12 x 50  
SE120-004-4MTM REV:1A  
HAYNES(R) 625 ALLOY PLATE  
Nadcap CERTIFICATE NUMBER 0089  
S400E,S1000E, EN 10204 3.1.B, AS9100

Specification • Spezifikation  
PS-489, E

Quantity Ordered  
Quantité Commandée  
Bestellemenge 6 PC

Quantity Shipped  
Quantité Expédiée  
Lieferrmenge 6 PC

Tensile Test at Room Temperature • Essai De Traction A Temp. Ambiante • Zugversuch				Tensile Test at Elevated Temperature • Essai De Traction A Haute Temp.				Stress Rupture Temperature • Essai A Charge De Rupture Zeltstaudversuch							
Ullimate Zugfestigkeit	% Yield Lim. Elast. A 1% 1% Streckgrenze	0.2% Yield Lim. Elast. A 0.2% 0.2% Streckgrenze	% Elong In % Allong En % Dehnung	%RA	Temp.	Ullimate Zugfestigkeit	% Yield Lim. Elast. A 1% 1% Streckgrenze	0.2% Yield Lim. Elast. A 0.2% 0.2% Streckgrenze	% Elong In % Allong En % Dehnung	%RA	Temp.	Stress Contrainte Spannung	Hours Heures Stunden	% Elong In % Allong En % Dehnung	% RA
133000 PSI		66000 PSI	45 %		(D)(A)										

Certified By • Certifié Par • Beschleunigt Durch: **Amanda Aguirre**  
Certification Technician

*Amanda Aguirre*

ATM  
016  
JUN 16 2005

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CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZECUJNIS

FILE COPY 2

Invoice No No. de facture Rechnungs Nr 43800001-0	Date Entered Date de Commande Bestelldatum 04/04/05	Customer Reference Reference Client Kundenbestellnum P05-01379	Report No. Rapport No Zarepis Nr 20050526076	Pages of Pages Page de Pages Anzahl der Seiten 3 Of 4
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**HAYNES**  
International  
Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

Sold To • Client • Bestelldanschrift  
**MAJOR TOOL AND MACHINE INC**  
1458 E 19TH ST  
INDIANAPOLIS  
IN 46218 USA

Ship To • Destinataire • Bestelmenge  
**MAJOR TOOL AND MACHINE INC**  
1458 E 19TH ST  
INDIANAPOLIS  
IN 46218 USA

Product Description • Description Produit • Material Beschreibung  
0.500 x 12 x 50  
SE120-004-4MTM REV:1A  
HAYNES(R) 625 ALLOY PLATE  
Nadcap CERTIFICATE NUMBER 0089  
S400E, S1000E, EN 10204 3.1.B, ASS9100

Specification • Specification • Spezifikation  
PS-489, E

Quantity Ordered  
Quantité Commandée  
Bestelmenge  
6 PC

Quantity Shipped  
Quantité Expédiée  
Liefermenge  
6 PC

Annexed Hardness Durée Result Gérentiel Thème	Age Hardness Durée Vieilli Gérentiel Thème	Grain Size Grossur De Grain Korngrösse	Grain Size Grossur De Grain Korngrösse	Grain Size Grossur De Grain Korngrösse	Grain Size Grossur De Grain Korngrösse	Grain Size Grossur De Grain Korngrösse	Grain Size Grossur De Grain Korngrösse	Grain Size Grossur De Grain Korngrösse	Grain Size Grossur De Grain Korngrösse	IGA	Uniformity	Corrosion Rate Corrosion MPP	Oxidation Rate	Charpy Impact Test					Creep Rupture				
		Grain Size Grossur De Grain Korngrösse	Grain Size Grossur De Grain Korngrösse	Grain Size Grossur De Grain Korngrösse	Grain Size Grossur De Grain Korngrösse	Grain Size Grossur De Grain Korngrösse	Grain Size Grossur De Grain Korngrösse	Grain Size Grossur De Grain Korngrösse	Grain Size Grossur De Grain Korngrösse	ALTA Risque Niveau	Attack Depth	Corrosion MPP	Test Méthode	Toughness Avg ft. Lbs.	Toughness 1 ft. Lbs.	Toughness 2 ft. Lbs.	Toughness 3 ft. Lbs.	Test Essai Versail Tempe	Stress Contrainte Stressure FSt	Hours Heures Stunden	% Elong In % Allong En % Dehnung	% Elong @ 15 TPa	
98 HRB	(1)(A)	7.5																					

Certified By • Certifié Par • Bestelndigt Durch: Amanda Aguirre  
Certification Technician  
5/26/2005  
(1) 2043612691

*Amanda Aguirre*  
MTH  
016  
JUN 16 2005

THE DATA CONTAINED HEREIN WAS OBTAINED THROUGH ANALYSIS THAT ARE REPRESENTATIVE OF THE PRODUCTION IN THIS SUBJECT EQUIPMENT. THIS MATERIAL MEETS THE REQUIREMENTS OF THE LISTED SPECIFICATIONS, AS REQUIRED BY ANY EXCEPTIONS OR MODIFIABLE ORDER REQUIREMENTS. THE REQUIREMENT OF FAILURE FOR TENSION OR FRACTURE IN STAT EXAM 13 OR 807 RIES ON THIS DOCUMENT MAY BE FULFILLED BY A FEDERAL, LOCAL, STATE OR FEDERAL LAW. THE INFORMATION SMALL NOT BE REPRODUCED EXCEPT BY THE TOLL. WITHOUT THE WRITTEN CONSENT OF HAYNES INTERNATIONAL, INC. SPECIFICATION MARKING REQUIREMENTS MAY BE VALID ON OTHERS REQUIREMENTS MULTIPLE MATERIAL SPECIFICATIONS.

CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGSINNS

FILE COPY 2

Invoice No No. De Facture Rechnungs Nr. 43800001-0	Date Entered Date De Commande Bestelldatum 04/04/05	Customer Reference Reference Client Kundenbestellnr. P05-01379	Report No. Rapport No. Zeugnis Nr. 20050526076	Pages of Pages Page de Pages Anzahl der Seiten 4 Of 4	<p><b>HAYNES</b> <b>International</b></p> <p>Kokomo, Indiana, 46902 PO Box 9013 Haynes International 1020 West Park Avenue</p>
Sold To • Client • Bestellantrag <b>MAJOR TOOL AND MACHINE INC</b> 1458 E 19TH ST INDIANAPOLIS IN 46218 USA		Ship To • Destinataire • Bestimmung <b>MAJOR TOOL AND MACHINE INC</b> 1458 E 19TH ST INDIANAPOLIS IN 46218 USA		Product Description • Description • Produkt • Material Beschreibung 0.500 x 12 x 50 SE120-004-MTM REV.1A HAYNES(R) 625 ALLOY PLATE Nadcap CERTIFICATE NUMBER 0089 S400E, S1000E, EN 10204 3.1.B, ASS9100	

Specification • Spécification PS-489, F	Quantity Ordered Quantité Commandée Bestellmenge 6 PC	Quantity Shipped Quantité Expédiée Liefermenge 6 PC
--	--	--

All tests and inspections have been performed and results meet specification requirements.  
 THIS MATERIAL IS FREE FROM MERCURY, CADMIUM, RADIUM, AND ALPHA SOURCE CONTAMINATION.  
 Material conforms to PS-483 Revision H as applicable.  
 Mill Orders Used: 2043612691 (6 PC)  
 (A) 1780 °F to 1950 °F

Certified By • Certifié Par • Bescheinigt Durch: **Amanda Aguirre**  
 Certification Technician  
 5/26/2005

*Amanda Aguirre*



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JUN 16 2005

Magnetic Permeability Test Witness

Haynes observed Mr. Edwards of Major Tool test the orders listed below for Magnetic Permeability on June 10, 2005, using a Severn Engineering Permeability Indicator #6763, identified as gauge J-1165 in Major Tool's calibration system. The gauge was in calibration and was due for recalibration on December 27, 2005. All items tested below were < 1.01 magnetic permeability.

## Heats Tested

2650-5-6801

2650-5-6796

2650-5-6805

~~2650-5-6808~~

2650-5-6820

## Purchase Order Numbers

P05-01369

P05-01372

P05-01373

P05-01374

P05-01377

P05-01378

P05-01379

Best Regards,

Marlin C. Losch III



ORIGINAL

HAYNES International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

**HAYNES**  
International

Product Description • Description Produit • Materialbeschreibung

0.250 x 31.375 x 28.500  
VYSA PORT 6 TUBE  
HAYNES(R) 625 ALLOY PLATE  
Nadcap CERTIFICATE NUMBER 0089  
S400E, S1000E, EN 10204 3.1.B, AS9100

**CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZELIENIS**

Invoice No. 43603 1801-1  
Date Entered 03/11/05  
Customer Reference PO800904  
Report No. 20050425106  
Page of Pages 1 Of 4  
Page de Pages 1 Of 4  
Anzahl der Seiten 1 Of 4

**MAJOR TOOL AND MACHINE INC**  
1458 E 19TH ST  
INDIANAPOLIS  
IN 46218 USA

**MAJOR TOOL AND MACHINE INC**  
1458 E 19TH ST  
INDIANAPOLIS  
IN 46218 USA

Ship To • Destinataire • Bestimmung  
Quantity Ordered  
Quantité Commandée  
Bestellmenge  
6 PC

Specification • Spécification • Spezifikation

ASME-SB-443, 04, UNS# N05625, Gr. 1; ASTM-B-443, 00c1, UNS# N06625, Gr. 1; PS-489, E

Quantity Shipped  
Quantité Expédiée  
Liefermenge  
6 PC

**Chemical Analysis • Analyse Chimique • Chemische Analyse**

Heat Number N° de la Coker Charge N°	Al	U	C	Co	Cr	Cu	Fe	Mn	Mo	Ni	P	S	Si	Ti	V	W	Butt End
2650 4 6730	0.21	0.03	3.61	0.24	21.69	0.07	4.07	0.3	8.49	60.78	0.007	0.002	0.16	0.27			BUTT END *03
2650 4 6731	0.21	0.02	3.54	0.23	21.51	0.08	4.68	0.26	8.59	59.88	0.008	<0.002	0.2	0.29			BUTT END *03
2650 4 6769	0.13	0.026		0.2555	22.32	0.0631	4.499	0.2755	8.75	59.77	0.0072	0.004	0.246	0.2595			BUTT END *01
2650 4 6730	3.56	<0.05															BUTT END *03
2650 4 6731	3.43	<0.05															BUTT END *03
2650 4 6769	3.5399	<0.05															BUTT END *01

Certified by • Certifié Par • Bescheinigt Durch: Troy Reynolds  
Certification / Certification

*Troy Reynolds*

MTM 09  
5/2/05  
95764  
1-12  
B-A

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ORIGINAL

Haynes International  
1029 West Park Avenue  
P.O. Box 9013  
Kokomo, Indiana, 46902

**HAYNES**  
International

Product Description • Investigation Product • Material Description

0.250 x 31.375 x 28.560  
VVSA PORT 6 TUBE  
HAYNES(R) 625 ALLOY PLATE -  
Nadcap CERTIFICATE NUMBER 0089  
S400E,S1000E, EN 10204 3.1.B, AS9100

Invoice No. No. de Facture Rechnungs Nr. 436927091-1	Date Entered Date De Commande Bestelldatum 03/11/05	Customer Reference Référence Client Kaufvertragsnummer P0500964	Report No. Rapport No Zeugnis Nr. 20050429106	Pages of Pages Page de Pages Anzahl der Seiten 2 Of 4
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Sold To • Client • Bestellauftrag  
**MAJOR TOOL AND MACHINE INC**  
1458 E 19TH ST  
INDIANAPOLIS  
IN 46218 USA

Ship To • Destination • Bestimmung  
**MAJOR TOOL AND MACHINE INC**  
1458 E 19TH ST  
INDIANAPOLIS  
IN 46218 USA

Quantity Ordered Quantité Commandée Bestellmenge 6 PC	Quantity Shipped Quantité Expédiée Liefermenge 6 PC
--	--

Specification • Spécification • Spezifikation  
ASME-SB-443, 04, UNS# N06625, Gr. 1; ASTM-B-443, 00c1, UNS# N06625, Gr. 1; PS-489, E

Ultrasonic Sugestivität	Room Temperature • Essai de Traction à Temp. Ambiante • Zugversuch			Elevated Temperature • Essai de Traction à Haute Temp.		
	PC Yield Lim. Elast. A 0.2%	U.T. Yield Lim. Elast. A 0.2%	U.T. Yield Lim. Elast. A 0.2%	PC Yield Lim. Elast. A 0.2%	U.T. Yield Lim. Elast. A 0.2%	U.T. Yield Lim. Elast. A 0.2%
123000 PSI	63000 PSI	51 %	(1)(A)	63000 PSI	51 %	(1)(A)
126000 PSI	64000 PSI	49 %	(2)(A)	64000 PSI	49 %	(2)(A)
132000 PSI	64000 PSI	45 %	(3)(A)	64000 PSI	45 %	(3)(A)

Tensile Test at Room Temperature • Essai de Traction à Temp. Ambiante • Zugversuch	To: Gas Vitesse • Temp.	Elongate Déformation	PC Yield Lim. Elast. A 0.2%	U.T. Yield Lim. Elast. A 0.2%	U.T. Yield Lim. Elast. A 0.2%	Stress Relaxation • Essai A. Charge De Relâchement		
						Stress Contrainte	Time Durée	% RA
123000 PSI								
126000 PSI								
132000 PSI								

Certified By • Certifié Par • Bescheinigt Durch: Troy Reynolds  
Certification Technician

*Troy Reynolds*

MTR 09  
5/2/05

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ORIGINAL

HAYNES International  
1929 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

**HAYNES**  
International

Product Description • Description Produits • Material Beschreibung

0.250 x 31.375 x 28.500  
VVSA PORT 6 TUBE  
HAYNES(R) 625 ALLOY PLATE -  
Nadcap CERTIFICATE NUMBER 0089  
S400E, S1000E, EN 10204 3.1.B, AS9100

**CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS**  
Invoice No. / Numéro de Facture: 436027001-1  
Date of Fabrication / Date de Fabrication: 03/11/05  
Customer Reference / Référence Client: 30506964  
Report No. / Numéro de Rapport: 20050429106  
Pages of Pages / Page de Pages: 3 OF 4

Ship To • Destination • Destinataire: MAJOR TOOL AND MACHINE INC  
1458 E 19TH ST  
INDIANAPOLIS  
IN 46218 USA

Quantity Ordered / Quantité Commandée: 6 PC  
Quantity Shipped / Quantité Expédiée: 6 PC  
Specification • Specification • Spécification: ASME SB-443.04, UNS# N06625, Gr. 1, ASTM-B-443, 08e1, UNS# N06625, Gr. 1, PS-489, E

Annotated Hardness / Dureté Annotée	Aged Hardness / Dureté Vieille / Conditioned Hardness	Grain Size / Grossier de Grain / Norme	IGA	Corrosion Rate	Charpy Impact Test		Creep Rupture	
					Temp. / Temp.	Temp. / Temp.	Temp. / Temp.	Temp. / Temp.
97 HRB 100 HRB 93 HRB	(1)(A) (2)(A) (3)(A)	5 5 6			Temp. / Temp.	Temp. / Temp.	Temp. / Temp.	Temp. / Temp.

Certified By • Certifié Par • Bescheinigt Durch: Troy Reynolds  
Certification Technician

ATMA 09  
5/2/05

*Troy Reynolds*

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ORIGINAL

HAYNES International  
1670 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

**HAYNES**  
**International**

Product Description • Beschreibung Produkt • Material Bezeichnung

0.250 x 31.375 x 28.500  
VYSA PORT 6 TUBE  
HAYNES(R) 625 ALLOY PLATE  
Nadcap CERTIFICATE NUMBER 0089  
S400E, S1000E, EN 10204 3.1.1.B, AS9100

CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS			
Invoice No. No. De Facture Rechnungs Nr.	Date Entered Date De Commandé Bestelldatum	Customer Reference Référence Client Kundenzusatznummer	Report No. Rapport No. Zusatz Nr.
436627001-1	03/11/05	PO560964	20050429106
Sold To • Client • Bestellanwärter <b>MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA</b>		Ship To • Destinataire • Bestimmung <b>MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA</b>	
Specification • Spécification • Spezifikation ASME-SB-443, 04, UNS# S06625, Gr. 1; ASTM-B-443, 06c1, UNS# N06625, Gr. 1; PS-489, E			
Quantity Ordered Quantité Commandée Bestellmenge		Quantity Shipped Quantité Expédiée Liefermenge	
6 PC		6 PC	

All tests and inspections have been performed and results meet specification requirements.  
THIS MATERIAL IS FREE FROM MERCURY, CADMIUM, RADIUM, AND ALPHA SOURCE CONTAMINATION.  
Material conforms to PS-483 Revision H as applicable.  
Mill Orders Used: 2741366701 (1 PC), 2741680501 (3 PC), 2941844501 (2 PC)  
(A) 1750 °F to 1950 °F

4/29/2005

Certified By • Certifié Par • Bescheinigt Durch: **Troy Reynolds**  
Certification Technician

*Troy Reynolds*

RTM 09  
5/2/05

NO. 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

ORIGINAL

**HAYNES**  
International  
Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

Product Description • Beschreibung Produkt • Material Bezeichnung

0.250 x 31.375 x 32.500  
VVS-A PORT 10 TUBE  
HAYNES(R) 625 ALLOY PLATE  
Nadcap CERTIFICATE NUMBER 0089  
S400E,S1000E, EN 10204 3.1.B, AS9100

Invoice No. No. De Facture Rechnungs Nr. 436027002-1	Date Entered Date De Commande Bestelldatum 03/11/05	Customer Reference Requête Client Kundenbestellnummer P0500664	Report No. Rapport No. Zertifikat Nr. 20050429108	Pages of Pages Page de Pages Anzahl der Seiten 1 Of 4
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Sold To • Client • Bestellauftrag  
**MAJOR TOOL AND MACHINE INC**  
1458 E 19TH ST  
INDIANAPOLIS  
IN 46218 USA

Ship To • Destination • Bestimmung  
**MAJOR TOOL AND MACHINE INC**  
1458 E 19TH ST  
INDIANAPOLIS  
IN 46218 USA

Specification • Spécification • Spezifikation  
ASME-SB-443, 04, UNS# N06625, Gr. 1; ASTM-B-443, 09e1, UNS# N06625, Gr. 1; PS-489, E

Quantity Ordered  
Quantité Commandée  
Bestellmenge  
6 PC

Quantity Shipped  
Quantité Expédiée  
Liefermenge  
6 PC

Chemical Analysis • Analyse Chimique • Chemische Analyse

Heat Number Numero de Chaudière Chargé Nr.	Al	H	C	Si	Co	Cr	Cu	Fe	Mn	Mo	Ni	P	S	Si	Ti	V	W	Butt End #
2650 4 6730	0.21	0.03	3.61	0.24	0.23	21.69	0.07	4.07	0.3	8.49	60.78	0.007	0.002	0.16	0.27			BUTT END #03
2650 4 6731	0.21	0.02	3.54	0.23	0.23	21.51	0.08	4.68	0.36	8.59	59.88	0.008	<0.002	0.2	0.29			BUTT END #03
2650 4 6769	0.13	0.026		0.2535	0.2535	22.32	0.0631	4.499	0.2755	8.75	59.77	0.0072	0.004	0.246	0.2595			BUTT END #01
2650 4 6730	3.56	<0.05																BUTT END #03
2650 4 6731	3.43	<0.05																BUTT END #03
2650 4 6769	3.5399	<0.05																BUTT END #01

4/29/2005

Certified By • Certifié Par • Bescheinigt Durch: Troy Reynolds  
Certification Technician

*Troy Reynolds*

MTM 09  
5/2/05

THE HAYNES GROUP HAS BEEN DESIGNATED AS A SUPPLIER OF CRITICAL MATERIALS TO THE U.S. GOVERNMENT. THE HAYNES GROUP HAS BEEN DESIGNATED AS A SUPPLIER OF CRITICAL MATERIALS TO THE U.S. GOVERNMENT. THE HAYNES GROUP HAS BEEN DESIGNATED AS A SUPPLIER OF CRITICAL MATERIALS TO THE U.S. GOVERNMENT. THE HAYNES GROUP HAS BEEN DESIGNATED AS A SUPPLIER OF CRITICAL MATERIALS TO THE U.S. GOVERNMENT.

ORIGINAL

**HAYNES**  
International

Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

Product Description • Description Produit • Material Beschreibung

0.250 x 31.375 x 32.500  
VYSA PORT 10 TUBE  
HAYNES(R) 625 ALLOY PLATE  
Nadcap CERTIFICATE NUMBER 0089  
S400F,S1000E, EN 10204 3.1.B, AS9100

**CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEDGNIS**

Invoice No. No. de Facture Rechnungs Nr. 4360270(2-1	Date Entered Date de Commande Bestelldatum 03/11/05	Customer Reference Reference Client Kundenreferenz P0590964	Report No. Rapport No. Zeugnis Nr. 20050429108	Pages of Pages Page de Pages Anzahl der Seiten 2 Of 4
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Ship To • Client • Bestellerzuschrift  
**MAJOR TOOL AND MACHINE INC**  
1458 E 19TH ST  
INDIANAPOLIS  
IN 46218 USA

Ship To • Destinataire • Bestimmung  
**MAJOR TOOL AND MACHINE INC**  
1458 E 19TH ST  
INDIANAPOLIS  
IN 46218 USA

Quantity Ordered Quantité Commandée Bestellmenge 6 PC	Quantity Shipped Quantité Expédiée Liefermenge 6 PC
--	--

Specification • Specification • Spezifikation  
ASME-SB-443.04, UNS# N06625, Gr. 1; ASTM-B-443.00e1, UNS# N06625, Gr. 1; PS-489, E

Tensile Test at Room Temperature • Essai De Traction A Temp. Ambiante • Zugversuch		Tensile Test at Elevated Temperature • Essai De Traction A Ht. Temp.		Stress Rupture Temperature • Essai A Charge De Rupture Zeitstrahlversuch	
Chemical Zusammensetzung	Tensile Tensile % Yield % Elongation % Elongation	Tensile Tensile % Yield % Elongation % Elongation	Tensile Tensile % Yield % Elongation % Elongation	Tensile Tensile % Yield % Elongation % Elongation	Tensile Tensile % Yield % Elongation % Elongation
123000 PSI	63000 PSI	51 %	(1)(A)	51 %	
126000 PSI	40000 PSI	49 %	(2)(A)	49 %	
132000 PSI	64000 PSI	45 %	(3)(A)	45 %	

Certified By • Certifié Par • Bescheinigt Durch: Troy Reynolds  
Certification Technician

*Troy Reynolds*

MTM 09  
5/2/05

THE HAYNES COMPANY MAKES NO WARRANTY, REPRESENTATION OR GUARANTEE OF THE ACCURACY OF THE INFORMATION CONTAINED HEREIN. THE HAYNES COMPANY SHALL NOT BE RESPONSIBLE FOR ANY DAMAGE TO PERSONS OR PROPERTY ARISING FROM THE USE OF THIS INFORMATION. THE HAYNES COMPANY SHALL NOT BE RESPONSIBLE FOR ANY DAMAGE TO PERSONS OR PROPERTY ARISING FROM THE USE OF THIS INFORMATION.

ORIGINAL

HAYNES International  
1020 West Park Avenue  
PO Box 3013  
Kokomo, Indiana, 46902

**HAYNES**  
International

Product Description • Description Produit • Material Beschreibung

0.250 x 31.375 x 32.500  
VWSA PORT 10 TUBE  
HAYNES(R) 625 ALLOY PLATE  
Nadcap CERTIFICATE NUMBER 0089  
S400E,S1000E, EN 10204 3.1.B, AS9100

Invoice No. No. du Facture Rechnungs-Nr. 434027002-1	Date Entered Date De Commande Bestelldatum 03/11/05	Customer Reference Référence Client Kundenreferenznummer 90500964	Report No. Rapport No. Zeugnis-Nr. 20050429168	Pages of Pages Page de Pages Anzahl der Seiten 3 Of 4
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Sold To • Client • Bestellausschrieb: MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA	Ship To • Destinataire • Bestelmenge: MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA
---	---

Quantity Ordered Quantité Commandée Bestellmenge 6 PC	Quantity Shipped Quantité Expédiée Liefermenge 6 PC
--	--

Anneal Hardness Dureté Result Cégligkeit Härte	Agid Hardness Dureté Yield Géallert Härte	Grain Size Grosser De Grain Körnungssatz		IGA	Uniformity Beseitigung	Corrosion Rate Corrosion	Oxidation Rate	Charpy Impact Test				Creep Rupture		
		Grain Size Grosser De Grain Körnungssatz	Grain Size Grosser De Grain Körnungssatz					Temp.	Energy	Temp.	Energy	Temp.	Energy	
97 HRB	(1)(A)	5												
100 HRB	(2)(A)	5												
93 HRB	(3)(A)	6												

(1) 2741300701 (2) 2741680501 (3) 2941844501

4/29/2005

Certified by • Certifié Par • Bescheinigt Durch: Troy Reynolds  
Certification Technician

MTM 09  
5/2/05

*Troy Reynolds*

THIS CERTIFICATE IS VALID ONLY IF THE PRODUCT IS THE SUBJECT'S PROPERTY. THE MATERIAL MAY BE REWORKED AT ANY TIME WITHOUT NOTICE. ANY REWORKING OF THE PRODUCT SHALL BE APPROVED BY HAYNES INTERNATIONAL. THIS CERTIFICATE IS VALID ONLY IF THE PRODUCT IS THE SUBJECT'S PROPERTY. THE MATERIAL MAY BE REWORKED AT ANY TIME WITHOUT NOTICE. ANY REWORKING OF THE PRODUCT SHALL BE APPROVED BY HAYNES INTERNATIONAL.

<b>CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZUFGNIS</b>	
Invoice No. No. de Facture Rechnungs Nr. 436027042-1	Date Fulfilled Date De Commande Bestelldatum 03/11/05
Customer Reference Référence Client Kundenbestellnummer P05067064	Report No. Rapport No. Zeugnis Nr. 20050429108
Sold To • Client • Destinataire <b>MAJOR TOOL AND MACHINE INC</b> <b>1458 E 19TH ST</b> <b>INDIANAPOLIS</b> <b>IN 46218 USA</b>	Ship To • Destinataire • Bestimmung <b>MAJOR TOOL AND MACHINE INC</b> <b>1458 E 19TH ST</b> <b>INDIANAPOLIS</b> <b>IN 46218 USA</b>
Specification • Specification • Spezifikation ASME-SB-443, 04, UNS# N06625, Gr 1; ASTM-B-443, 00e1, UNS# N06625, Gr 1; PS-489, E	Quantity Ordered Quantité Commandée Bestellmenge 6 PC
Quantity Shipped Quantité Expédiée Liefermenge 6 PC	Product Description • Description Produit • Material Beschreibung <b>0.250 x 31.375 x 32.500</b> <b>VVSA PORT 10 TUBE</b> <b>HAYNES(R) 625 ALLOY PLATE</b> <b>Nadcap CERTIFICATE NUMBER 0089</b> <b>S400E,S1000E, EN 10204 3.1.B, AS9100</b>

ORIGINAL  
**HAYNES**  
**International**  
 Hayes International  
 1020 West Park Avenue  
 PO Box 9013  
 Kokomo, Indiana, 46902

All tests and inspections have been performed and results meet specification requirements.  
 THIS MATERIAL IS FREE FROM MERCURY, CADMIUM, RADIUM AND ALPHA SOURCE CONTAMINATION.  
 Material conforms to PS-483 Revision H as applicable.  
 Mill Orders Used: 2741306701 (1 PC), 2741680571 (3 PC), 2941844501 (2 PC)  
 (A) 1750 °F to 1950 °F

4/29/2005

Certified By • Certifié Par • Bescheinigt Durch: Troy Reynolds  
 Certification Technician

*Troy Reynolds*



5/2/05



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 10 - Item: 135

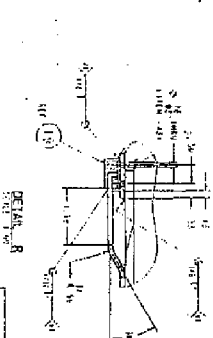
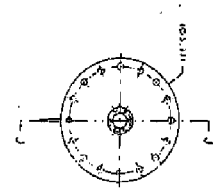
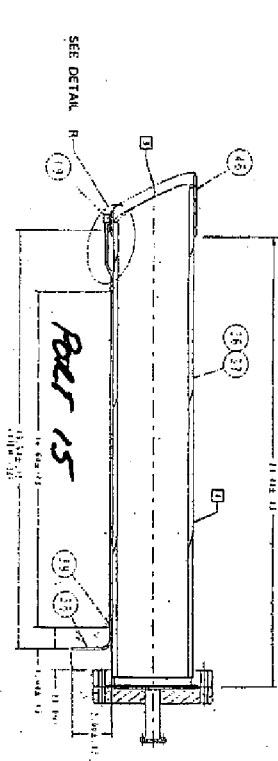
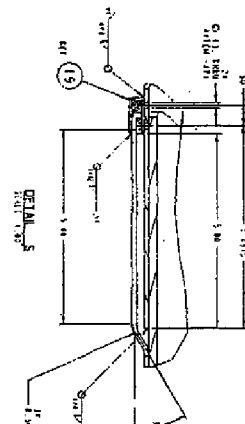
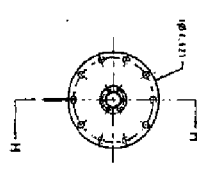
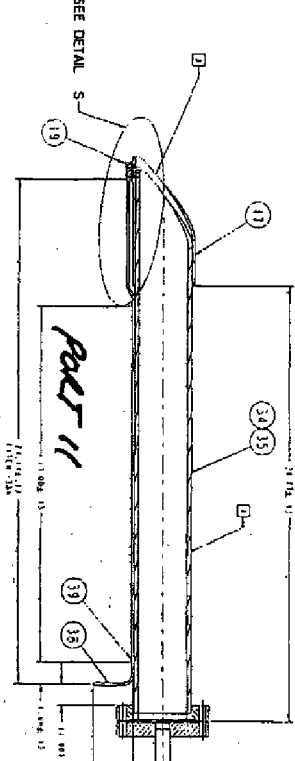
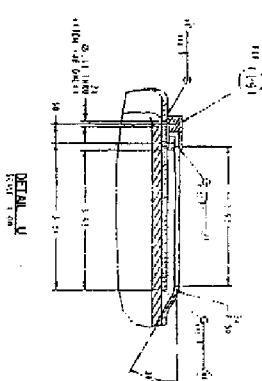
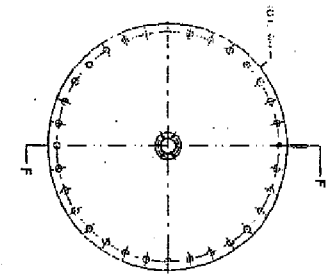
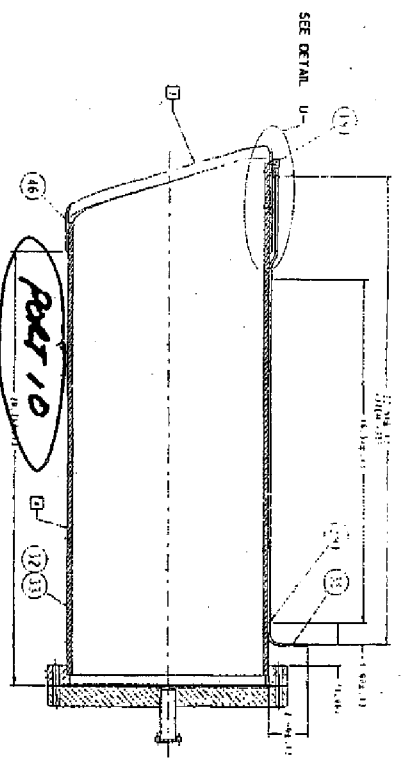
Workorder: 65678/8-0 Sub:225 Op:20

Part: SE120-004 PORT 10 - TUBE, 10.0 OD X 0.188 WALL - SE120-004-19 TUBE, 10.0 OD X 0.188 WALL

Drawing ID: SE120-004 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*				MFG			VISUAL ACCEPT PER	733-J.ST	712-W.	
(20)		VWI - COMPLETED WELD		AWI			PS-480 WPS 380 PPPL	06-21-05	06-21-05	

A

1 OF 10 PAGES - SEE PART 104 SHEET 1



65678/80/225/30/818  
 SE120-004 Part 104  
 1/6/05

RELEASED FOR  
 FABRICATION/INSTALLATION  
 Special Handling by Jerry Siegel

UNIVERSITY MICROFILMS  
 SERIALS ACQUISITION  
 300 N ZEEB RD  
 ANN ARBOR MI 48106  
 TEL: 734 763 0700  
 FAX: 734 763 0700  
 WWW: WWW.UMI.COM

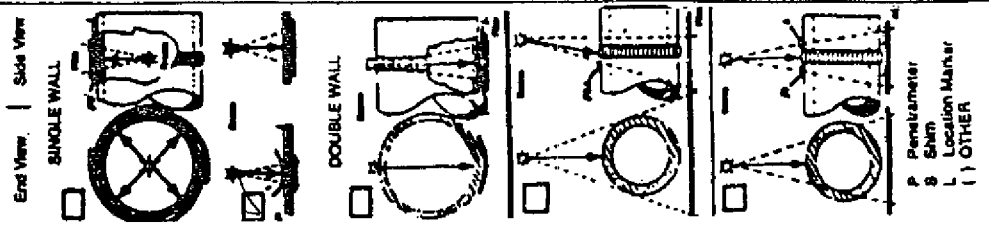
4959

10520 Cheater Road  
Woodlawn, Ohio 45215



CLIENT	Major Tool + Machine	RADIOGRAPHER	Robert Weaver	JOB NO.	13850000-1	P.O. NO.		DATE	7/6/05
ISOTOPE/RAY	IR 192	DIA. X LENNA	.118" x .094"	CURIES/AM	61	FOCAL SPOT SIZE	.151"	SFD	15"
WELD PROCESS	PAW - MAC	MATERIAL SPEC.	625 Inconel	MATERIAL THICKNESS	.25"	SOO	14.75"	TIME	1:30
WELD DESCRIPTION	65678/80/225/30/818 SE120-004 part 10	MATERIAL DIAMETER	10"	PENETRATOR	ASTM 1A	FILM PROCESSING	Auto	FILM TYPE	Kodak T Double
						SHIM	N/A	ACCEPTANCE STANDARD	ASME VIII Div. 1 UW-51

FITTING DESCRIPTION	FILM INTERVAL NUMBER	WELDER IDENTIFICATION	PENETRATOR		SLAG	POROSITY	POROSITY WITH TAIL	CRACK	LACK OF PEN	LACK FUSION	INTERNAL CONVEXITY	INTERNAL CONCAVITY	TUNGSTEN	MELT-THROUGH	BURN-THROUGH	CRATER-PIT	OXIDATION	INTERNAL UNDERCUT	EXTERNAL UNDERCUT	MISSED INDICATIONS	WELD CONTOUR	MISMATCH	FILM ARTIFACT	VISUAL CONCERNS	FILM DENSITY	SEE REMARKS	ACCEPT	REJECT	
			SIZE	QUALITY LEVEL																									
Seam 0-1	1-1	J.S.	1A	.008"																									
1-2	1-2																												
2-3	2-3																												



Robert Weaver 655514/II  
 Cooperheat-MOS Signature

Robert D. Edwards  
 Customer Representative Signature

7/6/05  
 Date

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 10 - Item: 138

Workorder: 65678/8-0 Sub:225 Op:34

Part: SE120-004 PORT 10 - TUBE, 10.0 OD X 0.188 WALL - SE120-004-19 TUBE, 10.0 OD X 0.188 WALL

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*			MASTER GAGE	QA		J-1270	LESS THAN 1.01	840-G.M			A
(10)		Mag. Perm: 1.02 Mu Max						08-16-05			
*			CALIPER	QA		J-1103	.060	840-G.M			A
(20)		ROUNDNESS WITHIN .060"						08-16-05			

ORIGINAL

HAYNES International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

**HAYNES**  
International

Product Description • Description Produit • Materialbeschreibung

0.250 x 31.375 x 28.500  
VYSA PORT 6 TUBE  
HAYNES(R) 625 ALLOY PLATE  
Nadcap CERTIFICATE NUMBER 0089  
S400E, S1000E, EN 10204 3.1.B, AS9100

**CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZELIENIS**

Invoice No. 436031801-1  
Date Entered 03/11/05  
Customer Reference PO800904  
Report No. 20050425106  
Page of Pages 1 of 4  
Page de Pages 1 of 4  
Anzahl der Seiten 1 of 4

**MAJOR TOOL AND MACHINE INC**  
1458 E 19TH ST  
INDIANAPOLIS  
IN 46218 USA

**MAJOR TOOL AND MACHINE INC**  
1458 E 19TH ST  
INDIANAPOLIS  
IN 46218 USA

Ship To • Destinataire • Bestimmung

Quantity Ordered  
Quantité Commandée  
Bestellmenge

Quantity Shipped  
Quantité Expédiée  
Liefermenge  
6 PC

Quantity  
Quantité  
Expédiée  
Liefermenge  
6 PC

Specification • Spécification • Spezifikation

ASME-SB-443, 04, UNS# N05625, Gr. 1; ASTM-B-443, 00c1, UNS# N06625, Gr. 1; PS-489, E

6 PC

Chemical Analysis • Analyse Chimique • Chemische Analyse

Heat Number N° de la Coker Charge N°	Al	U	C	Co	Cr	Cu	Fe	Mn	Mo	Ni	P	S	Si	Ti	V	W	Butt End
2650 4 6730	0.21	0.03	0.24	0.07	4.07	0.07	8.49	0.3	8.49	60.78	0.007	0.002	0.16	0.27			BUTT END 03
2650 4 6731	0.21	0.02	0.23	0.08	4.68	0.08	8.59	0.26	8.59	59.88	0.008	<0.002	0.2	0.29			BUTT END 03
2650 4 6769	0.13	0.026	0.2555	0.0631	4.499	0.0631	8.75	0.2755	8.75	59.77	0.0072	0.004	0.246	0.2595			BUTT END 01
2650 4 6730	3.56	<0.05															BUTT END 03
2650 4 6731	3.43	<0.05															BUTT END 03
2650 4 6769	3.5399	<0.05															BUTT END 01

Certified by • Certifié Par • Bescheinigt Durch: Troy Reynolds  
Certification / Certification

*Troy Reynolds*

MTM 09  
5/2/05  
95764  
1-12  
B-A

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ORIGINAL

Haynes International  
1029 West Park Avenue  
P.O. Box 9013  
Kokomo, Indiana, 46902

**HAYNES**  
International

Product Description • Investigation Product • Material Description

0.250 x 31.375 x 28.560  
VVSA PORT 6 TUBE  
HAYNES(R) 625 ALLOY PLATE -  
Nadcap CERTIFICATE NUMBER 0089  
S400E,S1000E, EN 10204 3.1.B, AS9100

Invoice No. No. de Facture Rechnungs Nr. 436927091-1	Date Entered Date De Commande Bestelldatum 03/11/05	Customer Reference Référence Client Kaufvertragsnummer P0500964	Report No. Rapport No Zeugnis Nr. 20050429106	Pages of Pages Page de Pages Anzahl der Seiten 2 Of 4
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Sold To • Client • Bestellauftrag  
**MAJOR TOOL AND MACHINE INC**  
1458 E 19TH ST  
INDIANAPOLIS  
IN 46218 USA

Ship To • Destination • Bestimmung  
**MAJOR TOOL AND MACHINE INC**  
1458 E 19TH ST  
INDIANAPOLIS  
IN 46218 USA

Quantity Ordered Quantité Commandée Bestellmenge 6 PC	Quantity Shipped Quantité Expédiée Liefermenge 6 PC
--	--

Specification • Spécification • Spezifikation  
ASME-SB-443, 04, UNS# N06625, Gr. 1; ASTM-B-443, 00c1, UNS# N06625, Gr. 1; PS-489, E

Ultrasonic Sugestivität	Room Temperature • Essai de Traction à Temp. Ambiante • Zugversuch			Elevated Temperature • Essai de Traction à Haute Temp.		
	PC Yield Lim. Elast. A 0.2%	PC Yield Lim. Elast. A 0.2%	PC Yield Lim. Elast. A 0.2%	PC Yield Lim. Elast. A 0.2%	PC Yield Lim. Elast. A 0.2%	PC Yield Lim. Elast. A 0.2%
123000 PSI	63000 PSI	51 %	(1)(A)			
126000 PSI	64000 PSI	49 %	(2)(A)			
132000 PSI	64000 PSI	45 %	(3)(A)			

Tensile Test at Room Temperature • Essai de Traction à Temp. Ambiante • Zugversuch	Tensile Test at Elevated Temperature • Essai de Traction à Haute Temp.		
	Temp.	Yield Point Pointe de Flèche	Ultimate Tensile Strength Résistance à la Traction

Certified By • Certifié Par • Bescheinigt Durch: Troy Reynolds  
Certification Technician

*Troy Reynolds*

MTRM 09  
5/2/05

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ORIGINAL

HAYNES International  
1929 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

**HAYNES**  
International

Product Description • Description Produits • Material Beschreibung

0.250 x 31.375 x 28.500  
VVS-A PORT 6 TUBE  
HAYNES(R) 625 ALLOY PLATE -  
Nadcap CERTIFICATE NUMBER 0089  
S400E, S1000E, EN 10204 3.1.B, AS9100

Invoice No Rechnungs Nr 436027001-1	Client • Bestellanmelder MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA	Order Reference Referenz Client Kundenbestellnummer 170506964	Report No Zeichnis Nr 20050429106	Pages of Pages Page de Pages Anzahl der Seiten 3 OF 4
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Sold To • Client • Bestellanmelder  
**MAJOR TOOL AND MACHINE INC**  
1458 E 19TH ST  
INDIANAPOLIS  
IN 46218 USA

Ship To • Destination • Lieferadresse  
**MAJOR TOOL AND MACHINE INC**  
1458 E 19TH ST  
INDIANAPOLIS  
IN 46218 USA

Specification • Specification • Spezifikation

ASME SB-443.04, UNS# N06625, Gr. 1, ASTM-B-443, 08e1, UNS# N06625, Gr. 1, PS-489, E

Quantity Ordered  
Quantité Commandée  
Bestellmenge  
6 PC

Quantity Shipped  
Quantité Expédite  
Liefermenge  
6 PC

Aged Hardness Dureté Vieille Geshärtete Härte	Grain Size Grosser De Grain Korngrösse	IGA	Corrosion Rate	Oxidation Rate	Charpy Impact Test			Creep Rapture		
					Temp.	Energy	Temp.	Time	Strain	
97 HRB 100 HRB 93 HRB	(1)(A) (2)(A) (3)(A)	5 5 6			Temp.	Energy	Temp.	Time	Strain	

Certified By • Certifié Par • Bescheinigt Durch: Troy Reynolds

Certification Technician

4/29/2005

(1) 2741306701 (2) 2741680501 (3) 2941894501

ATMA 09  
5/2/05

Troy Reynolds

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ORIGINAL

HAYNES International  
1670 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

**HAYNES**  
**International**

Product Description • Beschreibung Produkt • Material Bezeichnung

0.250 x 31.375 x 28.500  
VYSA PORT 6 TUBE  
HAYNES(R) 625 ALLOY PLATE  
Nadcap CERTIFICATE NUMBER 0089  
S400E, S1000E, EN 10204 3.1.1.B, AS9100

CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS			
Invoice No. No. De Facture Rechnungs Nr.	Date Entered Date De Commandé Bestelldatum	Customer Reference Réf. Client Kundenzusatznummer	Report No. Rapport No. Zusatz Nr.
436627001-1	03/11/05	PO560964	20050429106
Sold To • Client • Bestellanwärter <b>MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA</b>		Ship To • Destinataire • Bestimmung <b>MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA</b>	
Specification • Spécification • Spezifikation ASME-SB-443, 04, UNS# S06625, Gr. 1; ASTM-B-443, 06c1, UNS# N06625, Gr. 1; PS-489, E			
Quantity Ordered Quantité Commandée Bestellmenge		Quantity Shipped Quantité Expédiée Liefermenge	
6 PC		6 PC	

All tests and inspections have been performed and results meet specification requirements.  
THIS MATERIAL IS FREE FROM MERCURY, CADMIUM, RADIUM, AND ALPHA SOURCE CONTAMINATION.  
Material conforms to PS-483 Revision H as applicable.  
Mill Order Used: 2741366701 (1 PC), 2741680501 (3 PC), 2941844501 (2 PC)  
(A) 1750 °F to 1950 °F

4/29/2005

Certified By • Certifié Par • Bescheinigt Durch: **Troy Reynolds**  
Certification Technician

*Troy Reynolds*

RTM 09  
5/2/05

NO. 10, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.



ORIGINAL

**HAYNES**  
International  
Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

Product Description • Beschreibung Produkt • Material Bezeichnung

0.250 x 31.375 x 32.500  
VVS-A PORT 10 TUBE  
HAYNES(R) 625 ALLOY PLATE  
Nadcap CERTIFICATE NUMBER 0089  
S400E,S1000E, EN 10204 3.1.B, AS9100

**CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZKUCNIS**

Invoice No. No. De Facture Rechnungs Nr. 436027002-1	Date Entered Date De Commande Bestelldatum 03/11/05	Customer Reference Requête Client Kundenbestellnummer P0500664	Report No. Rapport No. Zeugnis Nr. 20050429108	Pages of Pages Page de Page Anzahl der Seiten 1 Of 4
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Sold To • Client • Besteller  
**MAJOR TOOL AND MACHINE INC**  
1458 E 19TH ST  
INDIANAPOLIS  
IN 46218 USA

Ship To • Destinataire • Bestimmung  
**MAJOR TOOL AND MACHINE INC**  
1458 E 19TH ST  
INDIANAPOLIS  
IN 46218 USA

Specification • Spécification • Spezifikation  
ASME-SB-443, 04, UNS# N06625, Gr. 1; ASTM-B-443, 09e1, UNS# N06625, Gr. 1; PS-489, E

Quantity Ordered  
Quantité Commandée  
Bestellmenge  
6 PC

Quantity Shipped  
Quantité Expédiée  
Liefermenge  
6 PC

Chemical Analysis • Analyse Chimique • Chemische Analyse

Heat Number Numero de Chaudière Chargé Nr.	Al	H	C	Si	Co	Cr	Cu	Fe	Mn	Nb	P	S	Si	Ti	V	W	Butt End #
2650 4 6730	0.21	0.03	3.61	0.24	0.23	21.69	0.07	4.07	0.3	8.49	0.007	0.002	0.16	0.27			BUTT END #03
2650 4 6731	0.21	0.02	3.54	0.23	0.23	21.51	0.08	4.68	0.36	8.59	0.008	<0.002	0.2	0.29			BUTT END #03
2650 4 6769	0.13	0.026		0.2535	0.2535	22.32	0.0631	4.499	0.2755	8.75	0.0072	0.004	0.246	0.2595			BUTT END #01
2650 4 6730	3.56	<0.05															BUTT END #03
2650 4 6731	3.43	<0.05															BUTT END #03
2650 4 6769	3.5399	<0.05															BUTT END #01

Certified By • Certifié Par • Bescheinigt Durch: **Froy Reynolds**  
Certification Technician

*Froy Reynolds*

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5/2/05

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ORIGINAL

**HAYNES**  
International

Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

Product Description • Description Produit • Material Beschreibung

0.250 x 31.375 x 32.500  
VYSA PORT 10 TUBE  
HAYNES(R) 625 ALLOY PLATE  
Nadcap CERTIFICATE NUMBER 0089  
S400F,S1000E, EN 10204 3.1.B, AS9100

**CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEDGNIS**

Invoice No. No. De Facture Rechnungs Nr. 4360270(2-1	Date Entered Date De Commande Bestelldatum 03/11/05	Customer Reference Reference Client Kundenreferenz P0590964	Report No. Rapport No. Zeugnis Nr. 20050429108	Pages of Pages Page de Pages Anzahl der Seiten 2 Of 4
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Ship To • Client • Bestellerzuschrift <b>MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA</b>	Ship To • Destinataire • Bestimmung <b>MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA</b>	Quantity Ordered Quantité Commandée Bestelmenge 6 PC	Quantity Shipped Quantité Expédiée Liefermenge 6 PC
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Specification • Specification • Spezifikation  
ASME-SB-443, 04, UNS# N06625, Gr. 1, ASTM-B-443, 00e1, UNS# N06625, Gr. 1; PS-489, E

Tensile Test at Room Temperature • Essai De Traction A Temp. Ambiante • Zugversuch		Tensile Test at Elevated Temperature • Essai De Traction A Ht. Temp.		Stress Rupture Temperature • Essai A Charge De Rupture Zeitstandversuch	
Chemical Zusammensetzung	Tensile % Yield % Elong % Elong IN % Elong IN % Elong IN	Tensile % Yield % Elong % Elong IN % Elong IN % Elong IN	Tensile % Yield % Elong % Elong IN % Elong IN % Elong IN	Tensile % Yield % Elong % Elong IN % Elong IN % Elong IN	Tensile % Yield % Elong % Elong IN % Elong IN % Elong IN
	51 %				
	49 %				
	45 %				

Certified By • Certifié Par • Bescheinigt Durch: Troy Reynolds  
Certification Technician

*Troy Reynolds*

MTM 09  
5/2/05

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ORIGINAL

**HAYNES**  
International

Haynes International  
1020 West Park Avenue  
PO Box 3013  
Kokomo, Indiana, 46902

Product Description • Description Produit • Material Beschreibung  
**0.250 x 31.375 x 32.500  
VVA PORT 10 TUBE  
HAYNES(R) 625 ALLOY PLATE  
Nadcap CERTIFICATE NUMBER 0089  
S400E,S1000E, EN 10204 3.1.B, AS9100**

**CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIE • WERKSZEUGNIS**

Invoice No. No. du Facture Rechnungs-Nr. 4314027002-1	Date Issued Date De Commande Bestelldatum 03/11/05	Customer Reference Réf client Kundenreferenznummer 90500964	Report No. Rapport No Zeugnis-Nr 20050429188	Pages of Pages Page de Pages Anzahl der Seiten 3 Of 4
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Sold To • Client • Bestellausschreiber:  
**MAJOR TOOL AND MACHINE INC  
1458 E 19TH ST  
INDIANAPOLIS  
IN 46218 USA**

Ship To • Destinataire • Bestimmung:  
**MAJOR TOOL AND MACHINE INC  
1458 E 19TH ST  
INDIANAPOLIS  
IN 46218 USA**

Specification • Specification • Spezifikation:  
ASTM-S10-443, 04, UNS# N06625, Gr. 1; ASTM-B-443, 00c.1, UNS# N06625, Gr. 1; PS-489, E

Quantity Ordered  
Quantité Commandée  
Bestellmenge  
6 PC

Quantity Shipped  
Quantité Expédiée  
Liefermenge  
6 PC

Anneal Hardness Dureté Result Cegheit Result	Agal Hardness Dureté Yield Gaiter Hardie	Grain Size Grossier De Grain Körgröße		IGA	Corrosion Rate	Charpy Impact Test			Creep Rupture									
		Grain Size Grossier De Grain Körgröße	Grain Size Grossier De Grain Körgröße			Temp	Temp	Temp	Temp	Temp	Temp							
97 HRB 100 HRB 93 HRB	(1)(A) (2)(A) (3)(A)	5 5 6																

Certified by • Certifié Par • Bescheinigt Durch: Troy Reynolds  
Certification Technician

MTM 09  
5/2/05

*Troy Reynolds*

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ORIGINAL  
**HAYNES**  
 International  
 Haynes International  
 1020 West Park Avenue  
 PO Box 9013  
 Kokomo, Indiana, 46902

**HAYNES**  
 International

Product Description • Description Produits • Material Beschreibung

0.250 x 31.375 x 32.500  
 VVSA PORT 10 TUBE  
 HAYNES(R) 625 ALLOY PLATE  
 Nadcap CERTIFICATE NUMBER 0089  
 S400E, S1000E, EN 10204 3.1.B, AS9100

CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS			
Invoice No No. de Facture Rechnungs Nr	Date Filled Date De Commande Bestelldatum	Customer Reference Reference Client Bestandestitel/daten	Report No. Rapport No Zeugnis Nr
436027042-1	03/11/05	P05067064	20050429108
Sold To • Client • Bestellername/stit		Ship To • Destinataire • Bestimmung	
MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA		MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA	
Specification • Specification • Spezifikation			
ASME-SB-443, 04, UNS# N06625, Gr 1; ASTM-B-443, 00e1, UNS# N06625, Gr 1; PS-489, E		Quantity Ordered Quantite Commandee Bestelldmenge	Quantity Shipped Quantite Expediee Liefermenge
		6 PC	6 PC

All tests and inspections have been performed and results meet specification requirements.  
 THIS MATERIAL IS FREE FROM MERCURY, CADMIUM, RADIUM AND ALPHA SOURCE CONTAMINATION.  
 Material conforms to PS-483 Revision H as applicable.  
 Mill Orders Used: 2741306701 (1 PC), 2741680501 (3 PC), 2941844501 (2 PC)  
 (A) 1750 °F to 1950 °F

4/29/2005

Certified By • Certifié Par • Bescheinigt Durch: Troy Reynolds  
 Certification Technician

*Troy Reynolds*



5/2/05

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 10 - Item: 140

Workorder: 65678/8-0 Sub:230 Op:34

Part: SE120-004 PORT 10 - TUBE, 10.0 OD X 0.188 WALL - SE120-004-19 TUBE, 10.0 OD X 0.188 WALL

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*			MASTER GAGE	QA		J-1270	LESS THAN 1.01	840-G.M			A
(10)		Mag. Perm: 1.02 Mu Max						08-16-05			
*			CALIPER	QA		J-1103	.060	840-G.M			A
(20)		ROUNDNESS WITHIN .060"						08-16-05			

Quality Assurance Documentation for Part ID: SE120-004 PORT 10A - Item: 141

Workorder: 65678/8-0 Sub:20 Op:10

**Part: SE120-004 PORT 10A - PORT 10A SUB-ASSEMBLY - PORT 10A SUB-ASSEMBLY**

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		VWI - INTERIOR COVER PASS / FILLET P10AF		MFG		VISUAL	OK	358-D.M	933-D.L		A
(30)				CWI				09-29-05	09-29-05		
*		VWI - EXTERIOR FILLETS P10AF		MFG		VISUAL	OK	358-D.M	933-D.L		A
(40)					CWI				09-29-05	09-29-05	

Quality Assurance Documentation for Part ID: SE120-004 PORT 10B - Item: 147

Workorder: 65678/8-0 Sub:21 Op:10

**Part: SE120-004 PORT 10B - PORT 10B SUB-ASSEMBLY - PORT 10B SUB-ASSEMBLY**

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		VWI - INTERIOR COVER PASS / FILLET P10BF		MFG		VISUAL	OK	358-D.M	933-D.L		A
(30)				CWI				09-29-05	09-29-05		
*		VWI - EXTERIOR FILLETS P1B0F		MFG		VISUAL	OK	358-D.M	933-D.L		A
(40)					CWI				09-29-05	09-29-05	

Quality Assurance Documentation for Part ID: SE120-004 PORT 11A - Item: 153

Workorder: 65678/8-0 Sub:22 Op:10

**Part: SE120-004 PORT 11A - PORT 11A SUB-ASSEMBLY - PORT 11A SUB-ASSEMBLY**

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		VWI - INTERIOR COVER PASS / FILLET P11AF		MFG		VISUAL	OK	197-T.FI	933-D.L		A
(30)				CWI				11-22-05	11-28-05		
*		VWI - EXTERIOR FILLETS P11AF		MFG		VISUAL	OK	197-T.FI	933-D.L		A
(40)					CWI				11-22-05	11-28-05	





**Eagle Alloys Corporation**

117 West Park Ct. Talbott, TN 37877  
Ph: (423) 586-8738 Fx: (423) 586-7456  
E-Mail: eaglealloys@aol.com

**CERTIFICATE OF COMPLIANCE**

**CUSTOMER**  
Major Tool & Machine, Inc.

**DATE**  
5-23-05

**PURCHASE ORDER NUMBER**  
P05-02476

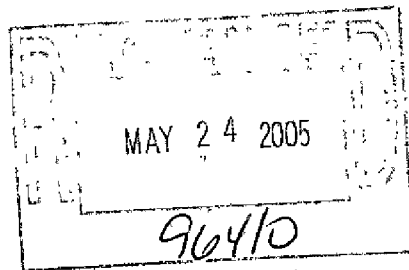
**OUR ORDER NUMBER**  
5-1337

**MATERIAL**                      **SIZE**  
Alloy 625 welded pipe 2-1/2" sch 10

**QTY**  
20 ft

**CONFORMS TO:**  
ASTM-B-705, PS483, PS 489

**RM ID: A8519**



*Line 1  
B.7*

**Certified By:**

*Rodney Bawlin*

*5/24/05*

BRISTOL METALS L.P.  
BRISTOL TN. U.S.A.  
MILL TEST REPORT

TO: EAGLE ALLOYS CORPORATION  
117 WEST PARK CT  
TALBOTT, TN 37277

CUST NO: 557512  
ORDER NO: 14762  
PO NO: 8294  
DATE: 01/21/2005

HEAT NO.: 26504674 2.5" WELDED PIPE SCH. 10S ALLOY 1625 UNS#N06625 ASTM  
RM ID: AD519 B705-03 / ASME SB705-01, 03 ADD. CLASS 2, FULL FINISHED.

ALUMINUM	.2	CARBON	.033
CHROMIUM	22.0024	COBALT	.1849
IRON	4.5278	MANGANESE	.2605
MOLYBDENUM	0.8153	NB+TA	3.5003
NICKEL	59.3567	PHOSPHORUS	.007
SILICON	.19	SULFUR	.002
TITANIUM	.2644		
ELONG %	47	HARD RB	93
TENSILE	131000	YIELD	64000
ANNEALED	YES	EDDY CURRENT	OK
FLATTENING	OK	TENSION	OK
HYDRO PRSSURE	1000 PSI		

Annealed at 1925 Deg. F. and water quenched to  
below 800 Deg. F. in less than 3 minutes

Bristol Metals has a Quality Management System that is in  
compliance with ISO 9001:2000

Hardness in accordance with NACE MR0175  
Bristol Metals does not add Mercury during any manufacturing process.  
Chemical content is % by weight.  
Mechanical test results are in English units (inches and pounds).  
Certification is in accordance with EN10204 (DIN 58049) 3.1.B.  
We certify this report to be true and accurate, according to our records on file  
No weld repairs have been performed on the base material.

Bristol Metals L.P.

*Daniel Singleton*  
Representative

MIBR



Quality Assurance Documentation for Part ID: SE120-004 PORT 11B - Item: 155

Workorder: 65678/8-0 Sub:23 Op:10

**Part: SE120-004 PORT 11B - PORT 11B SUB-ASSEMBLY - PORT 11B SUB-ASSEMBLY**

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		VWI - INTERIOR COVER PASS / FILLET P11BF		MFG		VISUAL	OK	197-T.FI	933-D.L		A
(30)				CWI				11-22-05	11-28-05		
*		VWI - EXTERIOR FILLETS P11BF		MFG		VISUAL	OK	197-T.FI	933-D.L		A
(40)					CWI				11-22-05	11-28-05	

Quality Assurance Documentation for Part ID: SE120-004 PORT 12A - Item: 157

Workorder: 65678/8-0 Sub:2 Op:30

**Part: SE120-004 PORT 12A - PORT 12A SUB-ASSEMBLY - PORT 12A SUB-ASSEMBLY (VERTICAL FABRICATED PORT)**

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*				MFG		VISUAL	ACCEPT PER CUSTOM	709-K.A	933-D.L		A
(10)		VWI ROOT PASS WELD P12A1		CWI			DRAWINGS AND SPE	11-04-05	11-04-05		
*				MFG		VISUAL	GOOD	358-D.M	933-D.L		A
(50)		VWI COVER PASS WELD P12A1		CWI				11-09-05	11-09-05		
*				MFG		VISUAL	OK PER SPEC.	093-M.S	933-D.L		A
(60)		VWI ROOT PASS WELD P12A2		CWI				11-04-05	11-07-05		
*				MFG		VISUAL	GOOD	358-D.M	933-D.L		A
(100)		VWI COVER PASS WELD P12A2		CWI				11-09-05	11-09-05		

Quality Assurance Documentation for Part ID: SE120-004 PORT 12A - Item: 158

Workorder: 65678/8-0 Sub:2 Op:40

**Part: SE120-004 PORT 12A - PORT 12A SUB-ASSEMBLY - PORT 12A SUB-ASSEMBLY (VERTICAL FABRICATED PORT)**

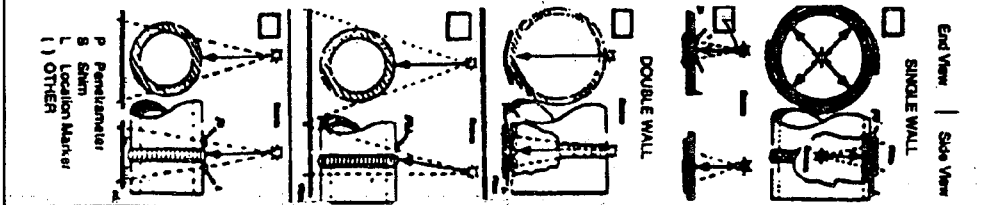
Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*				MFG		VISUAL	GOOD	358-D.M	933-D.L	
(20)		VWI - ROOT PASS P12AF		CWI				11-10-05	11-10-05	A
*				MFG		VISUAL	GOOD	358-D.M	933-D.L	
(50)		VWI - COVER PASS P12AF		CWI				11-11-05	11-11-05	A
*				MFG			FILLET WELDS NOT N	771-B.S	933-D.L	
(60)		VWI - FILLET WELDS P12AF		CWI			EDED	11-11-05	11-11-05	A



4959  
10520 Chester Road  
Woodlawn, Ohio 45215

CLIENT: Major Tool & Machine  
 SOOTER/RAV: DUAL LENS/VIEW: 118" x .079" 67  
 WELD PROCESS: GTAW  
 MATERIAL SPEC: 625 Inconel  
 INTERPRET LEVEL: Robert Weaver / II  
 SFD: 15"  
 MATERIAL DIAMETER: N/A  
 MATERIAL THICKNESS: .5"  
 RADIOGRAPHER: Robert Weaver  
 TIME: 3:15  
 PENETRANT: ASTM 1B  
 SHIM: N/A  
 JOB NO: 13850291  
 FILM TYPE: Kodak MX165 Double  
 ACCEPTANCE STANDARD: ASME VIII, Div 1 UW-51  
 P.O. NO: N/A  
 DATE: 11/15/05  
 DESCRIPTION: 65678/8.0/2/70/818  
 SE100-004 part 124  
 page 1 of 2  
 REMARKS: Density meter - 12105 cal due 2/2/05  
 NCR-18638

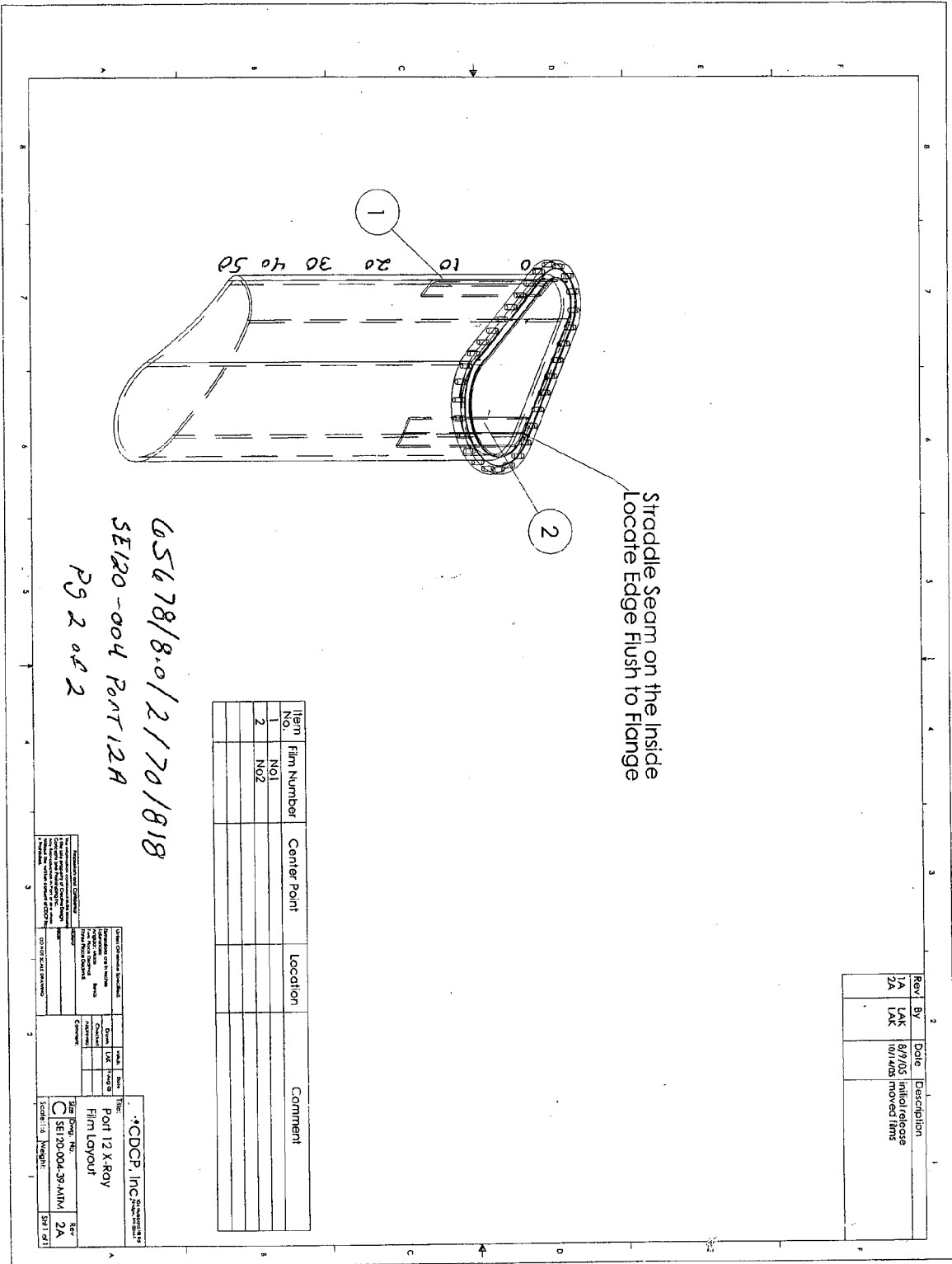
FITTING, SEAM OR FITTING	FILM INTERVAL NUMBER	WELDER IDENTIFICATION	PENETRANT		SLAG	POROSITY	POROSITY WITH TAIL	CRACK	LACK OF PEN	LACK FUSION	INTERNAL CONVEXITY	INTERNAL CONCAVITY	TUNGSTEN	MELT-THROUGH	BURN-THROUGH	CRATER-PIT	OXIDATION	INTERNAL UNDERCUT	EXTERNAL UNDERCUT	ALIGNED INDICATIONS	WELD CONTOUR	MIS-MATCH	FILM ARTIFACT	VISUAL CONCERNS	FILM DENSITY	SEE REMARKS	ACCEPT	REJECT								
			SIZE	QUALITY LEVEL																																
1	0-10	WA	1B	.013"																																
2																																				
1	10-30																																			
1	30-40																																			
1	40-50																																			



Robert Weaver 655514/II  
Cooperheat's Signature

Dwight D. Tharish  
Customer Representative Signature

11/15/05  
Date



Straddle Seam on the Inside  
Locate Edge Flush to Flange

65678/8.0/2/70/818  
SE120-004 Part 12A  
Pg 2 of 2

Item No.	Film Number	Center Point	Location	Comment
1	NO1			
2	NO2			

Rev	By	Date	Description
1A	LAK	8/7/05	Initial release
2A	LAK	10/14/05	moved films

**\*CDCP, Inc. 20050828**

Job: Fort 12 X-Ray  
 Film Layout  
 Part: SE120-004-39-AMM  
 Scale: 1/4" = 1'-0"

Drawn: [ ]  
 Checked: [ ]  
 Approved: [ ]

Sheet No. 2A of 2

Quality Assurance Documentation for Part ID: SE120-004 PORT 12A - Item: 161

Workorder: 65678/8-0 Sub:2 Op:80

Part: SE120-004 PORT 12A - PORT 12A SUB-ASSEMBLY - PORT 12A SUB-ASSEMBLY (VERTICAL FABRICATED PORT)


Drawing ID: SE122-018 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
1* (10)	G6	$\varnothing$ .030 A B C-D DIA. 0.531 THRU +/- 0.005" (32X)	CALIPER	MFG QA		P-925 MACH.	.535 .011 ABCD	234-E.B 11-23-05	854-R.U 11-23-05	A
1* (20)	G7	$\varnothing$ .012 A B C-D DIA. .136 +/- .005 X .38 DP +/- .010" 8-32 UNC .25 DP +/- .010" (8X)	THREAD PLUG GA CALIPER	MFG QA		A-74 P-193	.138 DIA. .378 DP. 8-32 UNC .250 DP.	506-R.LI 11-28-05	503-B.H 11-28-05	A
1* (30)	D2	$\sphericalangle$ 0.015"	INDICATOR	MFG QA		P-920 MACH.	.002	234-E.B 11-23-05	854-R.U 11-23-05	A
1* (40)	D3	.149 +.000/-.008"	DEPTH MICROMET	MFG QA		P-200	.143--.145	506-R.LI 11-28-05	503-B.H 11-28-05	A
1* (50)	D3	1.25 +/- .010"	OD MICROMETER	MFG QA		P-914	1.249 1.251	234-E.B 11-23-05	854-R.U 11-23-05	A
1* (60)	C3	R .03 (tool radius) (2X)	RADIUS GAGE	MFG QA		P-4511	.032	506-R.LI 11-28-05	503-B.H 11-28-05	A
1* (70)	D3	.94 +/- .010"	CALIPER	MFG QA		P-193	.939---.941	506-R.LI 11-28-05	503-B.H 11-28-05	A
1* (90)	G7	.471 +/- .005" (2X)	CALIPER	MFG QA		P-193	.470--.472	506-R.LI 11-28-05	503-B.H 11-28-05	A
1* (100)	G8	R 2.875 (verify tool path)		MFG QA		PGRM.#29203	ACCEPT	506-R.LI 11-28-05	503-B.H 11-28-05	A
1* (150)	E3	BREAK CORNERS R .005 MIN (2X) (visual verification)		MFG		VISUAL	ACCEPT	506-R.LI 11-28-05		A
1* (160)	G5	R 5.563 (verify tool path)		MFG		PGRM#29203	ACCEPT	506-R.LI 11-28-05		A



Quality Assurance Documentation for Part ID: SE120-004 PORT 12A - Item: 162

Workorder: 65678/8-0 Sub:2 Op:120

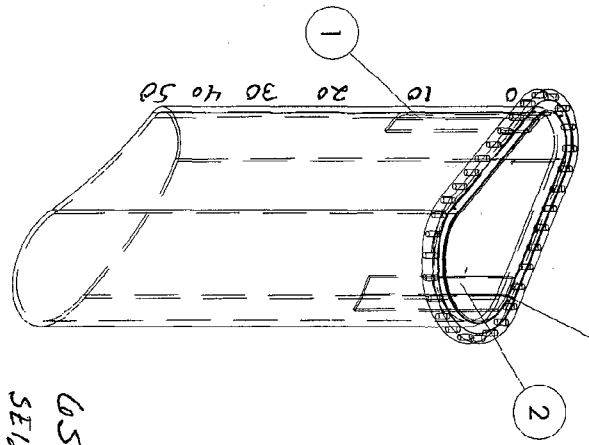
Part: SE120-004 PORT 12A - PORT 12A SUB-ASSEMBLY - PORT 12A SUB-ASSEMBLY (VERTICAL FABRICATED PORT)

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		 0.375	HEIGHT GAGE	QA		J-55	.300	854-R.U			A
(10)		PROFILE VERIFICATION	ELEC. PROBE			J-1057		12-21-05			
*		Magnetic Permeability 1.02 Max	MASTER GAGE	QA		J-1270	>1.05 & <1.1 REF. (N.C. # 18754)	854-R.U			A
(20)								12-21-05			
*		Interior Surface Finish 32 Micro-Inch RA	PROFILOMETER	QA		J-825	30	854-R.U			A
(30)								12-21-05			
*		Material Thickness: .500 +.04 / -.01"	CALIPER	QA		J-1099	.522	854-R.U			A
(40)								12-21-05			
*		CLEANLINESS PER PS483		QA		VISUAL	ACCEPT	854-R.U			A
(50)								12-21-05			
*		Flange face Finish 125 Micro-Inch RA	PROFILOMETER	QA		J-825	80	854-R.U			A
(60)								12-21-05			
*		Magnetic Permeability 1.2 Max (at flange we	MASTER GAGE	QA		J-1270	<1.2	854-R.U			A
(70)								12-21-05			



Rev	By	Date	Description
1A	LAK	8/9/05	Initial release
2A	LAK	10/1/05	Revised limits

Straddle Seam on the Inside  
Locate Edge Flush to Flange

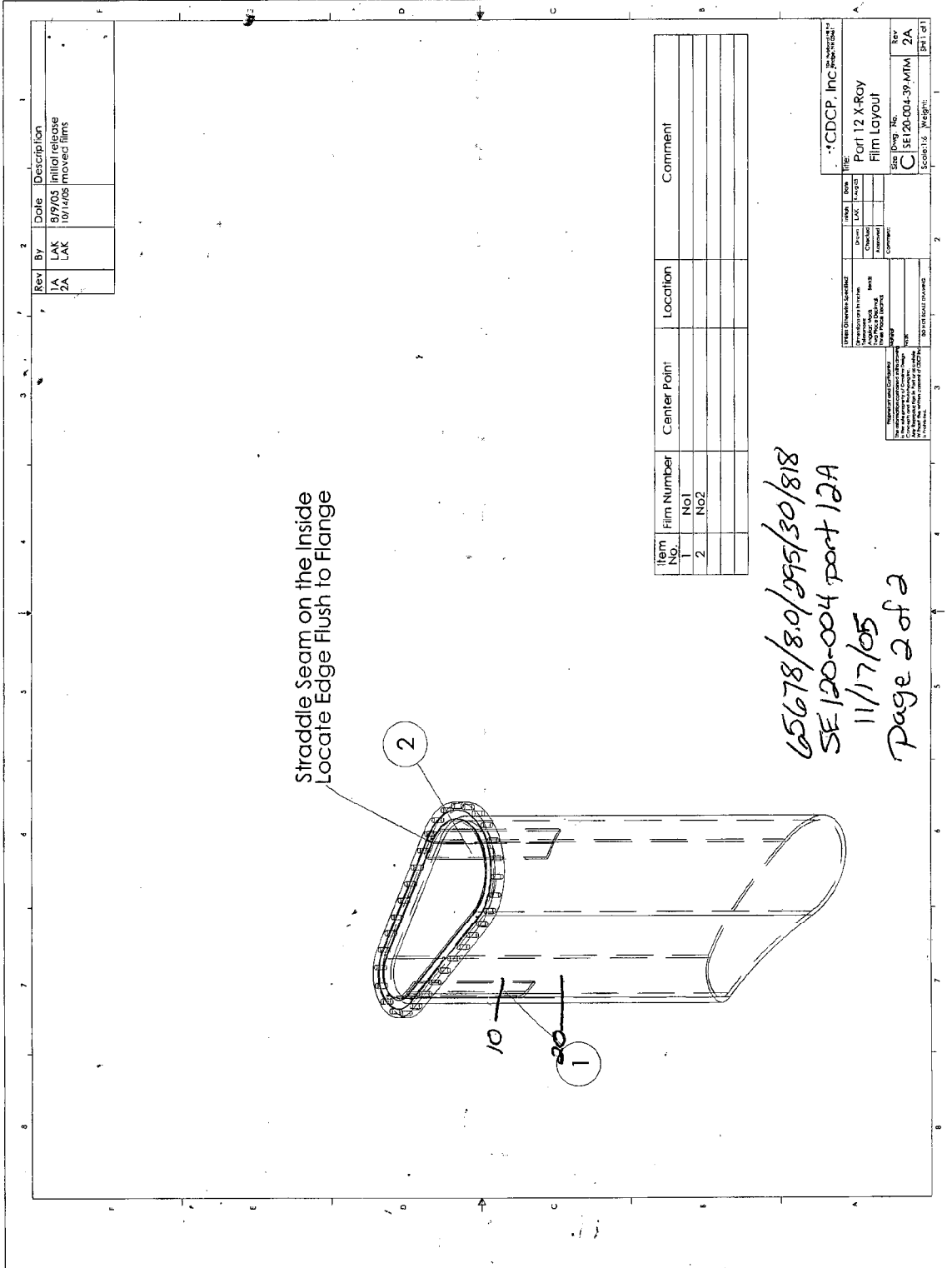


Item No.	Film Number	Center Point	Location	Comment
1	NO1			
2	NO2			

65678/8.0/2/70/818  
SE120-004 Port 12A  
Pg 2 of 2

**CDSCP, Inc.**  
 Title: Port 12 X-Ray Film Layout  
 Date: 8/9/05  
 Author: LAK  
 Checked: LAK  
 Approved: LAK  
 Scale: 1:1  
 Rev: 2A





Rev	By	Date	Description
1A	LAK	9/9/05	initial release
2A	LAK	10/14/05	moved films

Item No.	Firm Number	Center Point	Location	Comment
1	NO1			
2	NO2			

65678/8.0/295/30/818  
 SE 120-004 part 12A  
 11/17/05  
 Page 2 of 2

TITLE: Port 12 X-Roy Film Layout Scale: 1/8" = 1'-0"	
PROJECT: 120-004-39-ATM SHEET: 2A	REVISIONS: NO. DATE BY 1 11/17/05 LAK

Quality Assurance Documentation for Part ID: SE120-004 PORT 12B - Item: 167

Workorder: 65678/8-0 Sub:3 Op:30

**Part: SE120-004 PORT 12B - PORT 12B SUB-ASSEMBLY - PORT 12B SUB-ASSEMBLY (VERTICAL FABRICATED PORT)**

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*				MFG		VISUAL	OK PER SPEC.	358-D.M	933-D.L	
(10)		VWI ROOT PASS WELD P12B1		CWI				11-18-05	11-18-05	A
*				MFG		VISUAL	GOOD	358-D.M	933-D.L	
(50)		VWI COVER PASS WELD P12B1		CWI				11-20-05	11-21-05	A
*				MFG		VISUAL	OK PER SPEC.	358-D.M	933-D.L	
(60)		VWI ROOT PASS WELD P12B2		CWI				11-18-05	11-18-05	A
*				MFG		VISUAL	GOOD	358-D.M	933-D.L	
(100)		VWI COVER PASS WELD P12B2		CWI				11-20-05	11-21-05	A

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 12B - Item: 168

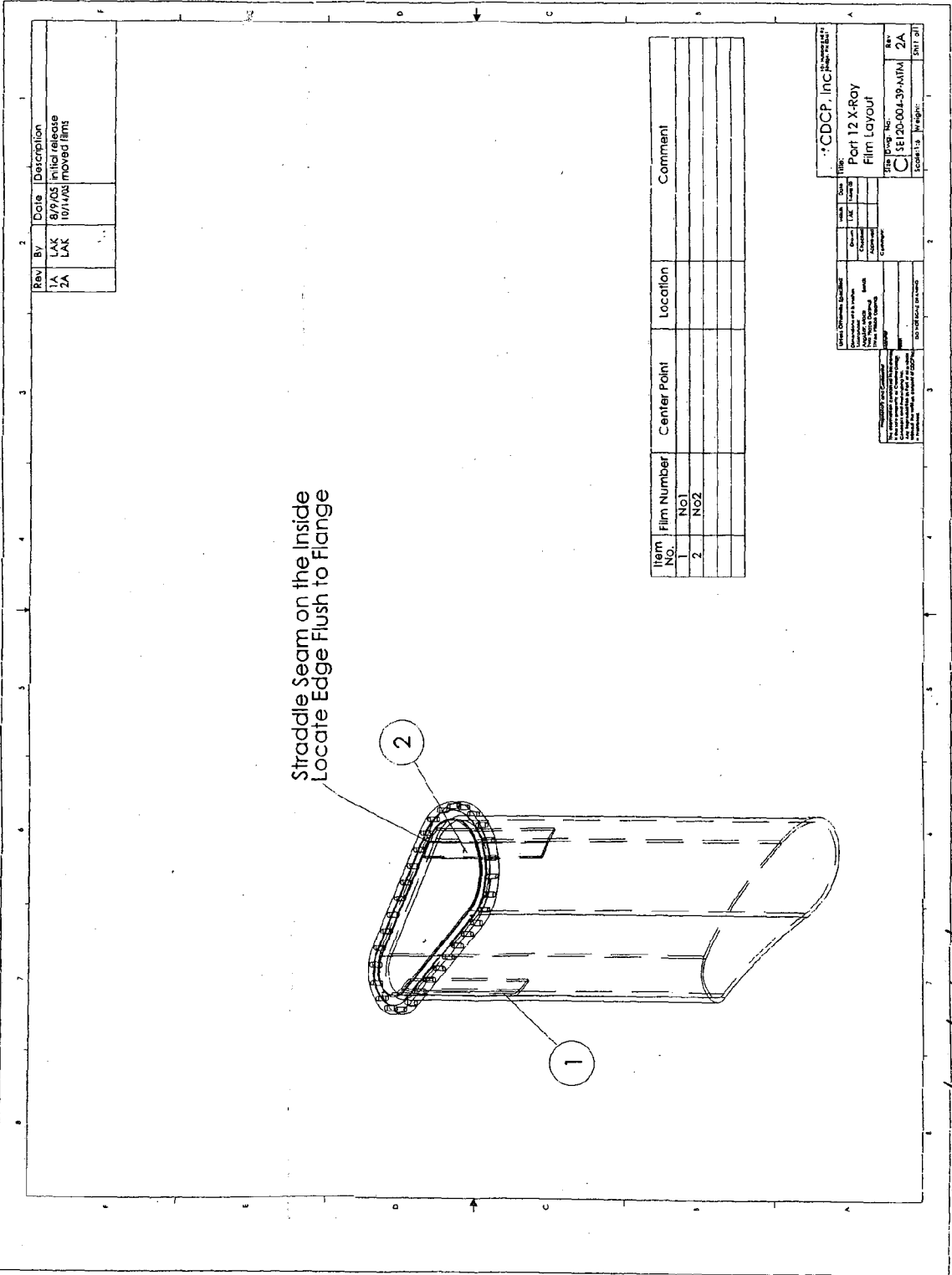
Workorder: 65678/8-0 Sub:3 Op:40

**Part: SE120-004 PORT 12B - PORT 12B SUB-ASSEMBLY - PORT 12B SUB-ASSEMBLY (VERTICAL FABRICATED PORT)**

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*				MFG		VISUAL	GOOD	358-D.M	933-D.L	
(20)		VWI - ROOT PASS P12BF		CWI				11-23-05	11-23-05	A
*				MFG		VISUAL	GOOD	358-D.M	933-D.L	
(50)		VWI - COVER PASS P12BF		CWI				11-25-05	11-29-05	A
*				MFG		VISUAL	WELDED O.D. FULL PE	771-B.S	933-D.L	
(60)		VWI - FILLET WELDS P12BF		CWI			NETRATION	11-29-05	11-29-05	A







Rev	By	Date	Description
1A	LAK	8/7/05	initial release
2A	LAK	10/17/05	insert film

Item No.	Film Number	Center Point	Location	Comment
1	NO1			
2	NO2			

CDCCP, Inc.

Port 12 X-Ray  
Film Layout

Film No: C1E120-001-39-ATM 2A


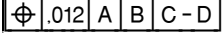
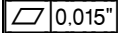
Exp. 13 14 15 16 17 18 19 20

50/28/11  
 page 2 of 2  
 SE120-00-004 Port 12B  
 8.0/3/70/818

Quality Assurance Documentation for Part ID: SE120-004 PORT 12B - Item: 171

Workorder: 65678/8-0 Sub:3 Op:80


Part: SE120-004 PORT 12B - PORT 12B SUB-ASSEMBLY - PORT 12B SUB-ASSEMBLY (VERTICAL FABRICATED PORT)

Drawing ID: SE122-018 Rev: 1				INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC		GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
1* (10)	G6	 DIA. 0.531 THRU +/- 0.005" (32X)		CALIPER	MFG		P-925	.531 .005 XABCD	234-E.B	854-R.U	A
				INDICATOR	QA		P-920		11-30-05	11-30-05	
1* (20)	G7	 DIA. .136 +/- .005 X .38 DP +/- .010" 8-32 UNC .25 DP +/- .010" (8X)		CALIPER	MFG		P-925	.134 .004 XABCD	234-E.B	854-R.U	A
				INDICATOR	QA		P-920		11-30-05	11-30-05	
1* (30)	D2			INDICATOR	MFG		P-920	.004	234-E.B	854-R.U	A
					QA				11-30-05	11-30-05	
1* (40)	D3	.149 +.000/-.008"		DEPTH MICROMET	MFG		P-200	.141--.143	506-R.LI	854-R.U	A
					QA				11-30-05	11-30-05	
1* (50)	D3	1.25 +/- .010"		OD MICROMETER	MFG		P-196	1.250---1.252	506-R.LI	854-R.U	A
					QA				11-30-05	11-30-05	
1* (60)	C3	R .03 (tool radius) (2X)			MFG		P--4511	.032	506-R.LI	854-R.U	A
					QA				11-30-05	11-30-05	
1* (70)	D3	.94 +/- .010"			MFG		P--193	.940--.942	506-R.LI	854-R.U	A
					QA				11-30-05	11-30-05	
1* (90)	G7	.471 +/- .005" (2X)		CALIPER	MFG		P-925	.471	234-E.B	854-R.U	A
					QA				11-30-05	11-30-05	
1* (100)	G8	R 2.875 (verify tool path)			MFG		PGRM#29203	ACCEPT	506-R.LI	854-R.U	A
					QA				11-30-05	11-30-05	
1* (150)	E3	BREAK CORNERS R .005 MIN (2X) (visual verification)			MFG		VISUAL	ACCEPT	506-R.LI		A
									11-30-05		
1* (160)	G5	R 5.563 (verify tool path)			MFG		PGRM#29203	ACCEPT	506-R.LI		A
									11-30-05		

Quality Assurance Documentation for Part ID: SE120-004 PORT 12B - Item: 172

Workorder: 65678/8-0 Sub:3 Op:120

**Part: SE120-004 PORT 12B - PORT 12B SUB-ASSEMBLY - PORT 12B SUB-ASSEMBLY (VERTICAL FABRICATED PORT)**

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		 0.375 PROFILE VERIFICATION	HEIGHT GAGE ELEC. PROBE	QA		J-55 J-1057	.305	854-R.U 12-21-05			A
*		Magnetic Permeability 1.02 Max	MASTER GAGE	QA		J-1270	>1.02 & <1.1 (REF. N.C. # 18754)	854-R.U 12-21-05			A
*		Interior Surface Finish 32 Micro-Inch RA	PROFILOMETER	QA		J-825	30	854-R.U 12-21-05			A
*		Material Thickness: .500 +.04 / -.01"	CALIPER	QA		J-1099	.527	854-R.U 12-21-05			A
*		CLEANLINESS PER PS483		QA		VISUAL	ACCEPT	854-R.U 12-21-05			A
*		Flange face Finish 32 Micro-Inch RA	PROFILOMETER	QA		J-825	20	854-R.U 12-21-05			A
*		Magnetic Permeability 1.2 Max (at flange we	MASTER GAGE	QA		J-1270	<1.2	854-R.U 12-21-05			A



4119 FULTON / 77022  
 P.O. BOX 130630  
 HOUSTON, TEXAS 77219-0630  
 (713) 695-6000  
 (713) 696-6725 FAX NUMBER

ORDER DATE 7/21/05 MACH S/O NUMBER 250675  
 \*\*\*\*\*  
 \*\*\* SHIPPING DEPT \*\*\*  
 \*\*\*\*\*

CUSTOMER #: 38800000  
 SOLD TO: MAJOR TOOL & MACHINE INC.  
 1458 E. 19TH. STREET

SLSPRSN #: 10000  
 CUSTOMER ORDER NUMBER: P05-03984  
 DEL ACT: DEL EST: 8/04/05

INDIANAPOLIS  
 IN 46218  
 BUYER: BOB

SHIP VIA: ABF F.O.B.: OUR PLANT  
 FREIGHT BILL NUMBER:

SHIP TO: MAJOR TOOL & MACHINE INC.  
 1458 E. 19TH. STREET

PREPAID/CHE: PREPAID/ALLOW: COLLECT: X  
 TERMS: SEE BELOW

INDIANAPOLIS  
 IN 46218  
 ATTENTION:  
 TAG #:  
 TAG #:

MILL TEST REPORTS:  
 X WITH SHIPMENT  
 X WITH INVOICE  
 NOT REQUIRED

ITEM	ORDER	QTY	SHIP DESCRIPTION	HEAT U/M NUMBER	MACH P.O. #
1	9	9pc. 34"lg	4"OD .250AW PIPE X 34"LG (-0+1/4) FORM & TACK 625 SB443 NO LONG SEAM BEVEL TAG: 6PCS PART# SE120-004 PORT 15 TAG: 3PCS PART# SE120-004 PORT FJS	EA 132793	81404C
				99716	
				99715	
2	6	6pc. 42"lg	4"OD .250AW PIPE X 42"LG (-0 +1/2) FORM & TACK 625 SB443 NO LONG SEAM BEVEL TAG: PART# SE120-004 PORT 17	EA 132793	81404C
				99721	

Re: 08.17.05 WX



6119 FULTON / 77022  
 P.O. BOX 130630  
 HOUSTON, TEXAS 77219-0630  
 (713) 695-6000  
 (713) 696-6725 FAX NUMBER

ORDER DATE MACH S/O NUMBER  
 7/21/05 250875  
 \*\*\*\*\*  
 \*\*\* SHIPPING DEPT \*\*\*  
 \*\*\*\*\*

CUSTOMER #: 38800000  
 SOLD TO: MAJOR TOOL & MACHINE INC.  
 1458 E. 19TH. STREET

SLSPRSN #: 10000  
 CUSTOMER ORDER NUMBER: POS-03984  
 DEL ACT: DEL EST: 8/04/05

INDIANAPOLIS  
 IN 46218  
 BUYER: BOB

SHIP VIA: AFB F.O.B.: OUR PLANT  
 FREIGHT BILL NUMBER:

SHIP TO: MAJOR TOOL & MACHINE INC.  
 1458 E. 19TH. STREET

PREPAID/CHG: PREPAID/ALLOW: COLLECT: X  
 TERMS: SEE BELOW

INDIANAPOLIS  
 IN 46218  
 ATTENTION:  
 TAG #:  
 TAG #:

MILL TEST REPORTS:  
 X WITH SHIPMENT  
 X WITH INVOICE  
 NOT REQUIRED

ITEM	ORDER	QUANTITY	SHIP DESCRIPTION	HEAT U/M NUMBER	MACH P.O. #
3	18	18 pcs. 52"lg	4"OD .250AW PIPE X 52"LG (-0,+1/2) FORM & TACK 625 58443 NO LONG SEAM BEVEL TAG: 1PC PART# SE120-004 PORT 17 5PC PART# SE120-004 PORT 18 4PC PART# SE120-004 PORT 2 6PC PART# SE120-004 PORT 8	EA 132793	81404C
<p style="text-align: right;"><i>9976A see last page for customer / vendor revision.</i></p> <p style="text-align: right;">_____ 99726</p> <p style="text-align: right;">_____ 99723</p> <p style="text-align: right;">_____ 99724</p>					
4	1		CONTACT MAJOR TOOL TRANS. LT DEPT FOR SHIPPING INSTRUCTIONS 317-917-2604. REFERENCE PRIME CONTACT #0E-AC02-76-CH03073		
5	1		BAND PIPE TO WOODEN PALLETS LT & SHRINK WRAP COMPLETELY		



4119 FULTON / 77022  
P.O. BOX 130630  
HOUSTON, TEXAS 77219-0630  
(713) 695-6000  
(713) 696-6725 FAX NUMBER

ORDER DATE MACH S/O NUMBER  
7/21/05 250875  
\*\*\*\*\*  
\*\*\* SHIPPING DEPT \*\*\*  
\*\*\*\*\*

CUSTOMER #: 38900000  
SOLD TO: MAJOR TOOL & MACHINE INC.  
1458 E. 19TH. STREET

SLSPRSN #: 10000  
CUSTOMER ORDER NUMBER: POS-03984  
DEL ACT: DEL EST: 8/04/05

INDIANAPOLIS  
IN 46218  
BUYER: BOB

SHIP VIA: ABF F.O.B.: OUR PLANT  
FREIGHT BILL NUMBER:

SHIP TO: MAJOR TOOL & MACHINE INC.  
1458 E. 19TH. STREET

PREPAID/CHG: PREPAID/ALLOW: COLLECT: X  
TERMS: SEE BELOW

INDIANAPOLIS  
IN 46218  
ATTENTION:  
TAG #:  
TAG #:

MILL TEST REPORTS:  
X WITH SHIPMENT  
X WITH INVOICE  
NOT REQUIRED

ITEM	ORDER	QUANTITY	B/O	SHIP DESCRIPTION	HEAT U/M NUMBER	MACH P.O. #
6	1			MTM TO PAY \$31,500.00 PRIOR TO SHIPMENT	LT RECV. 31,500 8/9/05 CHK# 60160	
FORWARD INVOICE TO BOB JOACHIM @ BJOACHIM@MAJORTOOL.COM BALANCE OF FUNDS DUE NET 30 DAYS.						

RECEIVED BY *[Signature]*

DATE *8-9-05*

DECLARED VALUE IS ----- \$48,400.00



6119 Fulton Street  
P. O. Box 130630  
Houston, Texas 77219  
(713) 695-6000  
(800) 231-6823  
(713) 696-6725 Fax

August 18, 2005

To: Major Tool & Machine

Attn: Dave Wilkinson

Re: **Marking Authorization**  
**Major Tool Po# P05-03984**  
**Mach S/O# 250875**

Dear Dave,

The Quality Control Department at Mach Industrial Group states the following material 4"OD .250AW Pipe x 52"LG Port 17, needs to be marked as follows:

4"OD .250AW Pipe x 52"LG Port 18 HT#132793

Let me know if we can help in any other way.

Sincerely,

A handwritten signature in black ink that reads "Denise Hernandez". The signature is written in a cursive style with a large, looping "D" and "H".

Denise Hernandez  
Sales Department

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 15 - Item: 174

Workorder: 65678/8-0 Sub:241 Op:20

Part: SE120-004 PORT 15 - PIPE, 3.5" SCH. 40 - SE120-004-15 PIPE, 3.5" SCH. 40

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*				MFG			ACCEPT	733-J.ST	712-W.	
(20)		VWI - COMPLETED WELD		CWI				08-30-05	08-30-05	

A



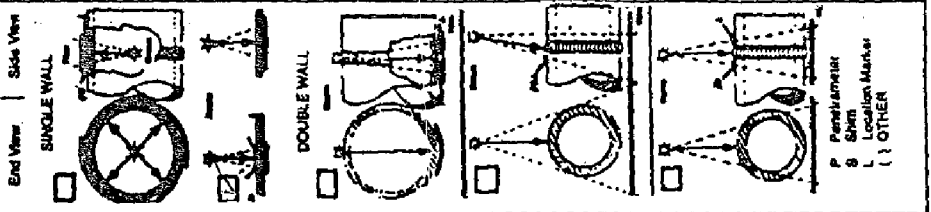


4959  
10520 Cheater Road  
Woodlawn, Ohio 45215



CLIENT	Major Tool & Machine	INTERPRETER LEVEL	Robert Weaver II	INDICATOR	Robert Weaver	JOB NO.	13850291	P.O. NO.	N/A	DATE	9/11/05
ISOT OPERATOR	TR192	FOCAL SPOT SIZE	.151"	TIME	4:30	FILM PROCESSING	Auto	FILM TYPE	Kodak AA Double	FILM TECHNIQUE	PI SCREENS
WELD PROCESS	PAW	MATERIAL SPEC.	625 Inconel	PENETRATOR	ASTM 1A	SHIM	N/A	ACCEPTANCE STANDARD	ASME VIII, UW-51		
DESCRIPTION	65678/8.01 241/30/818	MATERIAL DIAMETER	3.5"	MATERIAL THICKNESS	.1875"						

FITTING	SEAM OR FITTING	FILM INTERVAL	WELDER IDENTIFICATION	PENETRANT		SLAG	POROSITY	POROSITY WITH TAZ	CRACK	LACK OF PEN	LACK FUSION	INTERNAL CONVEXITY	INTERNAL CONCAVITY	TUNGSTEN	MELT THROUGH	BURN THROUGH	CRATER PIT	OXIDATION	INTERNAL UNDERCUT	EXTERNAL UNDERCUT	ALIGNED INDICATIONS	WELD CONTOUR	MISMATCH	FILM ARTIFACT	VISUAL CONCENS	FILM DENSITY	SEE REMARKS	ACCEPT	REJECT	
				SIZE	QUALITY LEVEL																									
long	0-1	J.S.	1A	.008"																										



*Robert Weaver II*  
Customer Representative Signature

*Raymond D. Edwards*  
Customer Representative Signature


9/11/05  
Date

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 15 - Item: 177

Workorder: 65678/8-0 Sub:241 Op:50

Part: SE120-004 PORT 15 - PIPE, 3.5" SCH. 40 - SE120-004-15 PIPE, 3.5" SCH. 40

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (40)		 0.06	INDICATOR	QA		J-1294	.023	085-D.G 10-15-05		

A

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 15 - Item: 179

Workorder: 65678/8-0 Sub:244 Op:20

Part: SE120-004 PORT 15 - PIPE, 3.5" SCH. 40 - SE120-004-15 PIPE, 3.5" SCH. 40

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*				MFG			ACCEPT	733-J.ST	712-W.	
(20)		VWI - COMPLETED WELD		CWI				09-02-05	09-02-05	

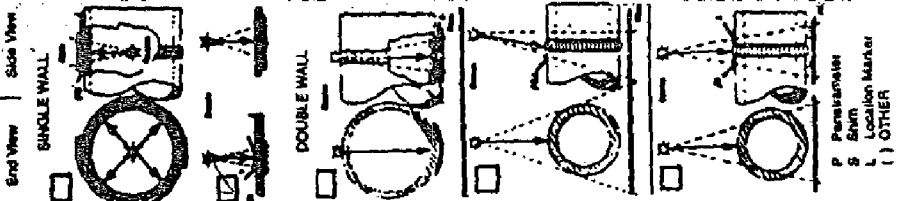
A

4959

10520 Chester Road  
Woodlawn, Ohio 43215

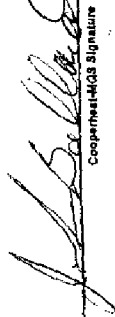


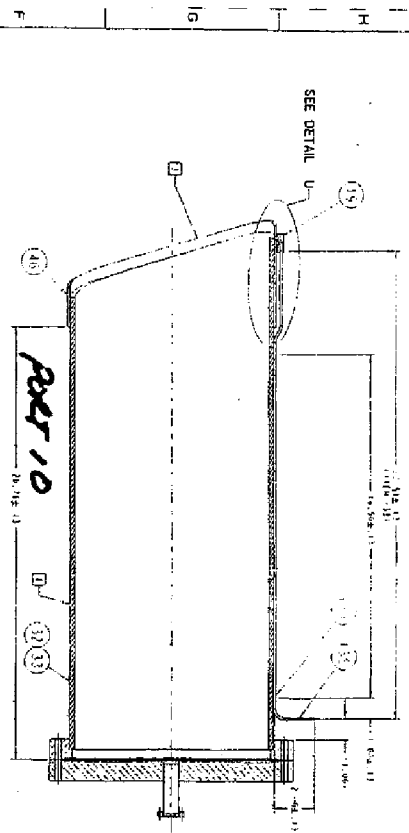
CLIENT Major Tool & Machine	INTERPRETER LEVEL Robert Weaver II	RADIOGRAPHER Robert Weaver	JOB NO. 38550291	P.O. NO. 11A	DATE 9/11/05
ISOTOPE RAY IR 192	FOCAL SPOT SIZE .151"	SCO 14.8125"	FILM PROCESSING Auto	FILM TYPE Kodak AA Double	PS SCREENS .010"
WELD PROCESS PAW	MATERIAL SPEC. 625 Inconel	MATERIAL THICKNESS .1875"	SPM N/A	ACCEPTANCE STANDARD ASME VIII, UW-51	
DESCRIPTION 65678/8.01244/30/818	MATERIAL DIAMETER 3.5"	PENETRATOR ASTM 1A			
SEAM OR FITTING Fitting					
FILM INTERVAL NUMBER 0-1 J.S. 1A .008"					
WELDER IDENTIFICATION					
PENETRATOR SIZE 1A .008"					
PENETRATOR QUALITY LEVEL					
SLUG					
FOROSITY					
FOROSITY WITH TAIL					
CRACK					
LACK OF PEN					
LACK FUSION					
INTERNAL CONCAVITY					
INTERNAL CONVEXITY					
TUNGSTEN					
MELT-THROUGH					
BURN-THROUGH					
CRATER FIT					
OXIDATION					
INTERNAL UNDERCUT					
EXTERNAL UNDERCUT					
ALIGNED INDICATIONS					
WELD CONTOUR					
MIS-MATCH					
FILM ARTIFACT					
VISUAL CONCERNS					
FILM DENSITY					
SEE REMARKS					
ACCEPT					
REJECT					



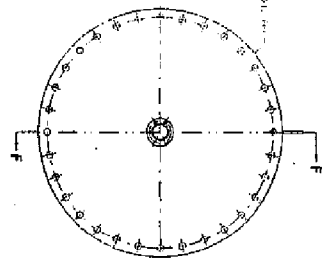
P Penetrator  
S SPM  
L Location Marker  
() OTHER


  
Customer Representative Signature  
 Date 9/11/05

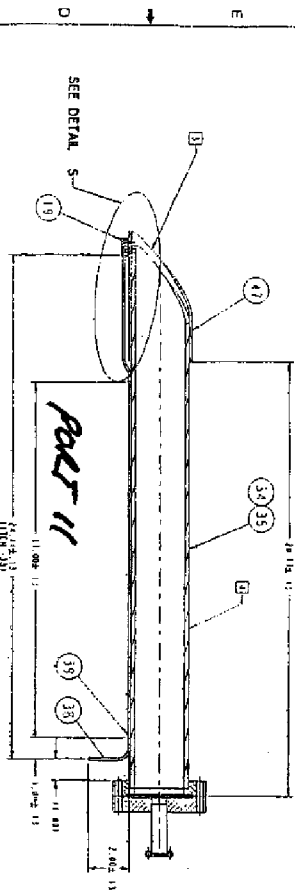

  
Cooperheat/MOS Signature



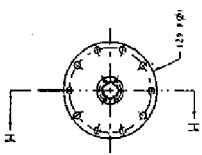
SECTION FF  
SCALE 1/8" = 1'-0"



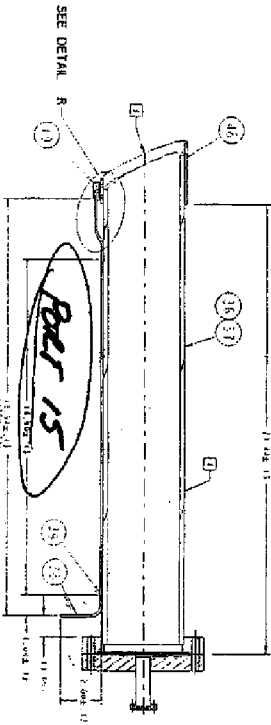
DETAIL U



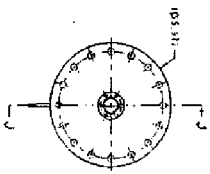
SECTION HH  
SCALE 1/8" = 1'-0"



DETAIL S



SECTION JJ  
SCALE 1/8" = 1'-0"



DETAIL R

US678/80/244/30/818  
 SE100-004 part 15B  
 9/1/05

RELEASED FOR  
 FABRICATION/INSTALLATION  
 per drawing of Jerry Siegel


DATE	BY	REVISION
11/11/05	JLS	1.0
11/11/05	JLS	1.1
11/11/05	JLS	1.2
11/11/05	JLS	1.3
11/11/05	JLS	1.4
11/11/05	JLS	1.5
11/11/05	JLS	1.6
11/11/05	JLS	1.7
11/11/05	JLS	1.8
11/11/05	JLS	1.9
11/11/05	JLS	2.0

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 15 - Item: 182

Workorder: 65678/8-0 Sub:244 Op:50

Part: SE120-004 PORT 15 - PIPE, 3.5" SCH. 40 - SE120-004-15 PIPE, 3.5" SCH. 40

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (40)		 0.06	INDICATOR	QA		J-1294	.02	085-D.G 10-15-05		

A

Quality Assurance Documentation for Part ID: SE120-004 PORT 15A - Item: 183

Workorder: 65678/8-0 Sub:24 Op:10

**Part: SE120-004 PORT 15A - PORT 15A SUB-ASSEMBLY - PORT 15A SUB-ASSEMBLY**

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		VWI - INTERIOR COVER PASS / FILLET P15AF		MFG		VISUAL	OK	197-T.FI	933-D.L		A
(30)				CWI				11-22-05	11-28-05		
*		VWI - EXTERIOR FILLETS P15AF		MFG		VISUAL	OK	197-T.FI	933-D.L		A
(40)					CWI				11-22-05	11-28-05	



Date: 5/3/2005

**CERTIFICATE OF CONFORMANCE**

I hereby certify that the products provided to **MAJOR TOOL & MACH.**

on Purchase Order **P05-00920**

and Varian Sales Order **319315350**

have been manufactured in accordance with all applicable Varian drawings and Varian specifications.

<u>ITEM</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
001	31	fa06000133	6.00" ADAPTER

27  
05.06.05  
95987 WX  
line 2-33



5.9.05

Varian, Inc.

*Mark L. Baribeault*

Mark L. Baribeault  
Quality Manager

Quality Assurance Documentation for Part ID: SE120-004 PORT 15B - Item: 186

Workorder: 65678/8-0 Sub:25 Op:10

**Part: SE120-004 PORT 15B - PORT 15B SUB-ASSEMBLY - PORT 15B SUB-ASSEMBLY**

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		VWI - INTERIOR COVER PASS / FILLET P15BF		MFG		VISUAL	OK	197-T.FI	933-D.L		A
(30)				CWI				11-22-05	11-28-05		
*		VWI - EXTERIOR FILLETS P15BF		MFG		VISUAL	OK	197-T.FI	933-D.L		A
(40)					CWI				11-22-05	11-28-05	



4119 FULTON / 77022  
 P.O. BOX 130630  
 HOUSTON, TEXAS 77219-0630  
 (713) 695-6000  
 (713) 696-6725 FAX NUMBER

ORDER DATE 7/21/05 MACH S/O NUMBER 250875  
 \*\*\*\*\*  
 \*\*\* SHIPPING DEPT \*\*\*  
 \*\*\*\*\*

CUSTOMER #: 36800000  
 SOLD TO: MAJOR TOOL & MACHINE INC.  
 1458 E. 19TH. STREET

SLSPRSN #: 10000  
 CUSTOMER ORDER NUMBER: P05-03984  
 DEL ACT: DEL EST: 8/04/05

INDIANAPOLIS  
 IN 46218  
 BUYER: BOB

SHIP VIA: ABF F.O.B.: OUR PLANT  
 FREIGHT BILL NUMBER:

SHIP TO: MAJOR TOOL & MACHINE INC.  
 1458 E. 19TH. STREET

PREPAID/CHG: PREPAID/ALLOW: COLLECT: X  
 TERMS: SEE BELOW

INDIANAPOLIS  
 IN 46218  
 ATTENTION:  
 TAG #:  
 TAG #:

MILL TEST REPORTS:  
 X WITH SHIPMENT  
 X WITH INVOICE  
 NOT REQUIRED

ITEM	ORDER	QTY	SHIP DESCRIPTION	HEAT U/M NUMBER	MACH P.O. #
1	9	9pc. 34"lg	4"OD .250AW PIPE X 34"LG (-0+1/4) FORM & TACK 625 SB443 NO LONG SEAM BEVEL TAG: 4PCS PART# SE120-004 PORT 15 TAG: 3PCS PART# SE120-004 PORT FJS	EA 132793	81404C
				99716	
				99715	
2	6	6pc. 42"lg	4"OD .250AW PIPE X 42"LG (-0 +1/2) FORM & TACK 625 SB443 NO LONG SEAM BEVEL TAG: PART# SE120-004 PORT 17	EA 132793	81404C
				99721	

Rel: 08.17.05 wx



6119 FULTON / 77022  
 P.O. BOX 130630  
 HOUSTON, TEXAS 77219-0630  
 (713) 696-6000  
 (713) 696-6725 FAX NUMBER

ORDER DATE: 7/21/05  
 MACH S/O NUMBER: 250875  
 \*\*\*\*\*  
 \*\*\* SHIPPING DEPT \*\*\*  
 \*\*\*\*\*

CUSTOMER #: 38800000  
 SOLD TO: MAJOR TOOL & MACHINE INC.  
 1458 E. 19TH. STREET

GLSPRSN #: 10000  
 CUSTOMER ORDER NUMBER: POS-03984  
 DEL ACT: DEL EST: 8/04/05

INDIANAPOLIS  
 IN 46218  
 BUYER: BOB

SHIP VIA: ABF F.O.B.: OUR PLANT  
 FREIGHT BILL NUMBER:

SHIP TO: MAJOR TOOL & MACHINE INC.  
 1458 E. 19TH. STREET

PREPAID/CHG: PREPAID/ALLOW: COLLECT: X  
 TERMS: SEE BELOW

INDIANAPOLIS  
 IN 46218  
 ATTENTION:  
 TAG #:  
 TAG #:

MILL TEST REPORTS:  
 X WITH SHIPMENT  
 X WITH INVOICE  
 NOT REQUIRED

ITEM	ORDER	QUANTITY	B/O	SHIP	DESCRIPTION	HEAT	U/M	NUMBER	MACH	P.O. #
3	18	18 pcs. 52"lg			4"OD .250AW PIPE X 52"LG (-0,+1/2) FORM & TACK 625 88443 NO LONG SEAM BEVEL TAG: 1PC PART# SE120-004 PORT 17 5PC PART# SE120-004 PORT 18 4PC PART# SE120-004 PORT 2 4PC PART# SE120-004 PORT 8	EA		132793	81404C	
4	1				CONTACT MAJOR TOOL TRANS. DEPT FOR SHIPPING INSTRUCTIONS 317-917-2404. REFERENCE PRIME CONTACT #DE-AC02-76-CH03073					
5	1				BAND PIPE TO WOODEN PALLETS & SHRINK WRAP COMPLETELY					

*99764 see last page for customer/  
 vendor revision.*

*99720  
 99723  
 99724*

*VJW.*

*VJW.*



6119 FULTON / 77022  
P.O. BOX 130630  
HOUSTON, TEXAS 77219-0630  
(713) 695-6000  
(713) 696-6725 FAX NUMBER

ORDER DATE MACH S/O NUMBER  
7/21/05 250875  
\*\*\*\*\*  
\*\*\* SHIPPING DEPT \*\*\*  
\*\*\*\*\*

CUSTOMER #: 38900000  
SOLD TO: MAJOR TOOL & MACHINE INC.  
1458 E. 19TH. STREET

SLSPRSN #: 10000  
CUSTOMER ORDER NUMBER: POS-03984  
DEL ACT: DEL EST: 8/04/05

INDIANAPOLIS.  
IN 46218  
BUYER: BOB

SHIP VIA: ABF F.O.B.: OUR PLANT  
FREIGHT BILL NUMBER:

SHIP TO: MAJOR TOOL & MACHINE INC.  
1458 E. 19TH. STREET

PREPAID/CHG: PREPAID/ALLOW: COLLECT: X  
TERMS: SEE BELOW

INDIANAPOLIS  
IN 46218  
ATTENTION:  
TAG #:  
TAG #:

MILL TEST REPORTS:  
X WITH SHIPMENT  
X WITH INVOICE  
NOT REQUIRED

ITEM	ORDER	QUANTITY	SHIP	DESCRIPTION	HEAT U/M NUMBER	MACH P.O. #
------	-------	----------	------	-------------	-----------------	-------------

6	1			MTM TO PAY \$31,500.00 PRIOR TO SHIPMENT	LT	
---	---	--	--	--	----	--

RECV. 31,500 8/9/05  
CHK# 60160

FORWARD INVOICE TO  
BOB JOACHIM @  
BJOACHIM@MAJORTOOL.COM  
BALANCE OF FUNDS DUE  
NET 30 DAYS.

RECEIVED BY Paul Smith

DATE 8-9-05

DECLARED VALUE IS ----- \$48,400.00



6119 Fulton Street  
P. O. Box 130630  
Houston, Texas 77219  
(713) 695-6000  
(800) 231-6823  
(713) 696-6725 Fax

August 18, 2005

To: Major Tool & Machine

Attn: Dave Wilkinson

Re: **Marking Authorization**  
**Major Tool Po# P05-03984**  
**Mach S/O# 250875**

Dear Dave,

The Quality Control Department at Mach Industrial Group states the following material 4"OD .250AW Pipe x 52"LG Port 17, needs to be marked as follows:

4"OD .250AW Pipe x 52"LG Port 18 HT#132793

Let me know if we can help in any other way.

Sincerely,

A handwritten signature in black ink that reads "Denise Hernandez". The signature is written in a cursive style with a large, looping "z" at the end.

Denise Hernandez  
Sales Department

**INSPECTION DATA CHECKLIST**

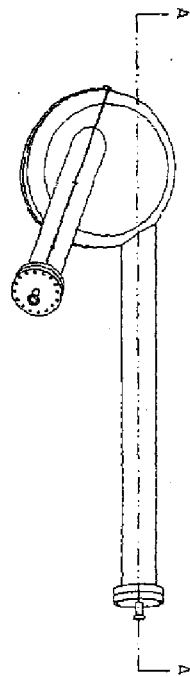
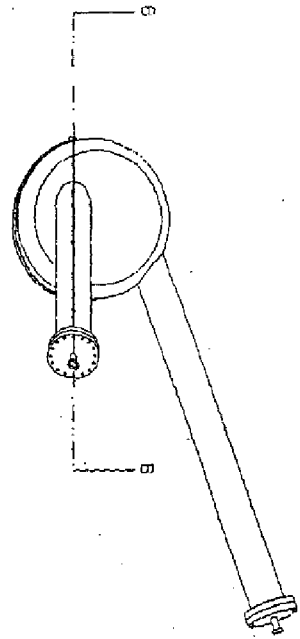
Quality Assurance Documentation for Part ID: SE120-004 PORT 17 - Item: 190

Workorder: 65678/8-0 Sub:166 Op:20

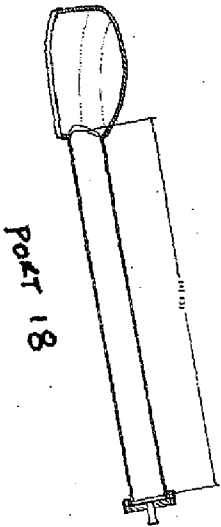
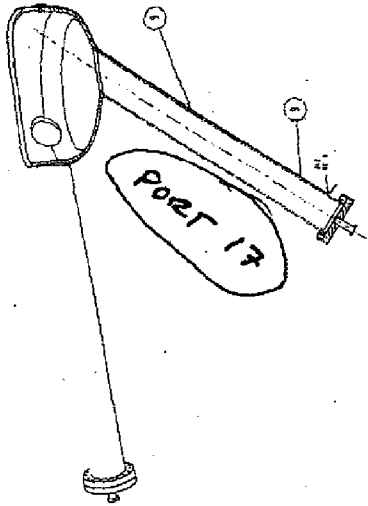
Part: SE120-004 PORT 17 - PIPE, 3.5" SCH. 40 - SE120-004-15 PIPE, 3.5" SCH. 40

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*				MFG			ACCEPT	733-J.ST	712-W.	
(20)		VWI - COMPLETED WELD		CWI				08-31-05	08-31-05	

A



FOR NOTES AND PARTS LIST, SEE SHEET 6



SECTION B-B

SECTION A-A

65678/80/146/30/818  
 SE 120-004 part 17A  
 9/11/05

RELEASED FOR  
 FABRICATION/INSTALLATION  
 FROM Drawing of Jerry Siegel

DATE	BY	CHKD	APP'D	REV
10/11/05	JERRY SIEGEL			1
LEGIBILITY: VERIFIED ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED EXCEPT WHERE SHOWN OTHERWISE DATE 10/11/05 BY JERRY SIEGEL				
58122-003				

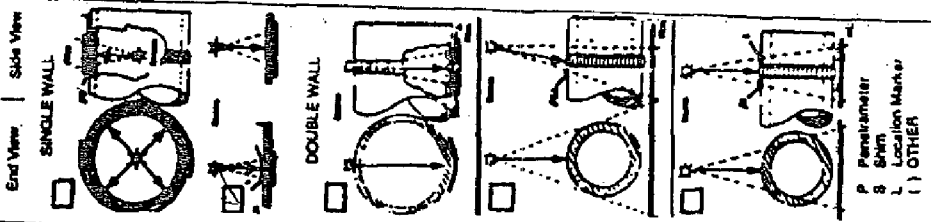


4959  
10520 Chester Road  
Woodlawn, Ohio 45215



CLIENT	Major Tool & Machine	RADIOGRAPHER	Robert Weaver II	JOB NO.	13850291	P.O. NO.	N/A	DATE	9/11/05
ISOTOPE-RAY	DIAMETER	SOE	15"	FILM PROCESSING	Alto	FILM TYPE	Kodak AA Double	FILM TECHNIQUE	FB SCREENS
WELD PROCESS	MATERIAL SPEC	MATERIAL THICKNESS	.1875"	SHIM	N/A	ACCEPTANCE STANDARD	ASME VIII, LW-51		.010"
DESCRIPTION	REMARKS								

FITTING	SCAM OR FITTING	FILM NUMBER	WELDER IDENTIFICATION	PENETRANT		SLAG	POROSITY	POROSITY WITH TAIL	CRACK	LACK OF PEN	LACK OF FUSION	INTERNAL CONVEXITY	INTERNAL CONCAVITY	TUNGSTEN	MELT-THROUGH	BURR-THROUGH	CRATER/FIT	OXIDATION	INTERNAL UNDERCUT	EXTERNAL UNDERCUT	MISSED INDICATIONS	WELD CONTOUR	MIS-MATCH	FILM ARTIFACT	VISUAL CONCERNS	FILM DENSITY	SEE REMARKS	ACCENT	REFLECT			
				SIZE	QUALITY LEVEL																											
long	0-1	J.S.	1A	1A	.008"																											



Robert Weaver 655514/HF  
 Robert D. Edwards  
 Date: 9/11/05

Customer Representative Signature

Cooper-heat-MOS Signature

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 17 - Item: 193

Workorder: 65678/8-0 Sub:166 Op:50

Part: SE120-004 PORT 17 - PIPE, 3.5" SCH. 40 - SE120-004-15 PIPE, 3.5" SCH. 40

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*		○ 0.06	HEIGHT GAGE	QA		J-530	.048	131-W.A		
(40)								10-17-05		

A

**INSPECTION DATA CHECKLIST**

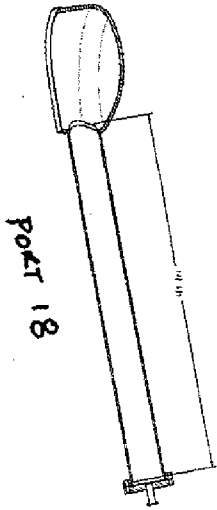
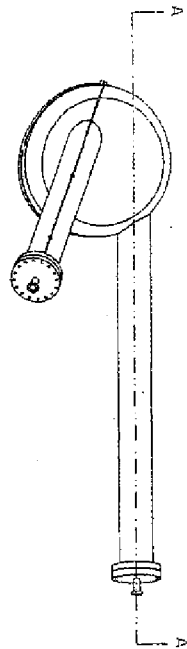
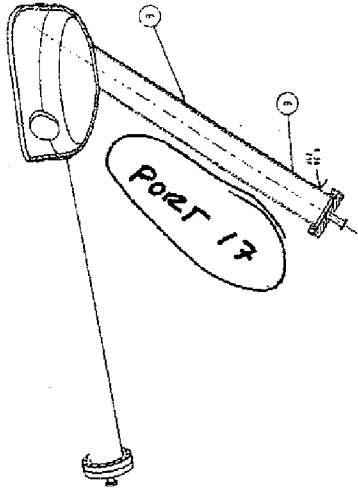
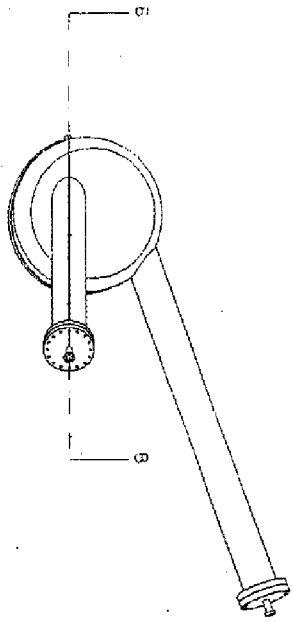
Quality Assurance Documentation for Part ID: SE120-004 PORT 17 - Item: 195

Workorder: 65678/8-0 Sub:174 Op:20

Part: SE120-004 PORT 17 - PIPE, 3.5" SCH. 40 - SE120-004-15 PIPE, 3.5" SCH. 40

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*				MFG			ACCEPT	733-J.ST	712-W.	
(20)		VWI - COMPLETED WELD		CWI				08-31-05	08-31-05	

A



SECTION B-B

SECTION A-A

65678/8.0/174/30/818  
 SE/20-004 Port 17B  
 9/11/05

FOR HOLES AND PARTS LIST SEE SHEET 1

RELEASED FOR  
 FABRICATION/INSTALLATION  
 BY: [Signature] JERRY SINGEL

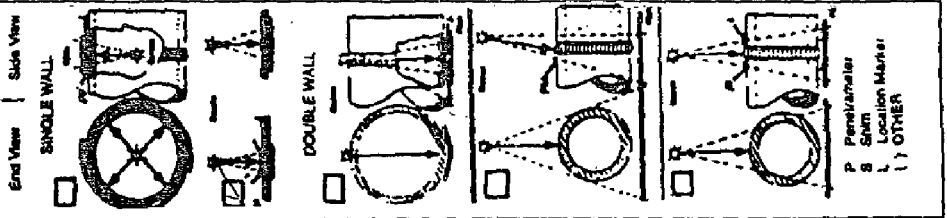
DATE: 9/11/05  
 TIME: 10:00 AM  
 LOCATION: [Blank]  
 DRAWING NO: 65678/8.0/174/30/818  
 PART NO: SE/20-004  
 PART NAME: Port 17B  
 DRAWN BY: [Blank]  
 CHECKED BY: [Blank]  
 APPROVED BY: [Blank]

4959

10520 Cheater Road  
Woodlawn, Ohio 45215



CLIENT Major Tool & Machine		INTERPRETER LEVEL Robert Weaver II		RADIOGRAPHER Robert Weaver		JOB NO. 13850291		P.O. NO. N/A		DATE 9/11/05	
ISOTOPE/RAY TR192		CURIERNA 1/18x.014		FOCAL SPOT SIZE .151"		FILM TYPE Kodak AA Double		FILM TECHNIQUE ASME VIII UW-51		PS SCREENS .010"	
WELD PROCESS PAW		MATERIAL SPEC 625 Inconel		MATERIAL THICKNESS .1875"		SHIM N/A		ACCEPTANCE STANDARD ASME VIII UW-51			
DESCRIPTION 65678/8.0/174/30/818 SE120-004 Part 17		MATERIAL DIAMETER 3.5"		PENETRANTER ASTM IA		TIME 4:30					
FITTING Long O-1 J.S.		FILM INTERVAL NUMBER		WELDER IDENTIFICATION		PENETRANTER SIZE		QUALITY LEVEL		REMARKS	
						SLAG		POROSITY		POROSITY WITH TAIL	
						CRACK		LACK OF PEN		LACK FUSION	
						INTERNAL CONVEXITY		INTERNAL CONCAVITY		TUNGSTEN	
						MELT-THROUGH		BURM-THROUGH		CRATER-PIT	
						OXIDATION		INTERNAL UNDERCUT		EXTERNAL UNDERCUT	
						ALIGNED INDICATIONS		WELD CONTOUR		MIS-MATCH	
						FILM ABSTRACT		VISUAL CONCERNS		FILM DENSITY	
						SEE REMARKS		ACCEPT		REJECT	



P Penetration  
S Shim  
L Location Marker  
() OTHER

*J. H. Ballard II*  
Cooperheat-MGS Signature

*Raymond P. Edwards*  
Customer Representative Signature

9/11/05  
Date

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 17 - Item: 198

Workorder: 65678/8-0 Sub:174 Op:50

Part: SE120-004 PORT 17 - PIPE, 3.5" SCH. 40 - SE120-004-15 PIPE, 3.5" SCH. 40

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (40)		○ 0.06	HEIGHT GAGE	QA		J-530	.019	131-W.A 10-17-05		

A

Quality Assurance Documentation for Part ID: SE120-004 PORT 17A - Item: 199

Workorder: 65678/8-0 Sub:162 Op:10

**Part: SE120-004 PORT 17A - PORT 17A SUB-ASSEMBLY - PORT 17A SUB-ASSEMBLY**

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		VWI - INTERIOR COVER PASS / FILLET P17AF		MFG		VISUAL	OK	197-T.FI	933-D.L		A
(30)				CWI				11-22-05	11-28-05		
*		VWI - EXTERIOR FILLETS P17AF		MFG		VISUAL	OK	197-T.FI	933-D.L		A
(40)					CWI				11-22-05	11-28-05	

Quality Assurance Documentation for Part ID: SE120-004 PORT 17B - Item: 200

Workorder: 65678/8-0 Sub:164 Op:10

**Part: SE120-004 PORT 17B - PORT 17B SUB-ASSEMBLY - PORT 17B SUB-ASSEMBLY**

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		VWI - INTERIOR COVER PASS / FILLET P17BF		MFG		VISUAL	OK	197-T.FI	933-D.L		A
(30)				CWI				11-22-05	11-28-05		
*		VWI - EXTERIOR FILLETS P17BF		MFG		VISUAL	OK	197-T.FI	933-D.L		A
(40)					CWI				11-22-05	11-28-05	





4119 FULTON / 77022  
 P.O. BOX 130630  
 HOUSTON, TEXAS 77219-0630  
 (713) 693-6000  
 (713) 694-6725 FAX NUMBER

ORDER DATE 7/21/05 MACH S/O NUMBER 250875  
 \*\*\*\*\*  
 \*\*\* SHIPPING DEPT \*\*\*  
 \*\*\*\*\*

CUSTOMER #: 38800000  
 SOLD TO: MAJOR TOOL & MACHINE INC.  
 1458 E. 19TH. STREET  
 INDIANAPOLIS  
 IN 46218  
 BUYER: BOB

SLSPRSN #: 10000  
 CUSTOMER ORDER NUMBER: F05-03984  
 DEL ACT: DEL EST: 8/04/05

SHIP VIA: ABF F.O.B.: OUR PLANT  
 FREIGHT BILL NUMBER:

SHIP TO: MAJOR TOOL & MACHINE INC.  
 1458 E. 19TH. STREET  
 INDIANAPOLIS  
 IN 46218  
 ATTENTION:  
 TAG #:  
 TAG #:

PREPAID/CHG: PREPAID/ALLOW: COLLECT: X  
 TERMS: SEE BELOW

MILL TEST REPORTS:  
 X WITH SHIPMENT  
 X WITH INVOICE  
 NOT REQUIRED

ITEM	ORDER	QTY	SHIP DESCRIPTION	U/M	HEAT NUMBER	MACH P.O. #
1	9	9pc. 34"lg	4"OD .250AW PIPE X 34"LG (-0+1/4) FORM & TACK 625 SB443 NO LONG SEAM BEVEL TAG: 2PCS PART# SE120-004 PORT 15 TAG: 3PCS PART# SE120-004 PORT FJS	EA	132793	81404C
					99716	
					99715	
2	6	6pc. 42"lg	4"OD .250AW PIPE X 42"LG (-0 +1/2) FORM & TACK 625 SB443 NO LONG SEAM BEVEL TAG: PART# SE120-004 PORT '17	EA	132793	81404C
					99721	

REL: 08.17.05 WX



6119 FULTON / 77022  
 P.O. BOX 130630  
 HOUSTON, TEXAS 77219-0630  
 (713) 695-6000  
 (713) 696-6725 FAX NUMBER

ORDER DATE MACH S/O NUMBER  
 7/21/05 250875  
 \*\*\*\*\*  
 \*\*\* SHIPPING DEPT \*\*\*  
 \*\*\*\*\*

CUSTOMER #: 38900000  
 SOLO TO: MAJOR TOOL & MACHINE INC.  
 1458 E. 19TH. STREET  
 INDIANAPOLIS  
 IN 46218  
 BUYER: BOB

SLSPRSN #: 10000  
 CUSTOMER ORDER NUMBER: POS-03984  
 DEL ACT: DEL EST: 8/04/05  
 SHIP VIA: ABF F.O.B.: OUR PLANT  
 FREIGHT BILL NUMBER:

SHIP TO: MAJOR TOOL & MACHINE INC.  
 1458 E. 19TH. STREET  
 INDIANAPOLIS  
 IN 46218  
 ATTENTION:  
 TAG #:  
 TAG #:

PREPAID/CHG: PREPAID/ALLOW: COLLECT: X  
 TERMS: SEE BELOW  
 MILL TEST REPORTS:  
 X WITH SHIPMENT  
 X WITH INVOICE  
 NOT REQUIRED

ITEM	ORDER	QUANTITY	B/O	SHIP	DESCRIPTION	HEAT U/M NUMBER	MACH P.O. #
3	18	18 pcs. 52"lg			4"OD .250AW PIPE X 52"LG (-0,+1/2) FORM & TACK 625 SB443 NO LONG SEAM BEVEL TAG: 1PC PART# SE120-004 PORT 17 5PC PART# SE120-004 PORT 18 4PC PART# SE120-004 PORT 2 5PC PART# SE120-004 PORT 8	EA 132793	81404C
						99726	
						99723	
						99724	
4	1				CONTACT MAJOR TOOL TRANS. DEPT FOR SHIPPING INSTRUCTIONS 317-917-2404. REFERENCE PRIME CONTACT #0E-AC02-76-CH03073	LT	
5	1				BAND PIPE TO WOODEN PALLETS & SHRINK WRAP COMPLETELY	LT	

*9976A see last page for customer/  
 vendor revision.*

*JW.*

*JW.*



6119 FULTON / 77022  
P.O. BOX 130630  
HOUSTON, TEXAS 77219-0630  
(713) 695-6000  
(713) 696-6725 FAX NUMBER

ORDER DATE MACH S/O NUMBER  
7/21/05 250875  
\*\*\*\*\*  
\*\*\* SHIPPING DEPT \*\*\*  
\*\*\*\*\*

CUSTOMER #: 38900000  
SOLD TO: MAJOR TOOL & MACHINE INC.  
1458 E. 19TH. STREET

SLSPRSN #: 10000  
CUSTOMER ORDER NUMBER: P05-03984  
DEL ACT: DEL EST: 8/04/05

INDIANAPOLIS  
IN 46218  
BUYER: BOB

SHIP VIA: ABF F.O.B.: OUR PLANT  
FREIGHT BILL NUMBER:

SHIP TO: MAJOR TOOL & MACHINE INC.  
1458 E. 19TH. STREET

PREPAID/CHG: PREPAID/ALLOW: COLLECT: X  
TERMS: SEE BELOW

INDIANAPOLIS  
IN 46218  
ATTENTION:  
TAG #:  
TAG #:

MILL TEST REPORTS:  
X WITH SHIPMENT  
X WITH INVOICE  
NOT REQUIRED

ITEM	ORDER	QUANTITY	B/O	SHIP DESCRIPTION	HEAT U/M NUMBER	MACH P.O. #
6	1			MTM TO PAY \$31,500.00 PRIOR TO SHIPMENT	LT	
FORWARD INVOICE TO BOB JOACHIM @ E.JOACHIM@MAJORTOOL.COM					RECV. 31,500 8/9/05 CIC# 60160	
BALANCE OF FUNDS DUE NET 30 DAYS.						

RECEIVED BY *Frank Smith*  
DATE 8-9-05

DECLARED VALUE IS ----- \$48,400.00



6119 Fulton Street  
P. O. Box 130630  
Houston, Texas 77219  
(713) 695-6000  
(800) 231-6823  
(713) 696-6725 Fax

August 18, 2005

To: Major Tool & Machine

Attn: Dave Wilkinson

Re: **Marking Authorization**  
**Major Tool Po# P05-03984**  
**Mach S/O# 250875**

Dear Dave,

The Quality Control Department at Mach Industrial Group states the following material 4"OD .250AW Pipe x 52"LG Port 17, needs to be marked as follows:

4"OD .250AW Pipe x 52"LG Port 18 HT#132793

Let me know if we can help in any other way.

Sincerely,

A handwritten signature in black ink that reads "Denise Hernandez". The signature is written in a cursive style with a large, looping flourish at the end.

Denise Hernandez  
Sales Department

**INSPECTION DATA CHECKLIST**

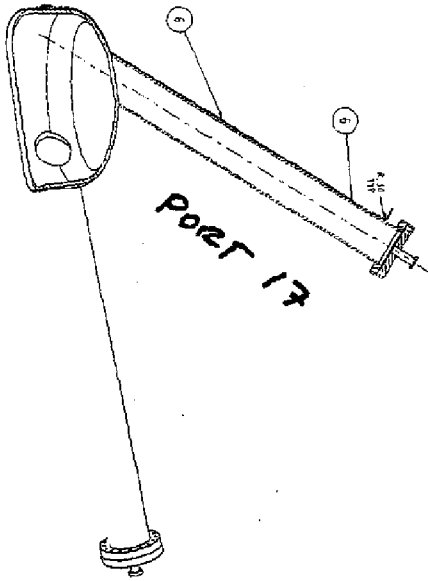
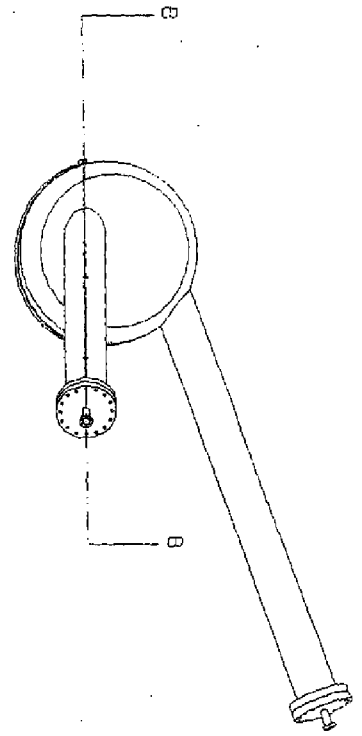
Quality Assurance Documentation for Part ID: SE120-004 PORT 18 - Item: 202

Workorder: 65678/8-0 Sub:171 Op:20

Part: SE120-004 PORT 18 - PIPE, 3.5" SCH. 40 - SE120-004-15 PIPE, 3.5" SCH. 40

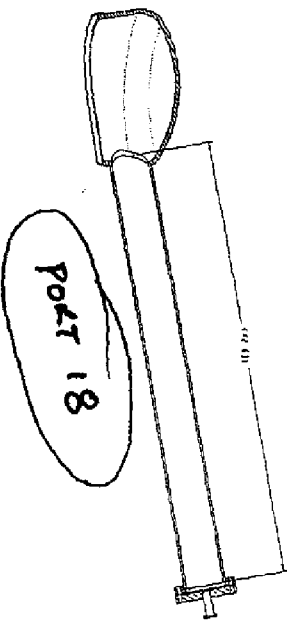
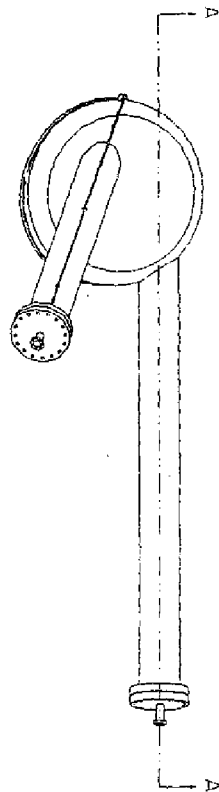
Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*				MFG		VISUAL	WELD ACCEPTABLE P CUSTOMER DRAWIN PECIFICATION REQUI EMENTS.	933-D.L	933-D.L	
(20)		VWI - COMPLETED WELD		CWI				09-09-05	09-09-05	

A



SECTION B-B

65678/80/171/30/818  
 SE120-004 port 18A  
 9/10/65



SECTION A-A

RELEASED FOR  
 FABRICATION/INSTALLATION  
 JERRY SIEGEL

FOR NOTES AND PARTS LIST, SEE SHEET 1

DATE	BY	REVISION
11/22/65	JERRY SIEGEL	1
11/22/65	JERRY SIEGEL	2
11/22/65	JERRY SIEGEL	3
11/22/65	JERRY SIEGEL	4
11/22/65	JERRY SIEGEL	5
11/22/65	JERRY SIEGEL	6
11/22/65	JERRY SIEGEL	7
11/22/65	JERRY SIEGEL	8
11/22/65	JERRY SIEGEL	9
11/22/65	JERRY SIEGEL	10

UNFINISHED  
 NATIONAL EQUIPMENT CORPORATION  
 VACUUM VESSEL  
 PORT 18A




**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 18 - Item: 205

Workorder: 65678/8-0 Sub:171 Op:50

Part: SE120-004 PORT 18 - PIPE, 3.5" SCH. 40 - SE120-004-15 PIPE, 3.5" SCH. 40

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (40)		 0.06	HEIGHT GAGE	QA		J-530	.045	854-R.U 10-20-05		

A



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 18 - Item: 207

Workorder: 65678/8-0 Sub:177 Op:20

Part: SE120-004 PORT 18 - PIPE, 3.5" SCH. 40 - SE120-004-15 PIPE, 3.5" SCH. 40

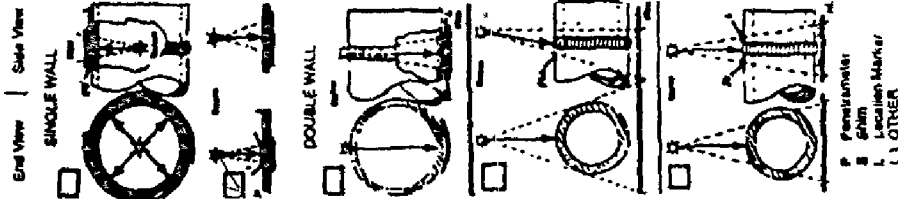
Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*				MFG		VISUAL	WELD ACCEPTABLE P CUSTOMER DRAWIN PECIFICATION REQUI EMENTS.	933-D.L	933-D.L	
(20)		VWI - COMPLETED WELD		CWI				09-09-05	09-09-05	A

4959

10520 Chester Road  
Woodlawn, Ohio 45215



CLIENT		INTERPRETER/LEVEL		INADVERTER		JOB NO		P.O. NO		DATE	
Major Tool & Machine		Robert weaver II		Robert weaver II		13850991		N/A		9/10/05	
ISOTOPE RAY		FOCAL SPOT SIZE		TIME		FILM PROCESSING		FILM TYPE		FILM TECHNIQUE	
IR 192		.151"		14.8125" 4:30		Auto		Kodak AA Double		.010"	
WELD PROCESS		MATERIAL THICKNESS		PENETRANT		SHIM		ACCEPTANCE STANDARD			
PAW		.1875"		ASTM IA		N/A		ASME VIII, UW-51			
DESCRIPTION		REMARKS									
65678/8.0/17730/818											
SE 120-004 Part 18											
FITTING		SCAM OR FITTING		FILM INTERVAL		WELDER IDENTIFICATION		PENETRANT SIZE		QUALITY LEVEL	
long 0-1 d.5								1A .008"			
SLAG		POROSITY		POROSITY WITH TAIL		CRACK		LACK OF PEN		LACK OF FUSION	
INTERNAL CONCAVITY		INTERNAL CONCAVITY		TUNGSTEN		MELT THROUGH		BURN-THROUGH		CRATER PIT	
OXIDATION		INTERNAL UNDERCUT		EXTERNAL UNDERCUT		ALIGNED INDICATIONS		WELD CONTOUR		MISMATCH	
FILM ARTIFACT		VISUAL CONCENS		FILM DENSITY		SEE REMARKS		ACCEPT		REJECT	
								V			

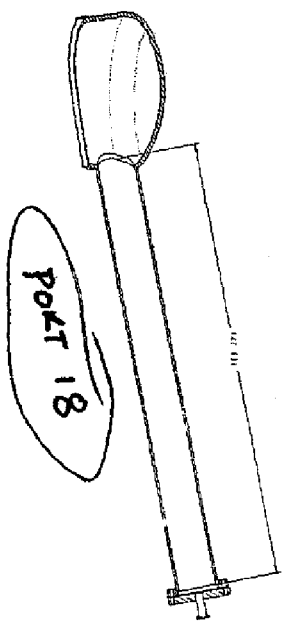
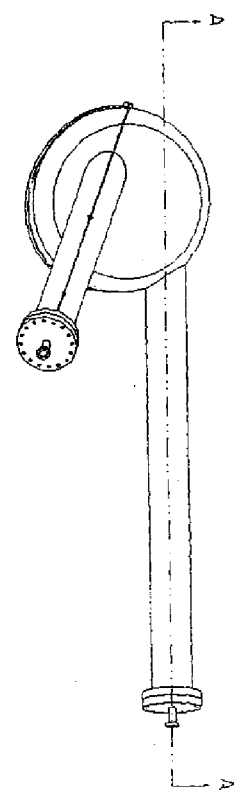
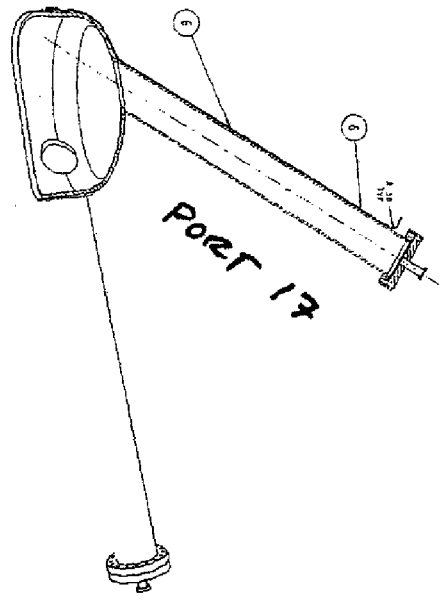
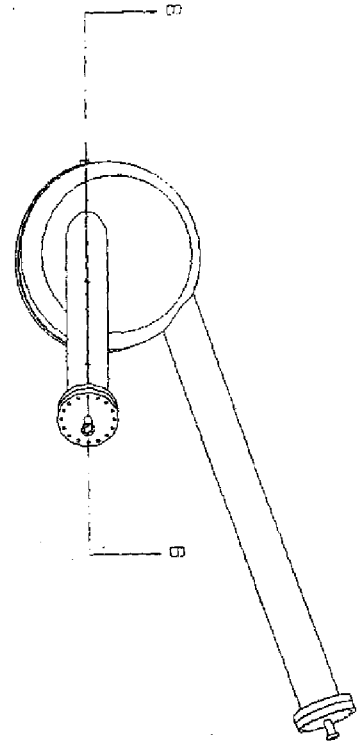


- Penetrant
- Shim
- Location Marker
- OTHER

*[Signature]*  
Customer Representative Signature

*[Signature]*  
Customer Representative Signature

9/10/05  
Date



SECTION B-B

SECTION A-A

65678/80/177/30/818  
 SE130-004 Port 18B  
 9/10/65

FOR NOTES AND PARTS LIST, SEE SHEET 1

RELEASED FOR  
 FABRICATION/INSTALLATION  
 PER ORDER OF Jerry Siegel


501 First Street, Pasadena, California NATIONAL AERONAUTICS AND SPACE ADMINISTRATION NASA	
LEONARDO NATIONAL CORNELL UNIVERSITY LABORATORY VACUUM VESSEL PORT 11, 1, 18 WELDED ORDER NO. 51122-007 DRAWING NO. 51122-007	

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 18 - Item: 210

Workorder: 65678/8-0 Sub:177 Op:50

Part: SE120-004 PORT 18 - PIPE, 3.5" SCH. 40 - SE120-004-15 PIPE, 3.5" SCH. 40

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (40)		 0.06	HEIGHT GAGE	QA		J-530	.050	854-R.U 10-20-05		

A

Quality Assurance Documentation for Part ID: SE120-004 PORT 18A - Item: 211

Workorder: 65678/8-0 Sub:163 Op:10

Part: SE120-004 PORT 18A - PORT 18A SUB-ASSEMBLY - PORT 18A SUB-ASSEMBLY

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		VWI - INTERIOR COVER PASS / FILLET P18AF		MFG		VISUAL	OK	197-T.FI	933-D.L		A
(30)				CWI				11-23-05	11-28-05		
*		VWI - EXTERIOR FILLETS P18AF		MFG		VISUAL	OK	197-T.FI	933-D.L		A
(40)					CWI				11-23-05	11-28-05	

Quality Assurance Documentation for Part ID: SE120-004 PORT 18A - Item: 212

Workorder: 65678/8-0 Sub:165 Op:10

**Part: SE120-004 PORT 18A - PORT 18B SUB-ASSEMBLY - PORT 18B SUB-ASSEMBLY**

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		VWI - INTERIOR COVER PASS / FILLET P18BF		MFG		VISUAL	OK	197-T.FI	933-D.L		A
(30)				CWI				11-23-05	11-28-05		
*		VWI - EXTERIOR FILLETS P18BF		MFG		VISUAL	OK	197-T.FI	933-D.L		A
(40)				CWI				11-23-05	11-28-05		



6119 FULTON / 77022  
 P.O. BOX 130630  
 HOUSTON, TEXAS 77219-0630  
 (713) 695-6000  
 (713) 694-6725 FAX NUMBER

ORDER DATE 7/21/05 MACH S/O NUMBER 250675  
 \*\*\*\*\*  
 \*\*\* SHIPPING DEPT \*\*\*  
 \*\*\*\*\*

CUSTOMER #: 38800000  
 SOLD TO: MAJOR TOOL & MACHINE INC.  
 1458 E. 19TH. STREET

SLSPRSN #: 10000  
 CUSTOMER ORDER NUMBER: P05-03984  
 DEL ACT: DEL EST: 8/04/05

INDIANAPOLIS-  
 IN 46218  
 BUYER: BOE

SHIP VIA: ABF F.O.B.: OUR PLANT  
 FREIGHT BILL NUMBER:

SHIP TO: MAJOR TOOL & MACHINE INC.  
 1458 E. 19TH. STREET

PREPAID/CHG: PREPAID/ALLOW: COLLECT: X  
 TERMS: SEE BELOW

INDIANAPOLIS  
 IN 46218  
 ATTENTION:  
 TAG #:  
 TAG #:

MILL TEST REPORTS:  
 X WITH SHIPMENT  
 X WITH INVOICE  
 NOT REQUIRED

ITEM	ORDER	QTY	SHIP	DESCRIPTION	HEAT U/M NUMBER	MACH P.O. #
1	9	9pc. 34"lg		4"OD .250AW PIPE X 34"LG (-0+1/4) FORM & TACK 625 SB443 NO LONG SEAM BEVEL TAG: 3PCS PART# SE120-004 PORT 15 TAG: 3PCS PART# SE120-004 PORT 15	EA 132793	81404C
					99716	
					99715	
2	6	6pc. 42"lg		4"OD .250AW PIPE X 42"LG (-0 +1/2) FORM & TACK 625 SB443 NO LONG SEAM BEVEL TAG: PART# SE120-004 PORT 17	EA 132793	81404C
					99721	

Rel: 08.17.05 wx



6119 FULTON / 77022  
P.O. BOX 130630  
HOUSTON, TEXAS 77219-0630  
(713) 695-6000  
(713) 696-6725 FAX NUMBER

ORDER DATE 7/21/05 MACH S/O NUMBER 250875  
\*\*\*\*\*  
\*\*\* SHIPPING DEPT \*\*\*  
\*\*\*\*\*

CUSTOMER #: 38900000  
SOLD TO: MAJOR TOOL & MACHINE INC.  
1458 E. 19TH. STREET

GLSPRSN #: 10000  
CUSTOMER ORDER NUMBER: POS-03984  
DEL ACT: DEL EST: 8/04/05

INDIANAPOLIS  
IN 46218  
BUYER: BOB

SHIP VIA: ABF F.O.B.: OUR PLANT  
FREIGHT BILL NUMBER:

SHIP TO: MAJOR TOOL & MACHINE INC.  
1458 E. 19TH. STREET

PREPAID/CHG: PREPAID/ALLOW: COLLECT: X  
TERMS: SEE BELOW

INDIANAPOLIS  
IN 46218  
ATTENTION:  
TAG #:  
TAG #:

MILL TEST REPORTS:  
X WITH SHIPMENT  
X WITH INVOICE  
NOT REQUIRED

ITEM	ORDER	QTY	SHIP	DESCRIPTION	HEAT U/M NUMBER	MACH P.O. #
3	18	18 pcs. 52"lg		4"OD .250AW PIPE X 52"LG (-0,+1/2) FORM & TACK 625 58443 NO LONG SEAM BEVEL TAG: 1PC PART# SE120-004 PORT 17 5PC PART# SE120-004 PORT 18 4PC PART# SE120-004 PORT 2 5PC PART# SE120-004 PORT 8	EA 132793	81404C
4	1			CONTACT MAJOR TOOL TRANS. DEPT FOR SHIPPING INSTRUCTIONS 317-917-2404. REFERENCE PRIME CONTACT #DE-AC02-76-CH03073	LT	
5	1			BAND PIPE TO WOODEN PALLETS & SHRINK WRAP COMPLETELY	LT	

*9976A see last page for customer/  
VENDOR REVISION.*

*99726  
99723  
99724*

*VJW.*

*VJW.*





4119 FULTON / 77022  
P.O. BOX 130630  
HOUSTON, TEXAS 77219-0630  
(713) 695-6000  
(713) 696-6725 FAX NUMBER

ORDER DATE 7/21/05 MACH S/O NUMBER 250875  
\*\*\*\*\*  
\*\*\* SHIPPING DEPT \*\*\*  
\*\*\*\*\*

CUSTOMER #: 38900000  
SOLD TO: MAJOR TOOL & MACHINE INC.  
1458 E. 19TH. STREET  
INDIANAPOLIS  
IN 46218  
BUYER: BOB

SLSPRSN #: 10000  
CUSTOMER ORDER NUMBER: POS-03984  
DEL ACT: DEL EST: 8/04/05  
SHIP VIA: ABF F.O.B.: OUR PLANT  
FREIGHT BILL NUMBER:

SHIP TO: MAJOR TOOL & MACHINE INC.  
1458 E. 19TH. STREET  
INDIANAPOLIS  
IN 46218  
ATTENTION:  
TAG #:  
TAG #:

PREPAID/CHG: PREPAID/ALLOW: COLLECT: X  
TERMS: SEE BELOW

MILL TEST REPORTS:  
X WITH SHIPMENT  
X WITH INVOICE  
NOT REQUIRED

ITEM	ORDER	QUANTITY	B/O	SHIP DESCRIPTION	HEAT U/M NUMBER	MACH P.O. #
6	1			MTM TO PAY \$31,500.00 PRIOR TO SHIPMENT	LT	
FORWARD INVOICE TO BOB JOACHIM @ BJOACHIM@MAJORTOOL.COM? BALANCE OF FUNDS DUE NET 30 DAYS.					RECV. 31,500 8/9/05 CIC# 60160	

RECEIVED BY Frank J. Smith

DATE 8-9-05

DECLARED VALUE IS ----- \$48,400.00



6119 Fulton Street  
P. O. Box 130630  
Houston, Texas 77219  
(713) 695-6000  
(800) 231-6823  
(713) 696-6725 Fax

August 18, 2005

To: Major Tool & Machine

Attn: Dave Wilkinson

Re: **Marking Authorization**  
**Major Tool Po# P05-03984**  
**Mach S/O# 250875**

Dear Dave,

The Quality Control Department at Mach Industrial Group states the following material 4"OD .250AW Pipe x 52"LG Port 17, needs to be marked as follows:

4"OD .250AW Pipe x 52"LG Port 18 HT#132793

Let me know if we can help in any other way.

Sincerely,

A handwritten signature in black ink that reads "Denise Hernandez". The signature is written in a cursive style with a large, looping "z" at the end.

Denise Hernandez  
Sales Department

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 2 - Item: 214

Workorder: 65678/8-0 Sub:180 Op:20

Part: SE120-004 PORT 2 - PIPE, 3.5" SCH. 40 - SE120-004-15 PIPE, 3.5" SCH. 40

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*				MFG		VISUAL	WELD ACCEPTABLE P CUSTOMER DRAWIN PECIFICATION REQUI EMENTS.	933-D.L	933-D.L	
(20)		VWI - COMPLETED WELD		CWI				09-09-05	09-09-05	

A

4959

10520 Cheater Road  
Woodlawn, Ohio 45215



CLIENT M 410 Tool & Machine		INTERPRETER/LEVEL Robert Weaver II		RADIOGRAPHER Robert Weaver		JOB NO 1385091		P.O. NO NA		DATE 9/10/05	
ISOTOPE/EXPT IR192		DIA. X LENGY 1/8" x 0.4"		FOCAL SPOT SIZE .151"		FILM PROCESSING Auto		FILM TYPE Kodak AA Double		FILM TECHNIQUE .010"	
WELD PROCESS PAW		MATERIAL SPEC. 625 Inconel		MATERIAL THICKNESS .1875"		SHIM ASTM 1A		ACCEPTANCE STANDARD ASME VIII, UW-51			
DESCRIPTION 656678/8.01180/301818 SE 170-004 Port 2		REMARKS									

SEAM OR FITTING	FILM INTERVAL NUMBER	WELDER IDENTIFICATION	PENETRANT		SLAG	POROSITY	POROSITY WITH TAIL	CRACK	LACK OF PEN	LACK OF FUSION	INTERNAL CONVEXITY	INTERNAL CONCAVITY	TUNGSTEN	MELT THROUGH	BURN THROUGH	CRATER/PIT	OXIDATION	INTERNAL UNDERCUT	EXTERNAL UNDERCUT	ALIGNED INDICATIONS	WELD CONTOUR	MIS MATCH	FILM ARTIFACT	VISUAL CONCERNS	FILM DENSITY	SEE REMARKS	ACCEPT	REJECT		
			SIZE	QUALITY LEVEL																										
long 0-1	J.S.	IA	.008"																											

*J. L. Bellard II*

*Raymond D. Edwards*

Cooperheat/MAS Signature

Customer Representative Signature

9/10/05

Date




**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 2 - Item: 217

Workorder: 65678/8-0 Sub:180 Op:50

Part: SE120-004 PORT 2 - PIPE, 3.5" SCH. 40 - SE120-004-15 PIPE, 3.5" SCH. 40

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (40)		 0.06	HEIGHT GAGE	QA		J-530	.055	854-R.U 10-20-05		

A

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 2 - Item: 219

Workorder: 65678/8-0 Sub:183 Op:20

Part: SE120-004 PORT 2 - PIPE, 3.5" SCH. 40 - SE120-004-15 PIPE, 3.5" SCH. 40

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*				MFG			ACCEPT	733-J.ST	712-W.	
(20)		VWI - COMPLETED WELD		CWI				09-02-05	09-02-05	A

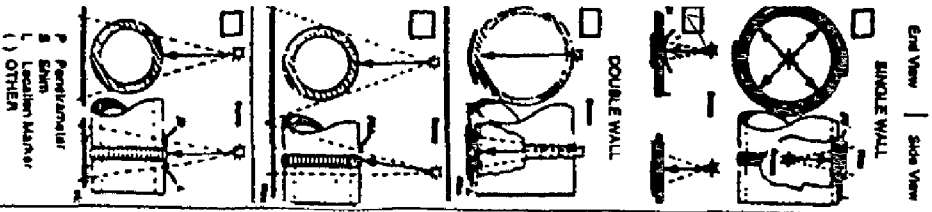


MC111793.TIF1

4959  
10820 Chester Road  
Woodlawn, Ohio 45216

CLIENT: Major Tool & Machine  
 ISOFORM RAY: TR152  
 D/A X LENGTH: 118x.04"  
 Q/INFORMA: 33  
 FOCAL SPOT SIZE: .151"  
 WELD PROCESS: PAW  
 MATERIAL SPEC: 625 Inconel  
 INTERNAL ENTRANCE: Robert Weaver II  
 SFD: 15"  
 SOO: 14.8125"  
 RADIOGRAPHER: Robert Weaver II  
 TIME: 4:30  
 JOB NO: 13850291  
 P.O. NO: 114  
 DATE: 9/10/05  
 DESCRIPTION: 656 78/80/183/30/818  
 SE: 130-004 PORT 2  
 MATERIAL DIAMETER: 3.5"  
 MATERIAL THICKNESS: .1875"  
 REMARKS: AS7M 1A  
 FILM PROCESSING: Auto  
 FILM TYPE: Kodak A1A Double  
 FILM TECHNIQUE: Double  
 PA SCREENS: .010"  
 ACCEPTANCE STANDARD: ASME VIII, UW-51

FITTING SEAM OR FITTING	FILM INTERVAL NUMBER	WELDER IDENTIFICATION	PENETRAMETER		SLAG	POROSITY	POROSITY WITH TAIL	CRACK	LACK OF PEN	LACK FUSION	INTERNAL CONVEXITY	INTERNAL CONCAVITY	TUNGSTEN	MELT THROUGH	BURN-THROUGH	CRATER-PIT	OXIDATION	INTERNAL UNDERCUT	EXTERNAL UNDERCUT	ALIGNED INDICATIONS	WELD CONTOUR	MIS-MATCH	FILM ARTIFACT	VISUAL CONCERNS	FILM DENSITY	SEE REMARKS	ACCEPT	REJECT	
			SIZE	QUALITY LEVEL																									
Long	0-1	J.S.	1A	.008"																									

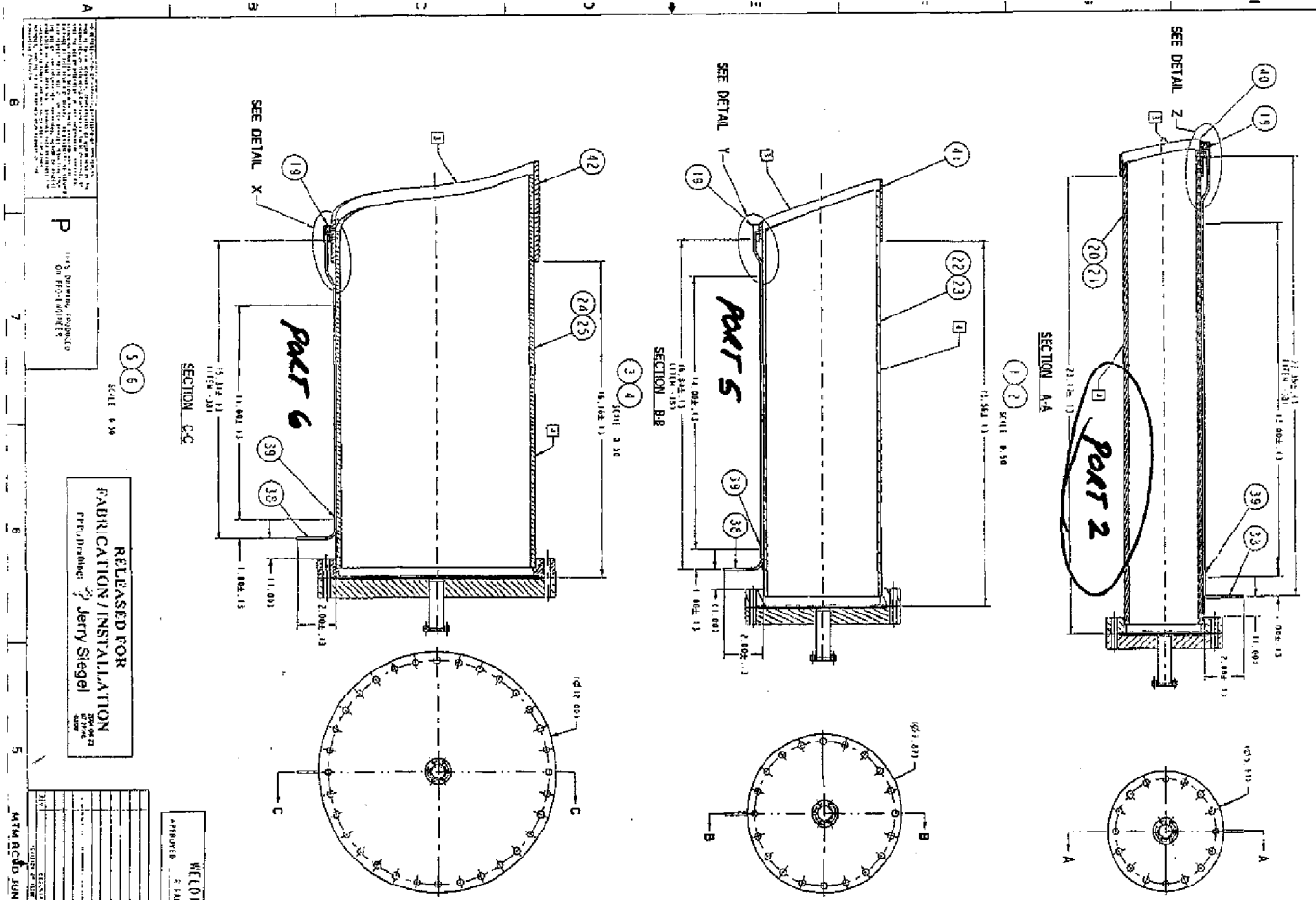


Robert Weaver 6555 14/111  
 CooperHeat-QOS signature

Robert Weaver II  
 Customer Representative Signature

9/10/05  
 Date



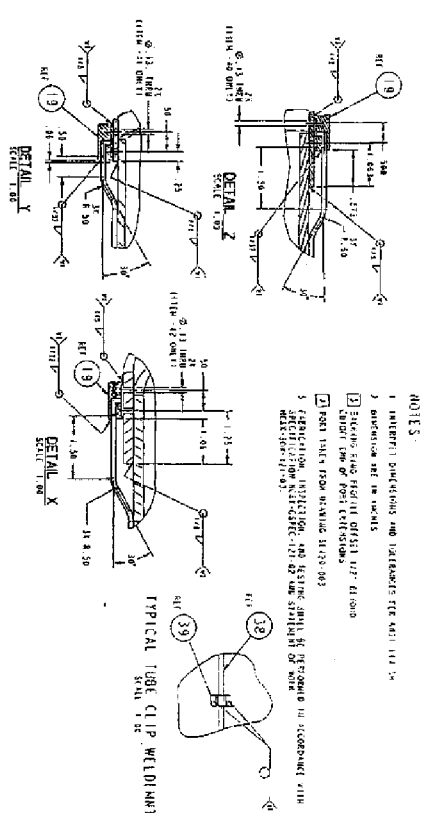


RELEASED FOR  
FABRICATION/INSTALLATION  
PREPARED BY: Jerry Siegel

WELDING ENGINEER  
APPROVED: S. MADHUSAI SUDHAKAR

NO.	DESCRIPTION	QTY	UNIT	REMARKS
1	FLANGE	1	EA	
2	FLANGE	1	EA	
3	FLANGE	1	EA	
4	FLANGE	1	EA	
5	FLANGE	1	EA	
6	FLANGE	1	EA	
7	FLANGE	1	EA	
8	FLANGE	1	EA	
9	FLANGE	1	EA	
10	FLANGE	1	EA	
11	FLANGE	1	EA	
12	FLANGE	1	EA	
13	FLANGE	1	EA	
14	FLANGE	1	EA	
15	FLANGE	1	EA	
16	FLANGE	1	EA	
17	FLANGE	1	EA	
18	FLANGE	1	EA	
19	FLANGE	1	EA	
20	FLANGE	1	EA	
21	FLANGE	1	EA	
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23	FLANGE	1	EA	
24	FLANGE	1	EA	
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26	FLANGE	1	EA	
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97	FLANGE	1	EA	
98	FLANGE	1	EA	
99	FLANGE	1	EA	
100	FLANGE	1	EA	

65678/80783/30/8/18  
SE/120-004 part 2B  
9/10/05



- NOTES:
1. MATERIAL SPECIFICATIONS AND DIMENSIONS FOR PART 112 15
  2. DIMENSIONS ARE IN MILLIMETERS
  3. DIMENSIONS ARE GIVEN IN PARENT PARENTHESIS
  4. DIMENSIONS ARE GIVEN IN BRACKET PARENTHESIS
  5. FABRICATION/INSTALLATION AND TESTING SHALL BE PERFORMED IN ACCORDANCE WITH SPECIFICATION MC120754
  6. DIMENSIONS ARE GIVEN IN SQUARE PARENTHESIS
  7. DIMENSIONS ARE GIVEN IN CIRCULAR PARENTHESIS
  8. DIMENSIONS ARE GIVEN IN TRIANGULAR PARENTHESIS
  9. DIMENSIONS ARE GIVEN IN DIAMETRIC PARENTHESIS
  10. DIMENSIONS ARE GIVEN IN RADIUS PARENTHESIS
  11. DIMENSIONS ARE GIVEN IN CHORD PARENTHESIS
  12. DIMENSIONS ARE GIVEN IN ARC PARENTHESIS
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  49. DIMENSIONS ARE GIVEN IN HEIGHT PARENTHESIS
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  51. DIMENSIONS ARE GIVEN IN DIAMETER PARENTHESIS
  52. DIMENSIONS ARE GIVEN IN RADIUS PARENTHESIS
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  54. DIMENSIONS ARE GIVEN IN ARC PARENTHESIS
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  57. DIMENSIONS ARE GIVEN IN VOLUME PARENTHESIS
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  59. DIMENSIONS ARE GIVEN IN AREA PARENTHESIS
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  61. DIMENSIONS ARE GIVEN IN LENGTH PARENTHESIS
  62. DIMENSIONS ARE GIVEN IN WIDTH PARENTHESIS
  63. DIMENSIONS ARE GIVEN IN HEIGHT PARENTHESIS
  64. DIMENSIONS ARE GIVEN IN THICKNESS PARENTHESIS
  65. DIMENSIONS ARE GIVEN IN DIAMETER PARENTHESIS
  66. DIMENSIONS ARE GIVEN IN RADIUS PARENTHESIS
  67. DIMENSIONS ARE GIVEN IN CHORD PARENTHESIS
  68. DIMENSIONS ARE GIVEN IN ARC PARENTHESIS
  69. DIMENSIONS ARE GIVEN IN ANGLE PARENTHESIS
  70. DIMENSIONS ARE GIVEN IN SURFACE PARENTHESIS
  71. DIMENSIONS ARE GIVEN IN VOLUME PARENTHESIS
  72. DIMENSIONS ARE GIVEN IN MASS PARENTHESIS
  73. DIMENSIONS ARE GIVEN IN AREA PARENTHESIS
  74. DIMENSIONS ARE GIVEN IN PERIMETER PARENTHESIS
  75. DIMENSIONS ARE GIVEN IN LENGTH PARENTHESIS
  76. DIMENSIONS ARE GIVEN IN WIDTH PARENTHESIS
  77. DIMENSIONS ARE GIVEN IN HEIGHT PARENTHESIS
  78. DIMENSIONS ARE GIVEN IN THICKNESS PARENTHESIS
  79. DIMENSIONS ARE GIVEN IN DIAMETER PARENTHESIS
  80. DIMENSIONS ARE GIVEN IN RADIUS PARENTHESIS
  81. DIMENSIONS ARE GIVEN IN CHORD PARENTHESIS
  82. DIMENSIONS ARE GIVEN IN ARC PARENTHESIS
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  85. DIMENSIONS ARE GIVEN IN VOLUME PARENTHESIS
  86. DIMENSIONS ARE GIVEN IN MASS PARENTHESIS
  87. DIMENSIONS ARE GIVEN IN AREA PARENTHESIS
  88. DIMENSIONS ARE GIVEN IN PERIMETER PARENTHESIS
  89. DIMENSIONS ARE GIVEN IN LENGTH PARENTHESIS
  90. DIMENSIONS ARE GIVEN IN WIDTH PARENTHESIS
  91. DIMENSIONS ARE GIVEN IN HEIGHT PARENTHESIS
  92. DIMENSIONS ARE GIVEN IN THICKNESS PARENTHESIS
  93. DIMENSIONS ARE GIVEN IN DIAMETER PARENTHESIS
  94. DIMENSIONS ARE GIVEN IN RADIUS PARENTHESIS
  95. DIMENSIONS ARE GIVEN IN CHORD PARENTHESIS
  96. DIMENSIONS ARE GIVEN IN ARC PARENTHESIS
  97. DIMENSIONS ARE GIVEN IN ANGLE PARENTHESIS
  98. DIMENSIONS ARE GIVEN IN SURFACE PARENTHESIS
  99. DIMENSIONS ARE GIVEN IN VOLUME PARENTHESIS
  100. DIMENSIONS ARE GIVEN IN MASS PARENTHESIS


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100	FLANGE	1	EA	

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 2 - Item: 222

Workorder: 65678/8-0 Sub:183 Op:50

Part: SE120-004 PORT 2 - PIPE, 3.5" SCH. 40 - SE120-004-15 PIPE, 3.5" SCH. 40

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (40)		 0.06	HEIGHT GAGE	QA		J-530	.042	085-D.G 10-17-05		

A

Quality Assurance Documentation for Part ID: SE120-004 PORT 2A - Item: 223

Workorder: 65678/8-0 Sub:6 Op:10

**Part: SE120-004 PORT 2A - PORT 2A SUB-ASSEMBLY - PORT 2A SUB-ASSEMBLY**

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		VWI - INTERIOR COVER PASS / FILLET P2AF		MFG		VISUAL	OK	197-T.FI	933-D.L		A
(30)				CWI				11-23-05	11-28-05		
*		VWI - EXTERIOR FILLETS P2AF		MFG		VISUAL	OK	197-T.FI	933-D.L		A
(40)					CWI				11-23-05	11-28-05	

Quality Assurance Documentation for Part ID: SE120-004 PORT 2B - Item: 224

Workorder: 65678/8-0 Sub:7 Op:10

Part: SE120-004 PORT 2B - PORT 2B SUB-ASSEMBLY - PORT 2B SUB-ASSEMBLY

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		VWI - INTERIOR COVER PASS / FILLET P2BF		MFG		VISUAL	OK	197-T.FI	933-D.L		A
(30)				CWI				11-23-05	11-28-05		
*		VWI - EXTERIOR FILLETS P2BF		MFG		VISUAL	OK	197-T.FI	933-D.L		A
(40)					CWI				11-23-05	11-28-05	

Quality Assurance Documentation for Part ID: SE120-004 PORT 4A - Item: 225

Workorder: 65678/8-0 Sub:8 Op:30

**Part: SE120-004 PORT 4A - PORT 4A SUB-ASSEMBLY - PORT 4A SUB-ASSEMBLY (PERSONNEL ACCESS PORT)**

Drawing ID: SE120-004 Rev: 2		INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*				MFG		VISUAL	ACCEPT	683-K.M	933-D.L	A
(10)		VWI ROOT PASS WELD 4A1-4A5		CWI				10-26-05	10-26-05	
*				MFG		VISUAL	GOOD	358-D.M	933-D.L	A
(50)		VWI COVER PASS WELD 4A1-4A5		CWI				10-27-05	11-04-05	
*				MFG		VISUAL	ACCEPT	683-K.M	933-D.L	A
(60)		VWI ROOT PASS WELD 4A2-4A5		CWI				10-26-05	10-26-05	
*				MFG		VISUAL	GOOD	358-D.M	933-D.L	A
(100)		VWI COVER PASS WELD 4A2-4A5		CWI				10-27-05	11-04-05	
*				MFG		VISUAL	ACCEPT	683-K.M	933-D.L	A
(110)		VWI ROOT PASS WELD 4A1-4A6		CWI				10-26-05	10-26-05	
*				MFG		VISUAL	GOOD	358-D.M	933-D.L	A
(150)		VWI COVER PASS WELD 4A1-4A6		CWI				10-27-05	11-04-05	
*				MFG		VISUAL	ACCEPT	683-K.M	933-D.L	A
(160)		VWI ROOT PASS WELD 4A2-4A6		CWI				10-26-05	10-26-05	
*				MFG		VISUAL	GOOD	358-D.M	933-D.L	A
(200)		VWI COVER PASS WELD 4A2-4A6		CWI				10-27-05	11-04-05	
*				MFG		VISUAL	OK	307-D.J	840-G.M	A
(210)		VWI ROOT PASS WELD 4A3-4A5		CWI				11-01-05	11-04-05	
*				MFG		VISUAL	O.K. PER CUSTOMER EQUIREMENTS	771-B.S	933-D.L	A
(250)		VWI COVER PASS WELD 4A3-4A5		CWI				11-17-05	11-04-05	
*				MFG		VISUAL	OK	307-D.J	840-G.M	A
(260)		VWI ROOT PASS WELD 4A4-4A5		CWI				11-01-05	11-04-05	
*				MFG		VISUAL	O.K. PER CUSTOMER EQUIREMENTS	771-B.S	933-D.L	A
(300)		VWI COVER PASS WELD 4A4-4A5		CWI				11-17-05	11-04-05	
*				MFG		VISUAL	OK	307-D.J	840-G.M	A
(310)		VWI ROOT PASS WELD 4A3-4A6		CWI				11-01-05	11-04-05	
*				MFG		VISUAL	O.K. PER CUSTOMER EQUIREMENTS	771-B.S	933-D.L	A
(350)		VWI COVER PASS WELD 4A3-4A6		CWI				11-17-05	11-04-05	
*				MFG		VISUAL	OK, ACCEPT	840-G.M	840-G.M	A
(360)		VWI ROOT PASS WELD 4A4-4A6		CWI				11-18-05	11-18-05	

**INSPECTION DATA CHECKLIST**

*	(400)	VWI COVER PASS WELD 4A4-4A6	MFG CWI	VISUAL	O.K. PER CUSTOMER EQUIREMENTS	771-B.S 11-17-05	933-D.L 11-04-05		A
*	(410)	VWI ROOT PASS WELD 4A CIRCUMFER	MFG CWI	VISUAL	ACCEPT	683-K.M 11-03-05	933-D.L 11-03-05		A
*	(450)	VWI COVER PASS WELD 4A CIRCUMFE	MFG CWI	VISUAL	GOOD	358-D.M 11-04-05	933-D.L 11-04-05		A
*	(510)	VWI ROOT PASS WELD 4A4X	MFG CWI	VISUAL	OK	307-D.J 11-01-05	840-G.M 11-04-05		A
*	(550)	VWI COVER PASS WELD 4A4X	MFG CWI	VISUAL	O.K. PER CUSTOMER EQUIREMENTS	771-B.S 11-17-05	933-D.L 11-04-05		A
*	(560)	VWI ROOT PASS WELD 4A2X	MFG CWI	VISUAL	ACCEPT	683-K.M 10-26-05	933-D.L 10-28-05		A
*	(580)	VWI COVER PASS WELD 4A2X	MFG CWI	VISUAL	GOOD	358-D.M 10-27-05	933-D.L 11-04-05		A

Quality Assurance Documentation for Part ID: SE120-004 PORT 4A - Item: 226

Workorder: 65678/8-0 Sub:8 Op:40

Part: SE120-004 PORT 4A - PORT 4A SUB-ASSEMBLY - PORT 4A SUB-ASSEMBLY (PERSONNEL ACCESS PORT)

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*				MFG		VISUAL	GOOD	358-D.M	933-D.L		A
(20)		VWI - ROOT PASS P4AF		CWI				11-10-05	11-10-05		
*				MFG		VISUAL	ACCEPT PER CUSTOM	709-K.A	581-D.E		A
(50)		VWI - COVER PASS P4AF		CWI			DRAWINGS AND SPE FICATIONS	11-14-05	11-14-05		
*				MFG		VISUAL	OK PER SPEC.	093-M.S	581-D.E		A
(60)		VWI - FILLET WELDS P4AF		CWI				11-14-05	11-14-05		



**Industrial Services, Inc.**  
TCM Division

10540 Chester Road  
Cincinnati, Ohio 45215  
(513) 771-3292 Phone

RADIOGRAPHY READER SHEET  
Form # 20.3A Rev. 3

4347

Densitometer S/N: 12105  
Job No: 13850291  
P.O. No: NA  
Cal Date: 11/21/05  
Date: 11/15/05

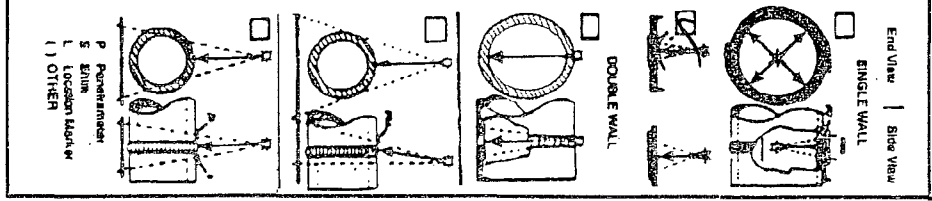
Client: Major Tool & Machine  
Interpreter/Level: Robert Weaver II  
Radiographer: Robert Weaver

Isotope/X-Ray: IR192  
Dia. X Len/KV: .118"x.079"  
Curies/MA: 67  
Focal Spot Size: .143"  
SFD: 15"  
SOD: 14.5"  
Time: 3:00  
Film Processing: Auto

Weld Process / Heat Number: GTAW  
Material Spec: 605 Inconel  
Material Diameter: NA  
Material Thickness: 5"  
Penetrant: ASTM 1B  
Shim: NA  
Acceptance Standard: ASME VIII, Div 1, UW-51

Description: 65.78/8.0/8.70/8.18  
SE 130-084 port 4A  
Page 1 of 2  
Density Readings through IQL(s) & Area of Interest: 2.0-4.0  
Remarks: Refer to Film Identification for Special Requirement for ASME Sec XI NA NER-18634

FITTING SEAM OR FITTING	FILM INTERVAL NUMBER	WELDER IDENTIFICATION	PENETRANT		SLAG	POROSITY	POROSITY WITH TAIL	CRACK	LACK OF PEN	LACK FUSION	INTERNAL CONVEXITY	INTERNAL CONCAVITY	TUNGSTEN	MELT-THROUGH	BURN-THROUGH	CRATER-PIT	OXIDATION	INTERNAL UNDERCUT	EXTERNAL UNDERCUT	ALIGNED INDICATIONS	WELD CONTOUR	MIS-MATCH	FILM ARTIFACT	VISUAL CONCERNS	FILM DENSITY	SEE REMARKS	ACCEPT	REJECT
			SIZE	QUALITY LEVEL																								
1	0-6	NA	1B	.013"		✓				✓																✓	X	
2	3	H				✓																				✓		
3	4	H				✓																				✓		
4	5	H				✓																				✓		
5	6	H				✓																				✓		
6	7	H				✓																				✓		
7	8	H				✓																				✓		
8	9	H				✓																				✓		

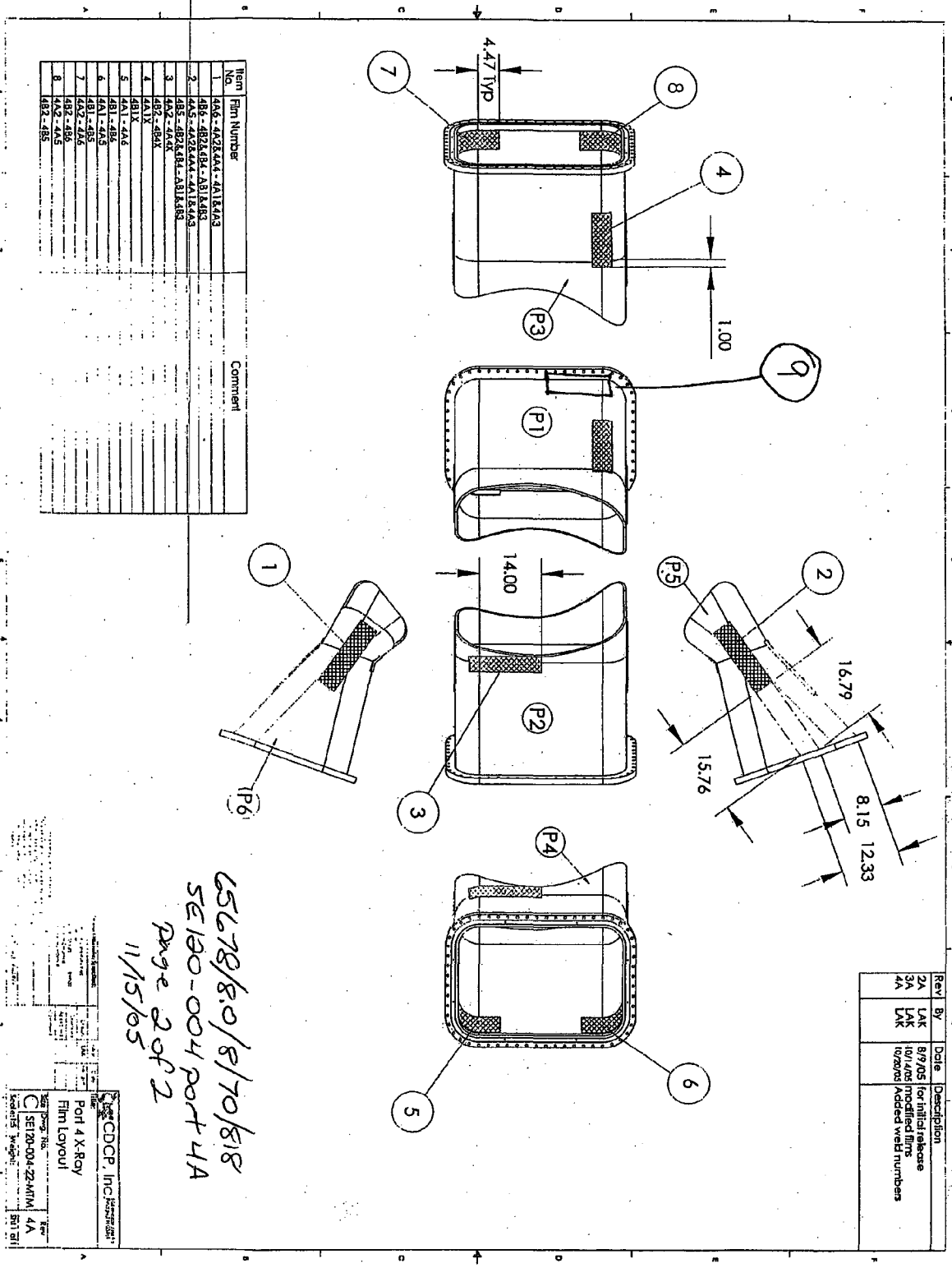


Robert Weaver II  
TEAM Technician Signature

Raymond D. Blum  
Customer Representative Signature

11/15/05  
Date





Item No	Film Number	Comment
1	446-4428444-4A18443	
2	485-482484-4B18483	
3	445-4428444-4A18443	
4	485-482484-4B18483	
5	442-446X	
6	482-484X	
7	441X	
8	481X	
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13	445-446	
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15	482-485	

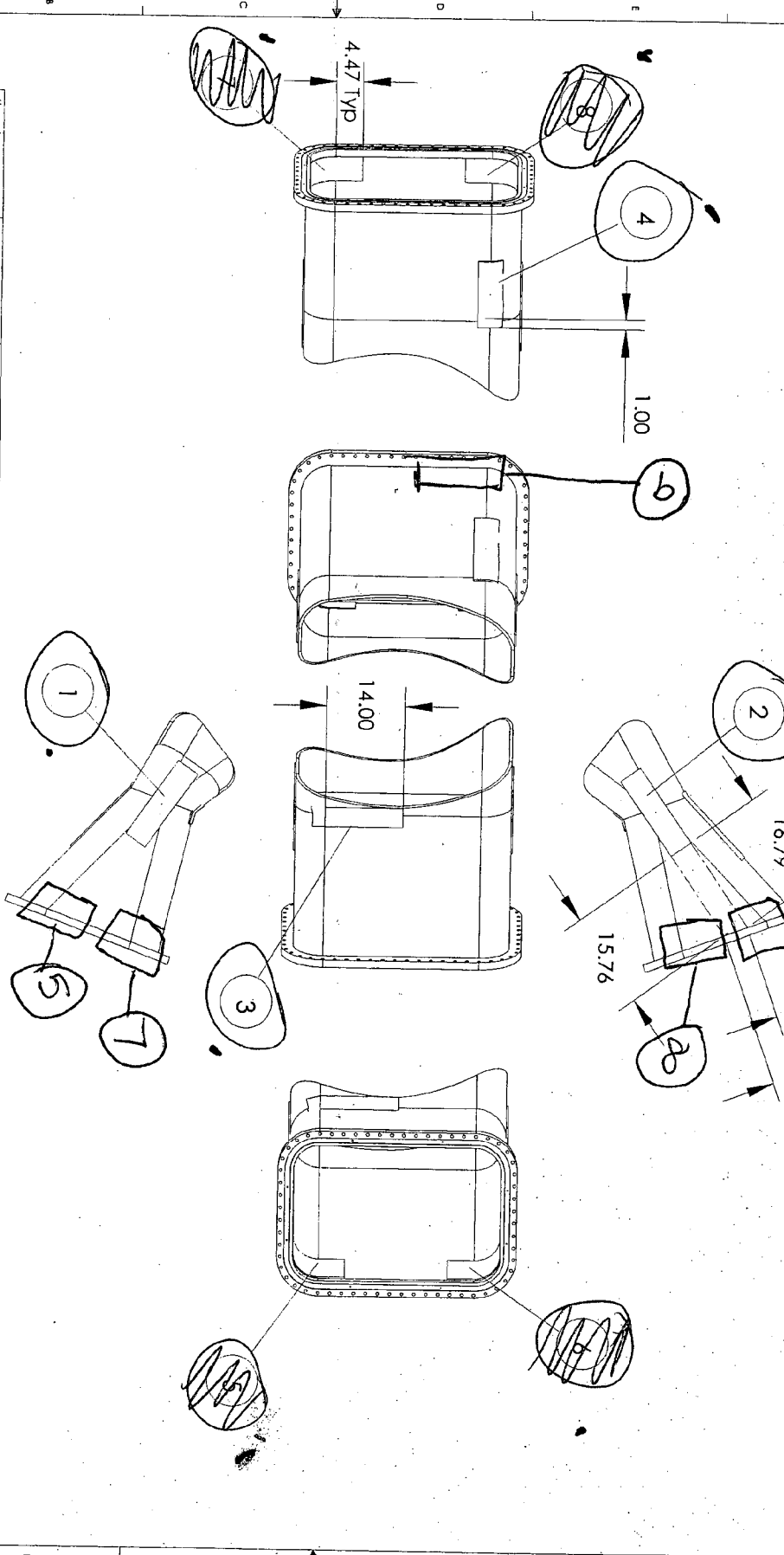
Rev	By	Date	Description
2A	LAK	8/9/05	for initial release
2A	LAK	10/4/05	modified film
2A	LAK	10/20/05	added w/d numbers

65678/8.0/8/70/8/8  
 SE130-004 port 4/A  
 Page 2 of 2  
 11/15/05

CDGP, Inc. 855-888-8888  
 Port 4 X-Ray  
 Film Layout  
 SER20-004-ZZ-ATM 4A  
 8/1/01



Rev	By	Date	Description
2A	LAK	8/9/05	for initial release
3A	LAK	10/4/05	modified films



Item No.	Film Number	Location	Comment
1			
2			
3			
4			
5			
6			
7			
8			

65678/8.0/8/70/818  
 SE120-004 part 4  
 11/15/05  
 Page 2 of 2

**\*CDCP, Inc.** Manufactured at CDCP, Inc. 1600 North 17th Street, Durham, NC 27705

UNITED STATES SPECIFICATIONS  
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 TOLERANCES UNLESS OTHERWISE SPECIFIED  
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DO NOT SCALE DRAWING

DATE: 11/15/05  
 DRAWN BY: LAK  
 CHECKED BY: [Signature]  
 APPROVED BY: [Signature]

FILE Dwg. No. SE120-004-22-MIM 3A  
 Rev. 3A  
 SHI dlt

Quality Assurance Documentation for Part ID: SE120-004 PORT 4A - Item: 231

Workorder: 65678/8-0 Sub:8 Op:80


Part: SE120-004 PORT 4A - PORT 4A SUB-ASSEMBLY - PORT 4A SUB-ASSEMBLY (PERSONNEL ACCESS PORT)

Drawing ID: SE122-049 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
1* (10)	E5	$\varnothing$ .030 A B C DIA. 0.531 THRU +/- 0.005" (60X)	PIN GAGE	MFG QA		J-669	.530/.535	182-J.LE 11-18-05	339-E.R 11-18-05	A
1* (20)	C7	1.18 +/- 0.010" (2x)	CALIPER	MFG QA		P-424	1.160 / 1.200 (ACCE PT PER N.C. 18547)	854-R.U 07-29-06	339-E.R 11-18-05	A
1* (30)	H5	$\sphericalangle$ 0.015"	INDICATOR	MFG QA		P-4923	FLAT W/IN .002	182-J.LE 11-17-05	339-E.R 11-18-05	A
1* (40)	C6	26.63 +/- 0.010"		MFG QA		EDGE FINDER	26.632	182-J.LE 11-18-05	339-E.R 11-18-05	A
1* (50)	D7	37.63 +/- 0.010"		MFG QA		EDGE FINDER	37.632	182-J.LE 11-18-05	339-E.R 11-18-05	A
1* (60)	B6	$\varnothing$ 0.012 A B C 8-32 UNC .250DP	THREAD PLUG GA	MFG QA		A-112	ACCEPT	182-J.LE 11-18-05	339-E.R 11-18-05	A
1* (70)	G5	.94 +/-0.010" ALL AROUND		MFG QA		GAGE PIN	.940	182-J.LE 11-18-05	339-E.R 11-18-05	A
1* (80)	H5	0.151 - 0.149 (0.153 +0/-0.003" on dwg) (leaves aprx 0.002" for polishing)	DEPTH MICROMET	MFG QA		P-4276	.149 / .151	182-J.LE 11-18-05	339-E.R 11-18-05	A
1* (90)	H5	1.25 +/- .010"	OD MICROMETER	MFG QA		P-4362	1.246/1.250	182-J.LE 11-17-05	339-E.R 11-18-05	A

Quality Assurance Documentation for Part ID: SE120-004 PORT 4A - Item: 232

Workorder: 65678/8-0 Sub:8 Op:120

Part: SE120-004 PORT 4A - PORT 4A SUB-ASSEMBLY - PORT 4A SUB-ASSEMBLY (PERSONNEL ACCESS PORT)

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		 0.375 PROFILE VERIFICATION	CMM	QA		00064	-0.17+0.287 (ACCEPT PER NC 18622 )	854-R.U 07-29-06			A
*		Magnetic Permeability 1.02 Max	MASTER GAGE	QA		J-1165	1.04-1.2 (ACCEPT PER NC 17664)	854-R.U 07-29-06			A
*		Interior Surface Finish 32 Micro-Inch RA	PROFILOMETER	QA		J-1109	15-30	212-J.LE 12-30-05			A
*		Material Thickness: .500 +.04 / -.01"	OD MICROMETER	QA		J-722	.499-.517	212-J.LE 12-30-05			A
*		CLEANLINESS PER PS483		QA		VISUAL	ACCEPT	212-J.LE 12-30-05			A
*		Magnetic Permeability 1.2 Max (at flange we	MASTER GAGE	QA		J-1165	LESS THAN 1.2	212-J.LE 12-30-05			A

Quality Assurance Documentation for Part ID: SE120-004 PORT 4A - Item: 233

Workorder: 65678/8-0 Sub:9 Op:80

Part: SE120-004 PORT 4A - PORT 4B SUB-ASSEMBLY - PORT 4B SUB-ASSEMBLY (PERSONNEL ACCESS PORT)

Drawing ID: SE122-049 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
1* (10)	E5	$\varnothing .030$ A B C DIA. 0.531 THRU +/- 0.005" (60X)	CALIPER	MFG		P-925	.531 .004 ABC	234-E.B	576-J.G	
			INDICATOR	QA		P-920		12-16-05	12-16-05	
1* (20)	C7	1.18 +/- 0.010" (2x)	OD MICROMETER	MFG QA		P-196	1.166---1.211 (ACCE PT PER N.C. 18547)	854-R.U 07-29-06	503-B.H 12-16-05	
1* (30)	H5	$\sphericalangle$ 0.015"	INDICATOR	MFG QA		P-4101	.002	506-R.LI 12-16-05	503-B.H 12-16-05	
1* (40)	C6	26.63 +/- 0.010"	INDICATOR	MFG QA		P-4101	26.623	506-R.LI 12-16-05	503-B.H 12-16-05	
1* (50)	D7	37.63 +/- 0.010"	INDICATOR	MFG QA		P-4101	37.630	506-R.LI 12-16-05	503-B.H 12-16-05	
1* (60)	B6	$\varnothing .012$ A B C 8-32 UNC .250DP	THREAD PLUG GA	MFG QA		A-74	ACCEPT .004 A B C	506-R.LI 12-16-05	503-B.H 12-16-05	
1* (70)	G5	.94 +/-0.010" ALL AROUND	CALIPER	MFG QA		P-193	.940	506-R.LI 12-16-05	503-B.H 12-16-05	
1* (80)	H5	0.151 - 0.149 (0.153 +0/-0.003" on dwg) (leaves aprx 0.002" for polishing)	INDICATOR	MFG QA		P-4101	.1493--.1495	506-R.LI 12-16-05	503-B.H 12-16-05	
1* (90)	H5	1.25 +/- .010"	OD MICROMETER	MFG QA		P-914	1.253	234-E.B 12-16-05	576-J.G 12-16-05	



**Industrial Services, Inc.**  
TCM Division

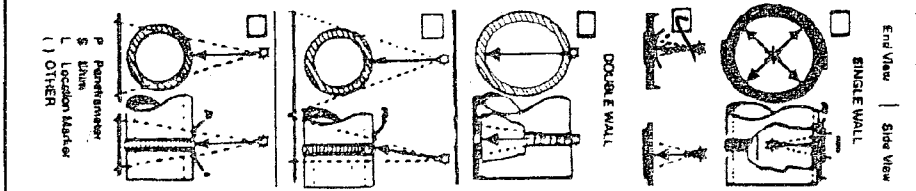
10540 Chester Road  
Cincinnati, Ohio 45215  
(513) 771-3292 Phone

**RADIOGRAPHY READER SHEET**  
Form # 20.3A Rev. 3

4347

Client <b>Major Tool &amp; Machine</b>		Interpreter/Level <b>Robert Weaver III</b>		Radiographer <b>Robert Weaver</b>		Job No. <b>13850291</b>		P.O. No. <b>N/A</b>		Cal Date: <b>11/2/05</b>		Date <b>11/15/05</b>	
Isotope/X-Ray <b>IR192</b>		Dia. X Len/KV <b>.118" x .079"</b>		Curies/MA <b>67</b>		Focal Spot Size SFD <b>.140"</b>		SFD <b>15"</b>		SOD <b>14.5"</b>		Time <b>3:00</b>	
Weld Process / Heat Number <b>GTAW</b>		Material Spec. <b>605 Inconel</b>		Material Diameter <b>N/A</b>		Material Thickness <b>.5"</b>		Penetrator <b>ASTM 1B</b>		Shim <b>N/A</b>		PB Screens <b>.010"</b>	
Description <b>65678/80/294/10/8/8</b>		Density Readings through IQ(s) & Area of Interest <b>20-40</b>		Remarks: Refer to Film Identification for Special Requirement for ASME Sec XI <b>N/A</b>		Film Processing <b>Auto</b>		Film Type / 1 or 2 <b>1</b>		Acceptance Standard <b>ASME VIII, Div. 1, Uw-51</b>		Film Technique <b>Double</b>	
FITTING SEAM OR FITTING		FILM INTERVAL NUMBER		WELDER IDENTIFICATION		SIZE		QUALITY LEVEL		SLAG		POROSITY	
POROSITY WITH TAIL		CRACK		LACK OF PEN		LACK FUSION		INTERNAL CONVEXITY		INTERNAL CONCAVITY		TUNGSTEN	
MELT-THROUGH		BURN-THROUGH		CRATER-PIT		OXIDATION		INTERNAL UNDERCUT		EXTERNAL UNDERCUT		ALIGNED INDICATIONS	
WELD CONTOUR		MIS-MATCH		FILM ARTIFACT		VISUAL CONCERNS		FILM DENSITY		SEE REMARKS		ACCEPT	
REJECT													

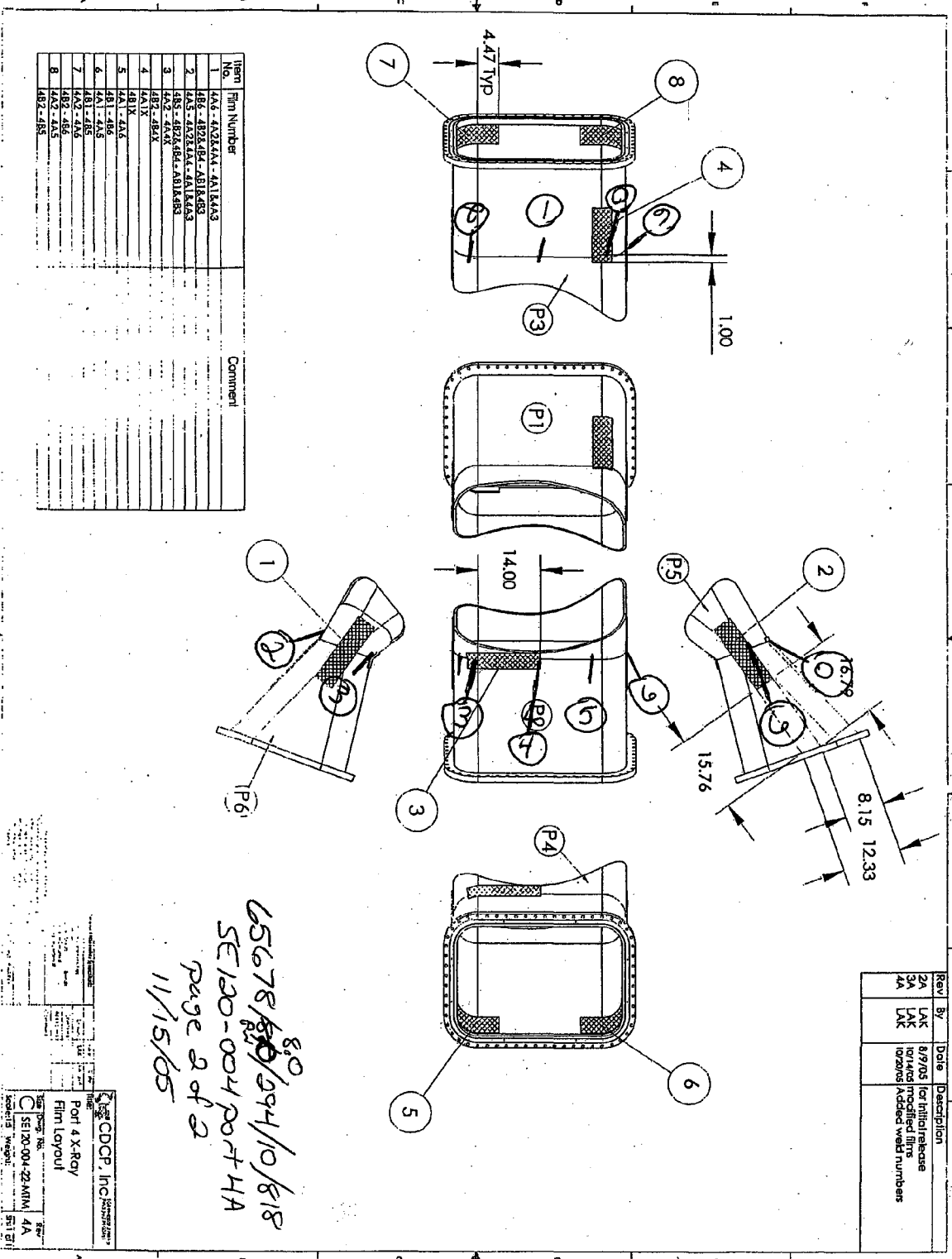
\* Film is flashed with job # 65678/80/8/70/8/8, ~~rework~~ rework leg was not put in until after part was shot. R



*Robert Weaver III*  
TEAM Technician Signature

*Robert D. Shanks*  
Customer Representative Signature

*11/15/05*  
Date



Rev	By	Date	Description
2A	LAK	8/7/05	for initial release
3A	LAK		
4A	LAK	10/20/05	Added weld numbers

65678 8.0/294/10/8/18  
 SE120-004 part 4A  
 page 2 of 2  
 11/15/05

CDDP, Inc.  
 Part 4 X-Ray  
 Film Layout  
 SE120-004-22-MIM 4A  
 Date: 11/15/05

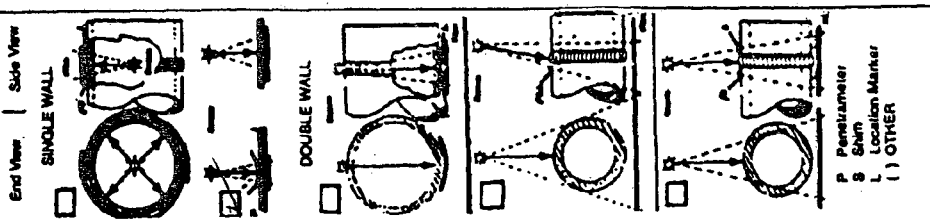




4959  
10520 Cheeler Road  
Woodlawn, Ohio 45215



CLIENT		INTERPRETER LEVEL		RADIOGRAPHER		JOB NO.		P.O. NO.		DATE	
Major Tool Machine		John Ballard II		John Ballard II		13850291		N/A		11/16/05	
ISOTOPE RAY		FOCAL SPOT SIZE		TIME		FILM PROCESSING		FILM TECHNIQUE		PB SCREENS	
IP-192		1.142"		3:00		AUTO		Kodak M125 Double		.06"	
WELD PROCESS		MATERIAL SPEC.		PENETRANT		SHIM		ACCEPTANCE STANDARD			
GTAW		6.25 Inconel		ASTM B		N/A		ASME VIII, Div. 1, UW-57			
DESCRIPTION		MATERIAL THICKNESS		REMARKS							
6567818.0/294/30/1818		1.5"		Densitometer - 12105 cal due 2/2/06							
SEAM OR FITTING		FILM INTERVAL NUMBER		WELDER IDENTIFICATION		PENETRANT SIZE		PENETRANT QUALITY LEVEL		SLAG	
TOP OF WELD		0-1		N/A		1B		1013"			
		2-3				↓		↓			
		6-0				↓		↓			
FITTING		INTERNAL UNDERCUT		INTERNAL UNDERCUT		EXTERNAL UNDERCUT		ALIGNED INDICATIONS		WELD CONTOUR	
		MATERIAL CONVEYTY		LACK FUSION		LACK OF PEN		CRACK		POROSITY WITH TAIL	
		INTERNAL CONCAVITY		TUNGSTEN		MELT-THROUGH		BURN-THROUGH		CRATER-FIT	
		OMDATION		INTERNAL UNDERCUT		EXTERNAL UNDERCUT		MISMATCH		FILM ARTIFACT	
		VISUAL CONCERNS		FILM DENSITY		SEE REMARKS		ACCEPT		REFLECT	



Customer Representative Signature: *John Ballard II*

Date: 11/16/05

Quality Assurance Documentation for Part ID: SE120-004 PORT 4B - Item: 238

Workorder: 65678/8-0 Sub:9 Op:30

Part: SE120-004 PORT 4B - PORT 4B SUB-ASSEMBLY - PORT 4B SUB-ASSEMBLY (PERSONNEL ACCESS PORT)

Drawing ID: SE120-004 Rev: 2		INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*				MFG		VISUAL	ACCEPTABLE	933-D.L	933-D.L	A
(10)		VWI ROOT PASS WELD 4B1-4B5		CWI				11-17-05	11-17-05	
*				MFG		VISUAL	GOOD	358-D.M	933-D.L	A
(50)		VWI COVER PASS WELD 4B1-4B5		CWI				11-20-05	11-30-05	
*				MFG		VISUAL	GOOD	358-D.M	933-D.L	A
(60)		VWI ROOT PASS WELD 4B2-4B5		CWI				11-17-05	11-17-05	
*				MFG		VISUAL	GOOD	358-D.M	933-D.L	A
(100)		VWI COVER PASS WELD 4B2-4B5		CWI				11-20-05	11-30-05	
*				MFG		VISUAL	GOOD	358-D.M	933-D.L	A
(110)		VWI ROOT PASS WELD 4B1-4B6		CWI				11-17-05	11-17-05	
*				MFG		VISUAL	GOOD	358-D.M	933-D.L	A
(150)		VWI COVER PASS WELD 4B1-4B6		CWI				11-20-05	11-30-05	
*				MFG		VISUAL	GOOD	358-D.M	933-D.L	A
(160)		VWI ROOT PASS WELD 4B2-4B6		CWI				11-17-05	11-17-05	
*				MFG		VISUAL	GOOD	358-D.M	933-D.L	A
(200)		VWI COVER PASS WELD 4B2-4B6		CWI				11-20-05	11-30-05	
*				MFG		VISUAL	ACCEPT	837-J.D	933-D.L	A
(210)		VWI ROOT PASS WELD 4B3-4B5		CWI				11-12-05	11-17-05	
*				MFG		VISUAL	GOOD	358-D.M	933-D.L	A
(250)		VWI COVER PASS WELD 4B3-4B5		CWI				11-20-05	11-30-05	
*				MFG		VISUAL	ACCEPT	837-J.D	933-D.L	A
(260)		VWI ROOT PASS WELD 4B4-4B5		CWI				11-12-05	11-17-05	
*				MFG		VISUAL	GOOD	358-D.M	933-D.L	A
(300)		VWI COVER PASS WELD 4B4-4B5		CWI				11-20-05	11-30-05	
*				MFG		VISUAL	ACCEPT	837-J.D	933-D.L	A
(310)		VWI ROOT PASS WELD 4B3-4B6		CWI				11-12-05	11-17-05	
*				MFG		VISUAL	GOOD	358-D.M	933-D.L	A
(350)		VWI COVER PASS WELD 4B3-4B6		CWI				11-20-05	11-30-05	
*				MFG		VISUAL	ACCEPT	837-J.D	933-D.L	A
(360)		VWI ROOT PASS WELD 4B4-4B6		CWI				11-12-05	11-17-05	

**INSPECTION DATA CHECKLIST**

*	(400)	VWI COVER PASS WELD 4B4-4B6	MFG CWI	VISUAL	GOOD	358-D.M 11-20-05	933-D.L 11-30-05		A
*	(410)	VWI ROOT PASS WELD 4B CIRCUMFER	MFG CWI	VISUAL	GOOD	307-D.J 11-22-05	933-D.L 11-22-05		A
*	(450)	VWI COVER PASS WELD 4B CIRCUMFE	MFG CWI	VISUAL	OK PER SPEC.	093-M.S 11-28-05	933-D.L 11-30-05		A
*	(460)	VWI ROOT PASS WELD 4B1X	MFG CWI	VISUAL	GOOD	358-D.M 11-18-05	933-D.L 11-18-05		A
*	(500)	VWI COVER PASS WELD 4B1X	MFG CWI	VISUAL	GOOD	358-D.M 11-20-05	933-D.L 11-30-05		A
*	(510)	VWI ROOT PASS WELD 4B4X	MFG CWI	VISUAL	ACCEPT	837-J.D 11-12-05	933-D.L 11-17-05		A
*	(550)	VWI COVER PASS WELD 4B4X	MFG CWI	VISUAL	GOOD	358-D.M 11-20-05	933-D.L 11-30-05		A

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 4B - Item: 239

Workorder: 65678/8-0 Sub:9 Op:40

**Part: SE120-004 PORT 4B - PORT 4B SUB-ASSEMBLY - PORT 4B SUB-ASSEMBLY (PERSONNEL ACCESS PORT)**

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*				MFG		VISUAL	OK PER SPEC.	093-M.S	933-D.L	
(20)		VWI - ROOT PASS P4BF		CWI				11-28-05	11-28-05	A
*				MFG		VISUAL	OK PER SPEC.	093-M.S	933-D.L	
(50)		VWI - COVER PASS P4BF		CWI				12-01-05	11-30-05	A
*				MFG		VISUAL	OK PER SPEC.	093-M.S	933-D.L	
(60)		VWI - FILLET WELDS P4BF		CWI				12-01-05	11-30-05	A



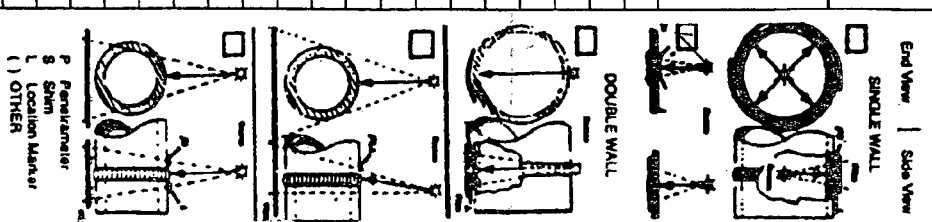
4959  
10520 Cheater Road  
Woodlawn, Ohio 45215

CLIENT: Major Tool & Machine  
 ISO OPERATOR: J.R. 192  
 WELD PROCESS: GTAW  
 DIA X LEAD: .118 x .079"  
 CURIESMAN: 524  
 FOCAL SPOT SIZE: .142"  
 INTERPRETER LEVEL: Robert Weaver / II  
 RADIOGRAPHER: Robert Weaver  
 JOB NO: 13852091  
 P.O. NO: N/A  
 DATE: 12/7/05

DESCRIPTION: 65678/80/9/70/818  
 SE100-004 part 4B  
 285 Inconel  
 15" SFD  
 14.5" SOD  
 5" REBAR  
 ASTM 1B PERMEAMETER  
 SHIM N/A  
 ASME VIII, Div. 1, UW-51

REMARKS: Densitometer 12105 cal. due 2-2-06  
 NCR-18811

FITTING, SEAM OR FITTING	FILM INTERVAL NUMBER	WELDER IDENTIFICATION	PERMEAMETER		SLAG	POROSITY	POROSITY WITH TAIL	CRACK	LACK OF PEN	LACK FUSION	INTERNAL CONVEXITY	INTERNAL CONCAVITY	TUNGSTEN	MELT-THROUGH	BURN-THROUGH	CRATER-PIT	OXIDATION	INTERNAL UNDERCUT	EXTERNAL UNDERCUT	ALIGNED INDICATIONS	WELD CONTOUR	MIS-MATCH	FILM ARTIFACT	VISUAL CONCERNS	FILM DENSITY	SEE REMARKS	ACCEPT	REJECT	PB SCREENS								
			SIZE	QUALITY LEVEL																																	
1	0-10	WA	1B	.016"																																	
2																																					
3																																					
4																																					
5																																					
6																																					
7																																					
8																																					
9																																					

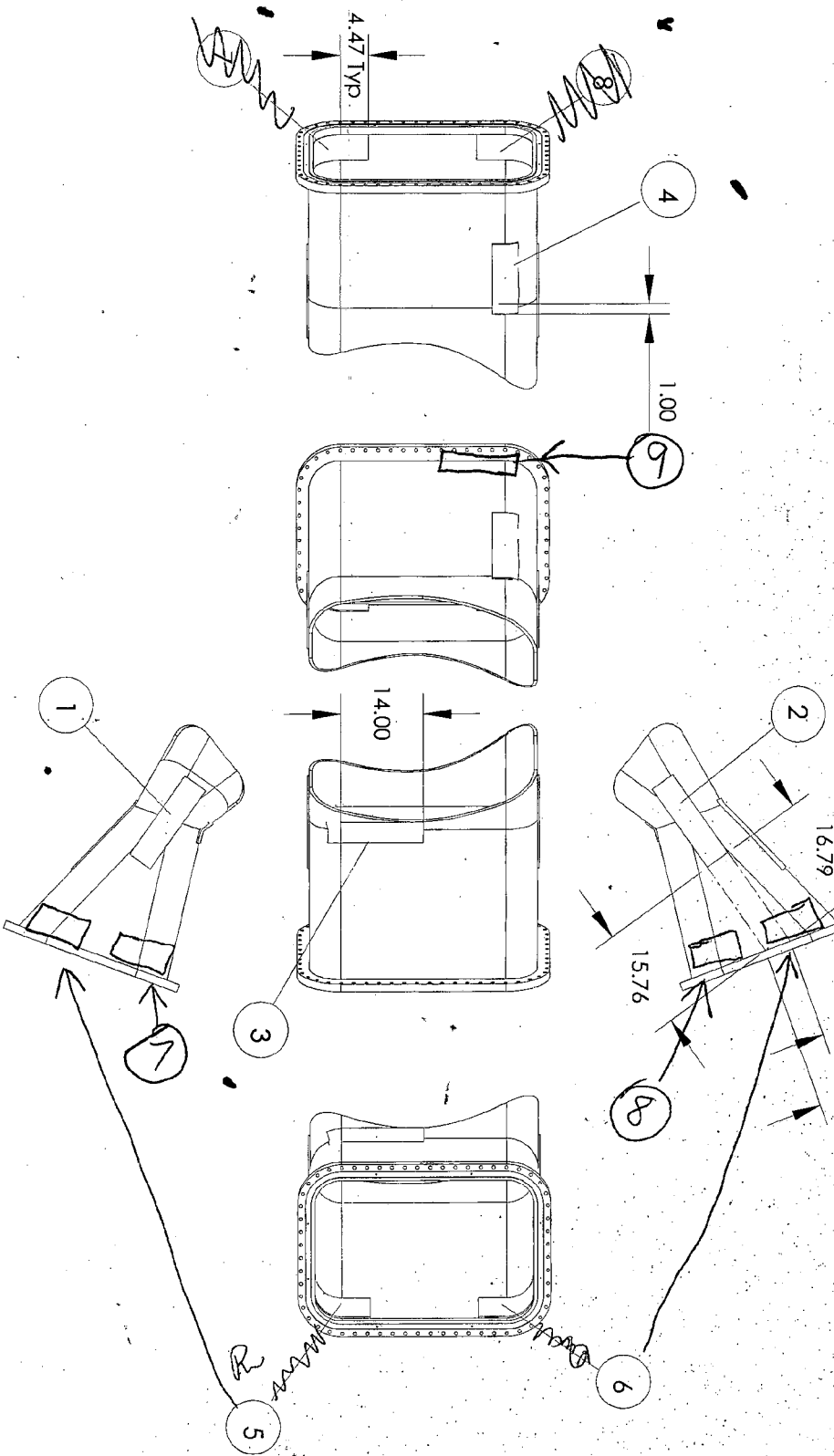


Robert Weaver 655514/H  
 Cooperheat-MIGS Signature

Robert D. Weaver  
 Customer Representative Signature

12/7/05  
 Date

Rev	By	Date	Description
2A	LAK	8/9/05	for initial release
3A	LAK	10/14/05	modified films



Item No.	Film Number	Location	Comment
1			
2			
3			
4			
5			
6			
7			
8			

05678/80/9/70/818  
 SE120-004 port 4/B  
 Page 2 of 2  
 12/7/05

Title: **Port 4 X-Ray Film Layout**  
 Author: **CDCP, Inc**  
 Date: **12/7/05**  
 Scale: **1:5**  
 Rev: **3A**

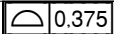
Checked	Approved	Comment

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Quality Assurance Documentation for Part ID: SE120-004 PORT 4B - Item: 242

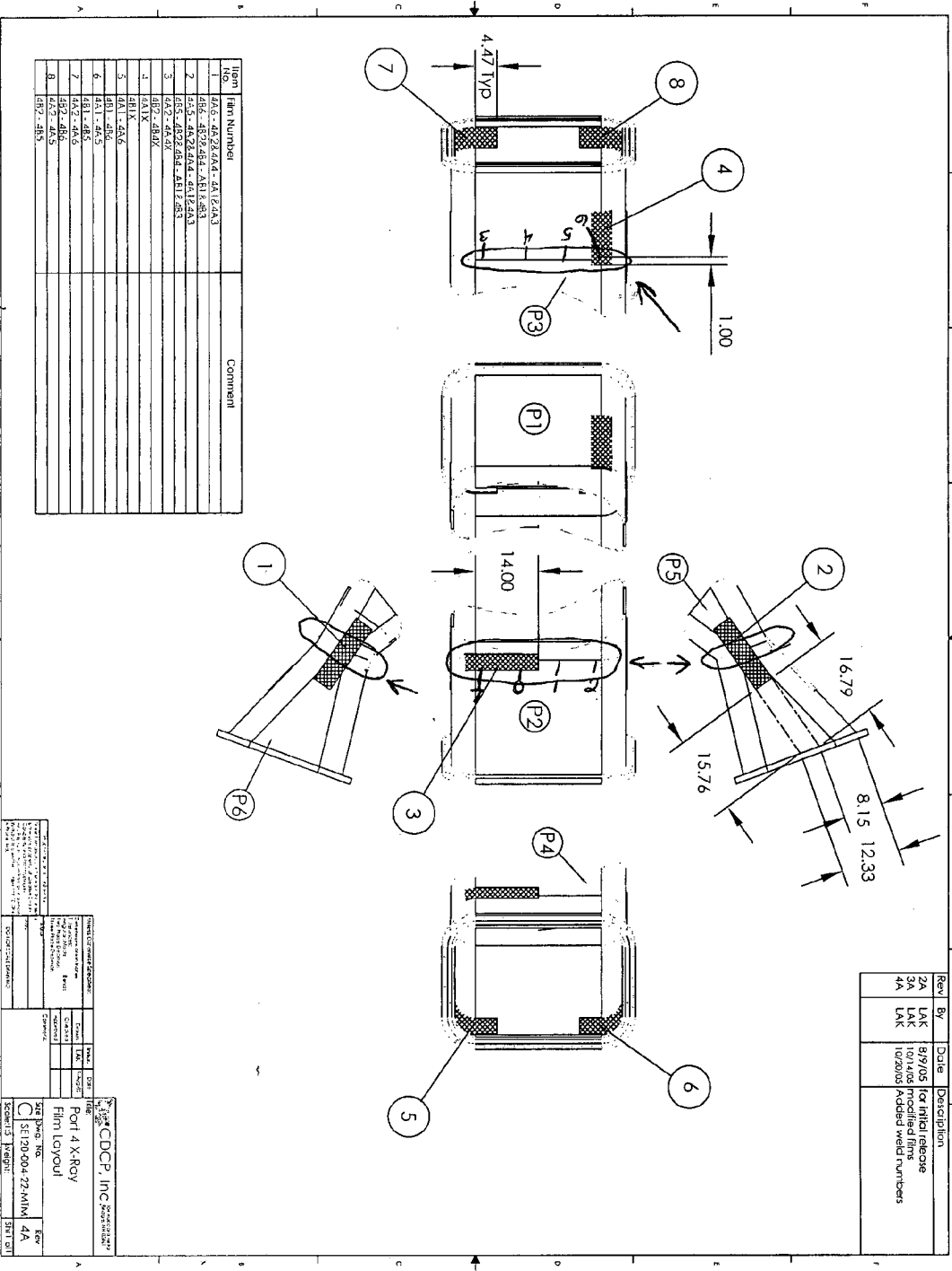
Workorder: 65678/8-0 Sub:9 Op:120

Part: SE120-004 PORT 4B - PORT 4B SUB-ASSEMBLY - PORT 4B SUB-ASSEMBLY (PERSONNEL ACCESS PORT)

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		 0.375 PROFILE VERIFICATION	CMM	QA		00064	-0.120 +.267 (ACCEP T PER NC 18675)	854-R.U 07-29-06			A
*		Magnetic Permeability 1.02 Max	MASTER GAGE	QA		J-1165	GREATER THAN 1.02 L ESS THAN 1.2( ACCEP T PER NC 17664)	854-R.U 07-29-06			A
*		Interior Surface Finish 32 Micro-Inch RA	PROFILOMETER	QA		J-1109	10-28	212-J.LE 12-30-05			A
*		Material Thickness: 0.500 +.04 / -.01"	OD MICROMETER	QA		J-722	.495-.515	212-J.LE 12-30-05			A
*		CLEANLINESS PER PS483		QA		VISUAL	ACCEPT	212-J.LE 12-30-05			A
*		Magnetic Permeability 1.2 Max (at flange we	MASTER GAGE	QA		J-1165	LESS THAN 1.2	212-J.LE 12-30-05			A







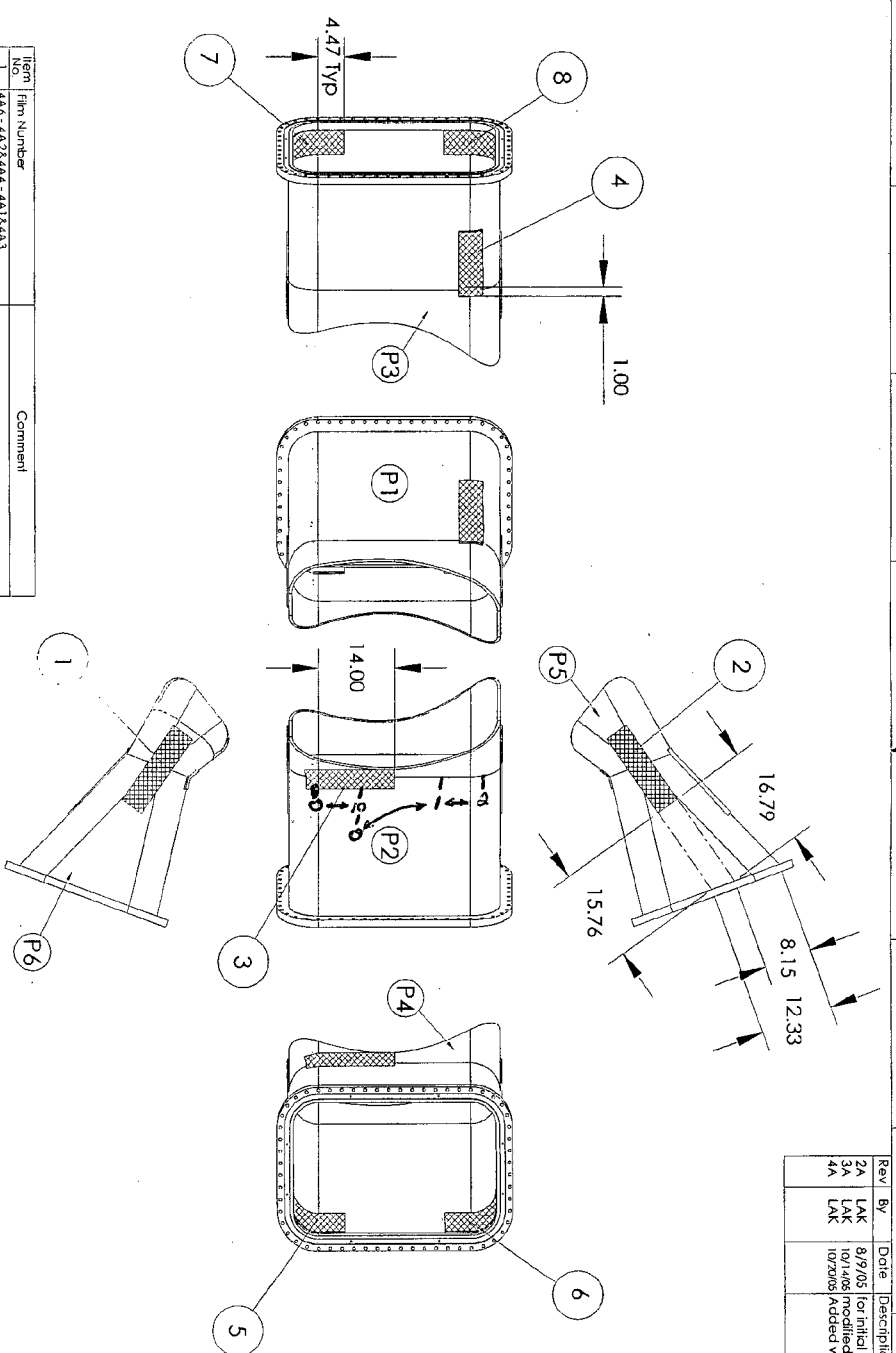
65678/8.0/098/10/818  
 SE120-004 part 4B  
 Page 2 of 2  
 12/12/05

Rev	By	Date	Description
2A	LAK	8/19/05	for initial release
3A	LAK	10/14/05	modified flms
4A	LAK	10/20/05	Added weld numbers

CDCCP, INC. 2005-01-01  
 Port 4 X-Ray  
 Film Layout  
 Scale: 1:1  
 Date: 12/12/05  
 Author: [Name]



Rev	By	Date	Description
2A	LAK	8/9/05	for initial release
3A	LAK		for final release
4A	LAK		added field numbers



Item	Film Number	Comment
1	4A6-4A264A4-4A184A3	
2	4B6-4B284B4-4B184B3	
3	4A5-4A734A4-4A184A3	
4	4B5-4B284B4-4B184B3	
5	4A2-4A4X	
6	4B2-4B4X	
7	4A1-4A5	
8	4B1-4B5	
9	4A7-4A6	
10	4B7-4B6	
11	4B2-4B5	

CDCCP, INC. PROPRIETARY

Part 4 X-Ray  
Film Layout

DATE: 12/13/05  
REV: 4A

CDCCP, INC. PROPRIETARY

DATE: 12/13/05  
REV: 4A

05678/8.0/298/30/8/8  
SE120-004 part 4B  
page 2 of 2  
12/13/05



6119 FULTON  
P.O. BOX 120630  
HOUSTON, TEXAS 77219  
713/495-6000  
FAX 713/496-6725  
S/O NUMBER 250332

SOLD TO: HAYNES INTERNATIONAL  
NORTHWOODS IND. PARK  
12241 FM 529  
HOUSTON,  
TX 77041  
P.O. NUMBER 1552

SHIP TO: HAYNES INTERNATIONAL  
12241 FM 529  
HOUSTON,  
TX 77041  
TAG #:

METALLURGICA  
TEST REPORT  
DATE 3/28/0  
PAGE

ITEM	DESCRIPTION	FORM & TACK ENDS	MATERIAL	SPEC	BASE SPEC	PIECES
001	8"OD, 188AW PIPE X 28"LG	SQUARE &	625	8443	S8443	
004	6"OD, 188AW PIPE X 28"LG	SQ & DEBURRED	625	8443	S8443	
005	4"OD, 188AW PIPE X 34"LG FORM	& TACK ENDS SQ & DEBURRED	625	8443	S8443	

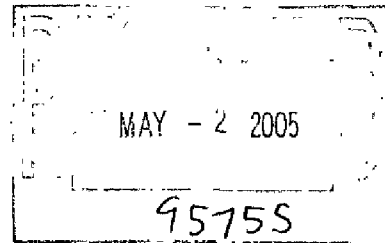
ITEM	HEAT #	C	MN	P	S	SI	CR	NI	MO	CU	CO	CB&TA	N	FE	V	W
001	2650-4-6731	.020	.260	.008		.200	21.510	59.880	8.590		.230	3.430		4.680		
004	2650-4-6731	.020	.260	.008		.200	21.510	59.880	8.590		.230	3.430		4.680		
005	2650-4-6731	.020	.260	.008		.200	21.510	59.880	8.590		.230	3.430		4.680		

ITEM	AL	TI	SN	PR	ZN	AS	MG	ALATI	G	BASE MATERIAL MANUFACTURER	M.S.N.
001	.210	.290								HAYNES INTERNATIONAL	
004	.210	.290								HAYNES INTERNATIONAL	
005	.210	.290								HAYNES INTERNATIONAL	

ITEM	YIELD	TENSILE	ELONG		R/A	SHM	HEAT TREAT		Q&CH	IMPACT TEST	SIZE (10mm X)	TEMP DEG-F	RESULTS (FT/LBS)			LATERAL EXPANSION			% DUCTILE FRACTUR	
			2	8			TEMP	TIME					TYPE	1	2	3	1	2	3	1
001	60,500	121,000	51.0			235														
004	60,500	121,000	51.0			235														
005	60,500	121,000	51.0			235														

HT# 2650-4-6731 (TA) = <.05  
GRAIN SIZE = 4.5  
HT# 2650-4-6731 (TA) = <.05  
GRAIN SIZE = 4.5  
HT# 2650-4-6731 (TA) = <.05  
GRAIN SIZE = 4.5

LABOR ONLY TO MANUFACTURE FROM CUSTOMER'S MATERIAL  
\*\*\*\*\* MADE IN THE USA \*\*\*\*\*



5/2/05



1-12  
B.A.

NOTARIZED MILL TEST REPORTS AVAILABLE UPON REQUEST.

\*W-WATER  
A-AIR  
FC-FURNACE COOL  
O-OIL  
QT-AIR QUENCH  
AND 1250F TEMPER

WE CERTIFY THAT ALL CHEMICAL ANALYSIS, MECHANICAL PROPERTIES, TEST RESULTS AND STATEMENTS OF PERFORMANCE OPERATIONS RECORDED HEREIN, ARE ACCORDING TO THE RECORDS OF MACH INTERNATIONAL. MATERIALS HEREIN ST. ARE IN COMPLIANCE WITH ALL SPECIFICATIONS LISTED ABOVE.

DATE 3/28/05 SIGNATURE *[Signature]*

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 5 - Item: 248

Workorder: 65678/8-0 Sub:186 Op:20

Part: SE120-004 PORT 5 - TUBE, 6.0 OD X 0.188 WALL - SE120-004-17 TUBE, 6.0 OD X 0.188 WALL

Drawing ID: SE120-004 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*				MFG			VISUAL ACCEPT PER	733-J.ST	712-W.	
(20)		VWI - COMPLETED WELD		AWI			PS-480 WPS 380 PPPL	06-21-05	06-21-05	

A

4959  
10520 Chester Road  
Woodlawn, Ohio 45215



JAMES BELG

CLIENT: Major Tool & Machine  
 ISOTOPEX RAY: IR 192  
 WELD PROCESS: PAW-MAC  
 DESCRIPTION: 65678/80/186/30 1818 SE 120-004 part 5

INTERMEDIATE LEVEL: Robert Weaver/II  
 RADIOGRAPHER: Robert Weaver  
 JOE NO: 185082-4  
 DATE: 7-24-05

FOCAL SPOT SIZE: .151"  
 CURIES/MA: 519  
 WELD PROCESS: PAW-MAC  
 MATERIAL: 625 Inconel

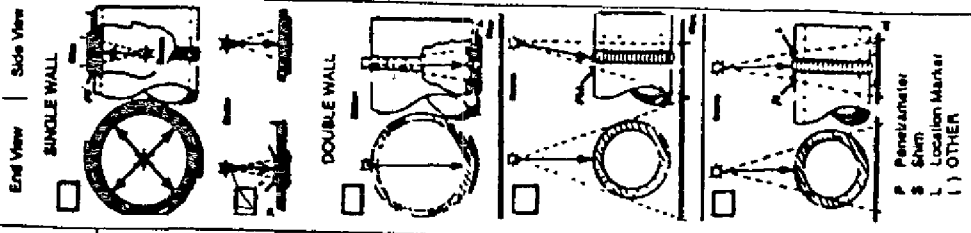
SPD: 15"  
 TIME: 1:50  
 PENETRATOR: ASTM 1A

MATERIAL THICKNESS: .187"  
 PENETRATOR: N/A

ACCEPTANCE STANDARD: ASME VIII DIV 1 UW-51

FILM TECHNIQUE: Double  
 FILM TYPE: Kodak T  
 SHIM: N/A

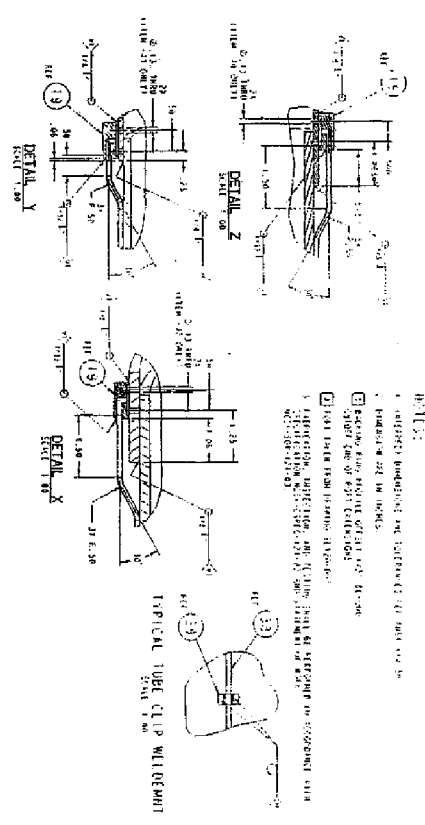
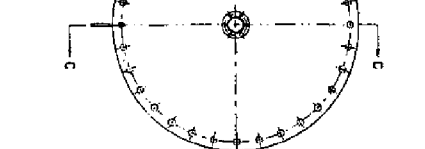
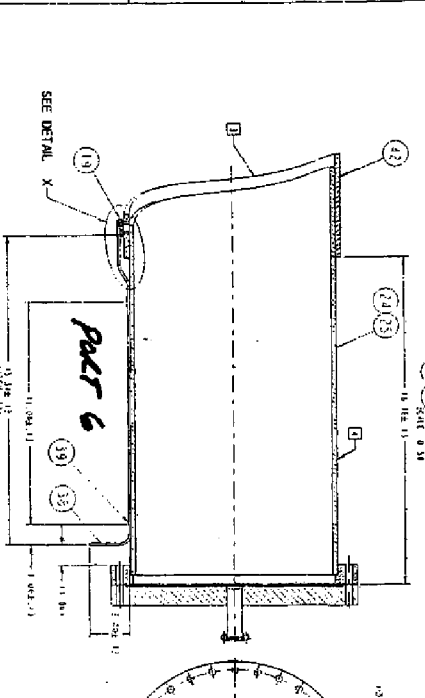
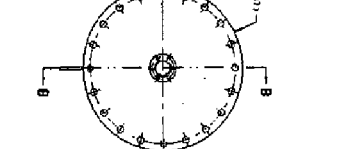
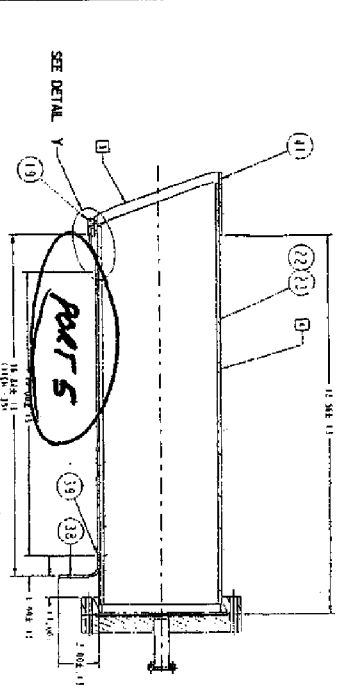
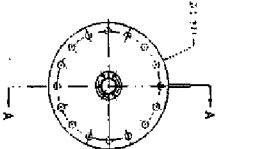
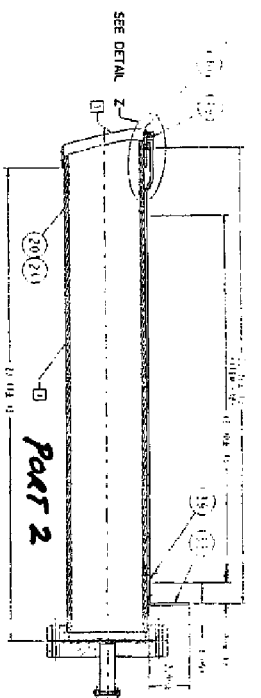
FITTING	SEAM OR FITTING	FILM INTERVAL	WELDER IDENTIFICATION	PENETRATOR		SLAG	POROSITY	POROSITY WITH TAL	CRACK	LACK OF PEN	LACK OF FUSION	INTERNAL CONVEYITY	INTERNAL CONCAVITY	TUNGSTEN	MELT THROUGH	BURN THROUGH	CRATER/FIT	OXIDATION	INTERNAL UNDERCUT	EXTERNAL UNDERCUT	ALIGNED INDICATIONS	WELD CONTOUR	MIS-MATCH	FILM ARTIFACT	VISUAL CONCERNS	FILM DENSITY	SEE REMARKS	ACCEPT	REJECT		
				SIZE	QUALITY LEVEL																										
Seam	↓	0-1	J.S.	1A	POB																										
		1-2	↓		↓																										



Robert Weaver 655514/II  
 Cooperheat/MOS Signature

James Belg  
 Customer Representative Signature

7-24-05  
 Date



RELEASED FOR FABRICATION/INSTALLATION  
 BY: JERRY SIEGEL  
 DATE: 8/26/05

WELDING ENGINEER  
 JERRY SIEGEL  
 DATE: 8/26/05

65678/80/86/30/818  
 SE100-004 PART 5A

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DATE: 8/26/05  
 BY: JERRY SIEGEL  
 TITLE: WELDING ENGINEER



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 5 - Item: 251

Workorder: 65678/8-0 Sub:186 Op:34

Part: SE120-004 PORT 5 - TUBE, 6.0 OD X 0.188 WALL - SE120-004-17 TUBE, 6.0 OD X 0.188 WALL

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*			MASTER GAGE	QA		J-1270	LESS THAN 1.01	840-G.M			A
(10)		Mag. Perm: 1.02 Mu Max						08-16-05			
*			CALIPER	QA		J-707	.030	840-G.M			A
(20)		ROUNDNESS WITHIN .030"						08-16-05			

**INSPECTION DATA CHECKLIST**

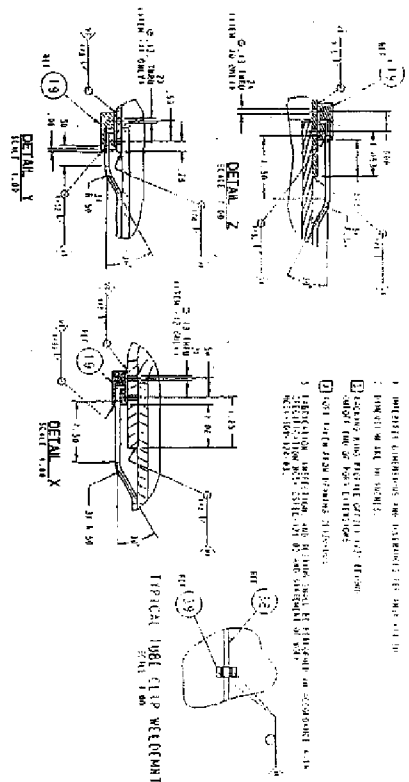
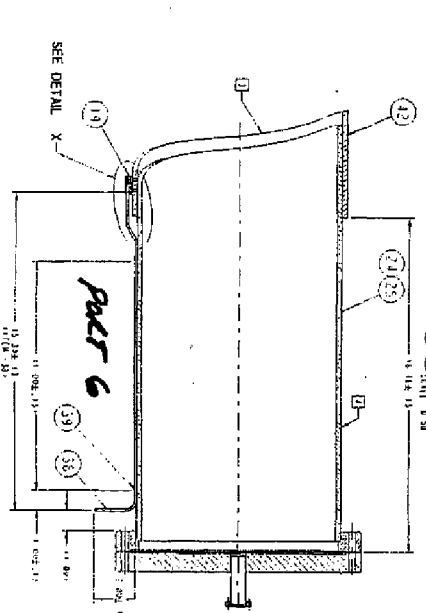
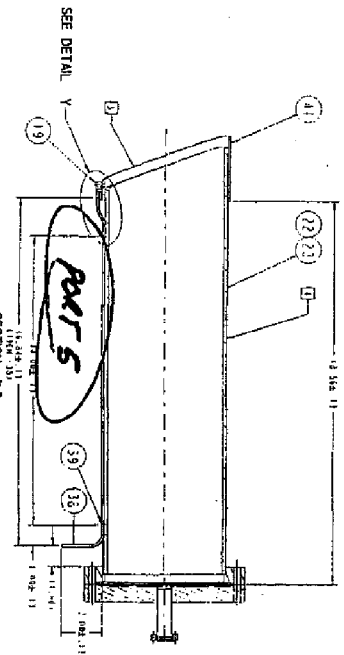
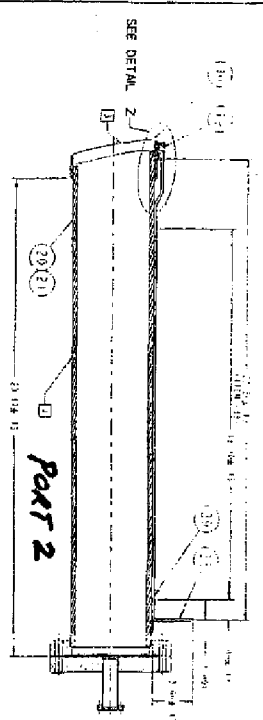
Quality Assurance Documentation for Part ID: SE120-004 PORT 5 - Item: 253

Workorder: 65678/8-0 Sub:189 Op:20

Part: SE120-004 PORT 5 - TUBE, 6.0 OD X 0.188 WALL - SE120-004-17 TUBE, 6.0 OD X 0.188 WALL

Drawing ID: SE120-004 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*				MFG			VISUAL ACCEPT PER	733-J.ST	712-W.	
(20)		VWI - COMPLETED WELD		AWI			PS-480 WPS 380 PPPL	06-21-05	06-21-05	

A



RELEASED FOR  
FABRICATION/INSTALLATION  
BY: JERRY SIEGEL

WELDING ENGINEER  
DATE: 8/26/05

65678/80/89/30/818  
SE 130-004 Part 5B

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4959

10520 Chester Road  
Woodlawn, Ohio 45215



JAMES BOALG

CLIENT Major Tool + Machine		INTERFERE LEVEL Robert Weaver/II	RADIOGRAPHER Robert Weaver	JOB NO. 1385028-4	P.O. NO.	DATE 7-24-05
ISO/FILM IR 192	DIA X LEN V 1.18" x .094"	FOCAL SPOT SIZE .151"	TIME 1:50	FILM PROCESSING AUTO	FILM TYPE Kodak T	FILM TECHNIQUE Double
WELD PROCESS PAW-MAC	MATERIAL SPEC. 625 Inconel	MATERIAL DIAMETER 6"	PENETRANT ASTM 1A	SKIM N/A	ACCEPTANCE STANDARD ASME VIII Div. 1	PB SCREENS .010"
DESCRIPTION 65678/8.0/189/30/818 SE120-004 part 5	REMARKS					

FITTING, SEAM OR FITTING	FILM INTERVAL NUMBER	WELDER IDENTIFICATION	PENETRANT		SLAG	POROSITY	POROSITY WITH TAIL	CRACK	LACK OF PEN	LACK OF FUSION	INTERNAL CONCAVITY	INTERNAL CONVEXITY	TUNGSTEN	MELT-THROUGH	BURN-THROUGH	CRATER/PIT	OXIDATION	INTERNAL UNDERCUT	EXTERNAL UNDERCUT	ALIGNED INDICATIONS	WELD CONTOUR	MIS-MATCH	FILM ARTIFACT	VISUAL CONCERNS	FILM DENSITY	SEE REMARKS	ACCEPT	REJECT		
			SIZE	QUALITY LEVEL																										
Seam ↓ 1-2	0-1 1-2	J.S. ↓	1A ↓	.008 ↓		✓																								

End View	Side View
SINGLE WALL	DOUBLE WALL

P Penetrant	Penetrant
S Sealer	Sealer
L Location Marker	Location Marker
1 OTHER	OTHER

Robert Weaver 655514/II  
Cooperheat-MOS Signature  
Ch Boy 655506/II

Robert P. Edward  
Customer Representative Signature

7-24-05  
Date

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 5 - Item: 256

Workorder: 65678/8-0 Sub:189 Op:34

Part: SE120-004 PORT 5 - TUBE, 6.0 OD X 0.188 WALL - SE120-004-17 TUBE, 6.0 OD X 0.188 WALL

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*			MASTER GAGE	QA		J-1270	LESS THAN 1.01	840-G.M			A
(10)		Mag. Perm: 1.02 Mu Max						08-15-05			
*			CALIPER	QA		J-1103	.023	840-G.M			A
(20)		ROUNDNESS WITHIN .030"						08-15-05			

Quality Assurance Documentation for Part ID: SE120-004 PORT 5A - Item: 257

Workorder: 65678/8-0 Sub:10 Op:10

**Part: SE120-004 PORT 5A - PORT 5A SUB-ASSEMBLY - PORT 5A SUB-ASSEMBLY**

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		VWI - INTERIOR COVER PASS / FILLET P5AF		MFG		VISUAL	OK	358-D.M	933-D.L		A
(30)				CWI				09-29-05	09-29-05		
*		VWI - EXTERIOR FILLETS P5AF		MFG		VISUAL	OK	358-D.M	933-D.L		A
(40)					CWI				09-29-05	09-29-05	

Quality Assurance Documentation for Part ID: SE120-004 PORT 5B - Item: 259

Workorder: 65678/8-0 Sub:11 Op:10

Part: SE120-004 PORT 5B - PORT 5B SUB-ASSEMBLY - PORT 5B SUB-ASSEMBLY

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		VWI - INTERIOR COVER PASS / FILLET P5BF		MFG		VISUAL	OK	358-D.M	933-D.L		A
(30)				CWI				09-29-05	09-29-05		
*		VWI - EXTERIOR FILLETS P5BF		MFG		VISUAL	OK	358-D.M	933-D.L		A
(40)					CWI				09-29-05	09-29-05	

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 6 - Item: 261

Workorder: 65678/8-0 Sub:192 Op:20

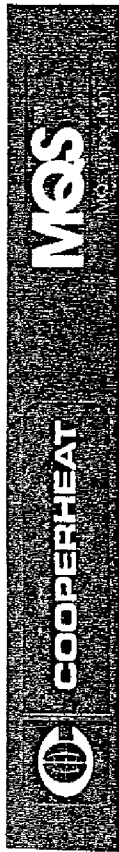
Part: SE120-004 PORT 6 - TUBE, 10.0 OD X 0.188 WALL - SE120-004-19 TUBE, 10.0 OD X 0.188 WALL

Drawing ID: SE120-004 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*				MFG			VISUAL ACCEPT PER	733-J.ST	712-W.	
(20)		VWI - COMPLETED WELD		AWI			PS-480 WPS 380 PPPL	06-21-05	06-21-05	

A



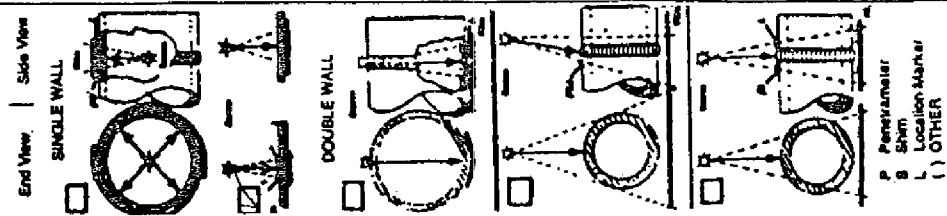
4959  
10520 Cheater Road  
Woodlawn, Ohio 45215



JAMES BERG

CLIENT	MAJOR TOOL + MACHINE	RADIOGRAPHER	ROBERT WEAVER	JOB NO.	13850-252-4	P.O. NO.		DATE	7-23-05
ISOTOPE-RAY	IR 92	ISO	15"	FILM PROCESSING	Auto	FILM TYPE	Kodak T Double	FILM TECHNIQUE	DOUBLE
WELD PROCESS	PAW-MAC	MATERIAL SPEC.	625 Inconel	SHIM	N/A	ACCEPTANCE STANDARD	ASME VIII Div. 1 UW-51		
DESCRIPTION	65678/80/192/30/818 SE120-004 port 6	INTERNAL DIAMETER	10"	PENETRATOR	ASTM 1A				
		MATERIAL THICKNESS	.250	TIME	2:00 min				
		SOOT	14.75						

FITTING	SEAM OR FITTING	FILM INTERVAL NUMBER	WELDER IDENTIFICATION	PENETRATOR		SLAG	POROSITY	POROSITY WITH TAIL	CRACK	LACK OF PEN	LACK OF FUSION	INTERNAL CONVEITY	INTERNAL CONCAVITY	TUNGSTEN	MELT-THROUGH	BURN-THROUGH	CRATER-FIT	OXIDATION	INTERNAL UNDERCUT	EXTERNAL UNDERCUT	ALIGNED INDICATIONS	WELD CONTOUR	MIS-MATCH	FILM ARTIFACT	VISUAL CONCERNS	FILM DENSITY	SEE REMARKS	ACCEPT	REJECT	
				SIZE	QUALITY LEVEL																									
	Seam	0-1	J.S.	1A	008																									
		1-2																												

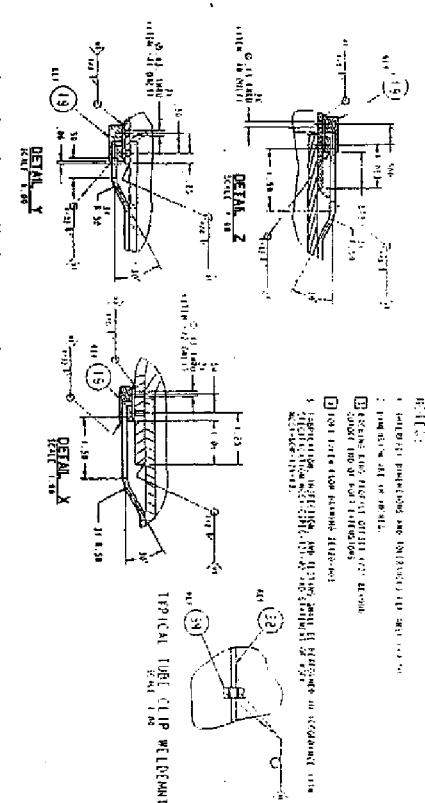
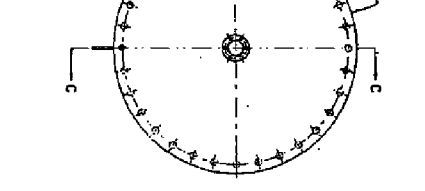
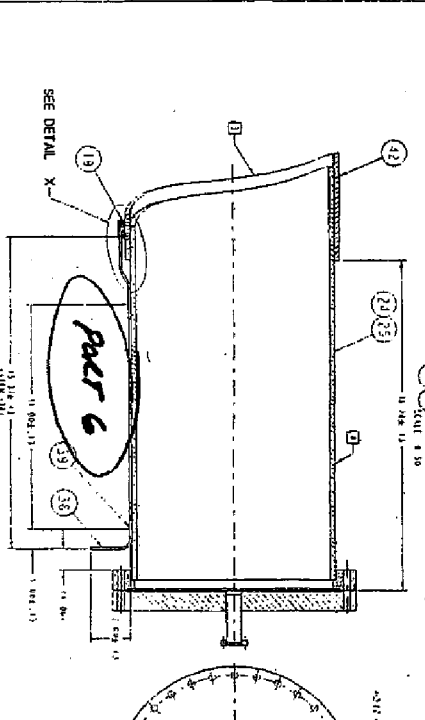
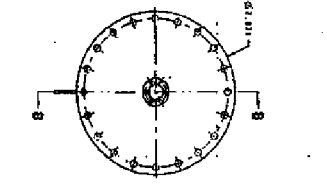
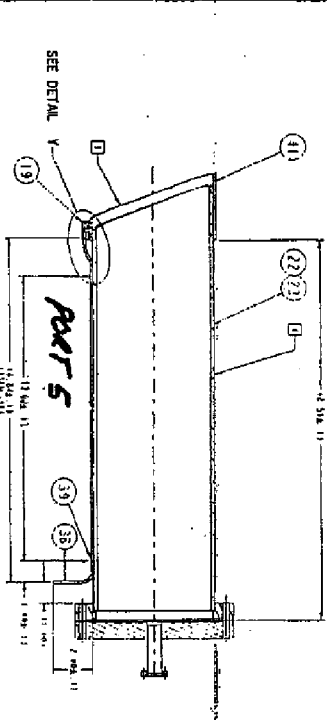
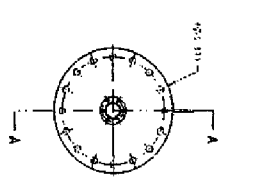
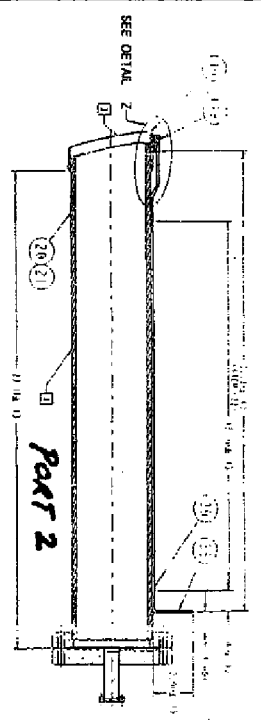


Robert Weaver 655514/II  
K. Berg 65506/II  
Cooperheat-MQS Signature

Raymond P. Edwards  
Customer Representative Signature

7-23-05

DWG



NO.	DESCRIPTION	QTY	UNIT	REMARKS	
1	WELDING ENGINEER				
2	DESIGNER				
3	DRAWER				
4	CHECKER				
5	APPROVER				
6	DATE				
7	SCALE				
8	PROJECT NO.				
9	PROJECT NAME				
10	CLIENT				
11	CONTRACT NO.				
12	CONTRACT DATE				
13	CONTRACT VALUE				
14	CONTRACT TYPE				
15	CONTRACT STATUS				
16	CONTRACT LOCATION				
17	CONTRACT DESCRIPTION				
18	CONTRACT TERMS				
19	CONTRACT CONDITIONS				
20	CONTRACT SPECIFICATIONS				
21	CONTRACT DRAWINGS				
22	CONTRACT SCHEDULE				
23	CONTRACT PAYMENT				
24	CONTRACT RISK				
25	CONTRACT LIABILITY				
26	CONTRACT INSURANCE				
27	CONTRACT TAXES				
28	CONTRACT LEGAL				
29	CONTRACT DISPUTE				
30	CONTRACT TERMINATION				
31	CONTRACT ASSIGNMENT				
32	CONTRACT SUBCONTRACTING				
33	CONTRACT FORCE MAJEURE				
34	CONTRACT ENTIRE AGREEMENT				
35	CONTRACT GOVERNING LAW				
36	CONTRACT DISPUTE RESOLUTION				
37	CONTRACT SIGNATURE				
38	CONTRACT DATE				
39	CONTRACT PLACE				
40	CONTRACT WITNESSES				
41	CONTRACT NOTES				
42	CONTRACT ATTACHMENTS				
43	CONTRACT REFERENCES				
44	CONTRACT CONTACTS				
45	CONTRACT HISTORY				
46	CONTRACT VERSIONS				
47	CONTRACT REVISIONS				
48	CONTRACT COMMENTS				
49	CONTRACT FOOTNOTES				
50	CONTRACT INDEX				

RELEASED FOR FABRICATION/INSTALLATION per Drawing 2 Jerry Siegel

NO.	DESCRIPTION	QTY	UNIT	REMARKS
1	WELDING ENGINEER			
2	DESIGNER			
3	DRAWER			
4	CHECKER			
5	APPROVER			
6	DATE			
7	SCALE			
8	PROJECT NO.			
9	PROJECT NAME			
10	CLIENT			
11	CONTRACT NO.			
12	CONTRACT DATE			
13	CONTRACT VALUE			
14	CONTRACT TYPE			
15	CONTRACT STATUS			
16	CONTRACT LOCATION			
17	CONTRACT DESCRIPTION			
18	CONTRACT TERMS			
19	CONTRACT CONDITIONS			
20	CONTRACT SPECIFICATIONS			
21	CONTRACT DRAWINGS			
22	CONTRACT SCHEDULE			
23	CONTRACT PAYMENT			
24	CONTRACT RISK			
25	CONTRACT LIABILITY			
26	CONTRACT INSURANCE			
27	CONTRACT TAXES			
28	CONTRACT LEGAL			
29	CONTRACT DISPUTE			
30	CONTRACT TERMINATION			
31	CONTRACT ASSIGNMENT			
32	CONTRACT SUBCONTRACTING			
33	CONTRACT FORCE MAJEURE			
34	CONTRACT ENTIRE AGREEMENT			
35	CONTRACT GOVERNING LAW			
36	CONTRACT DISPUTE RESOLUTION			
37	CONTRACT SIGNATURE			
38	CONTRACT DATE			
39	CONTRACT PLACE			
40	CONTRACT WITNESSES			
41	CONTRACT NOTES			
42	CONTRACT ATTACHMENTS			
43	CONTRACT REFERENCES			
44	CONTRACT CONTACTS			
45	CONTRACT HISTORY			
46	CONTRACT VERSIONS			
47	CONTRACT REVISIONS			
48	CONTRACT COMMENTS			
49	CONTRACT FOOTNOTES			
50	CONTRACT INDEX			

65678/80/792/30/88  
SE/100-004 part 6A  
8/16/85

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 6 - Item: 264

Workorder: 65678/8-0 Sub:192 Op:34

Part: SE120-004 PORT 6 - TUBE, 10.0 OD X 0.188 WALL - SE120-004-19 TUBE, 10.0 OD X 0.188 WALL

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*			MASTER GAGE	QA		J-1270	LESS THAN 1.01	840-G.M			A
(10)		Mag. Perm: 1.02 Mu Max						08-16-05			
*			CALIPER	QA		J-1103	.032	840-G.M			A
(20)		ROUNDNESS WITHIN .060"						08-16-05			

**INSPECTION DATA CHECKLIST**

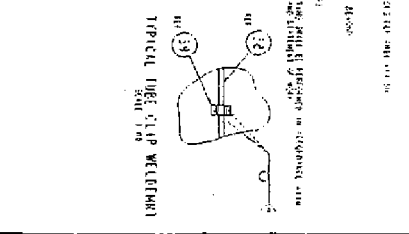
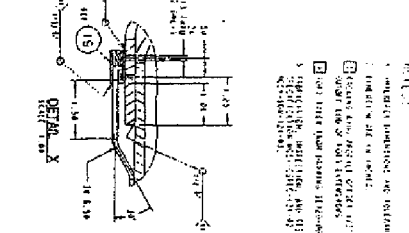
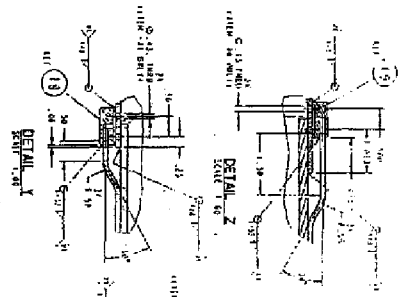
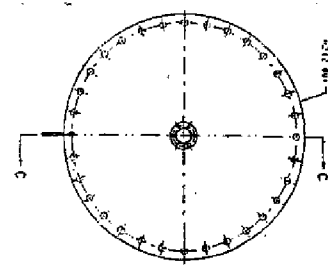
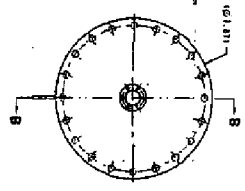
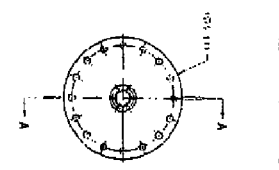
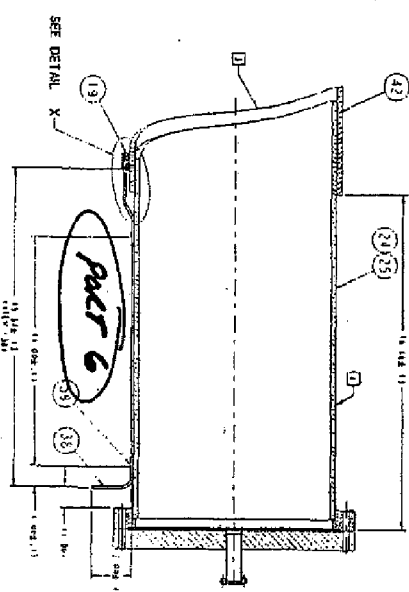
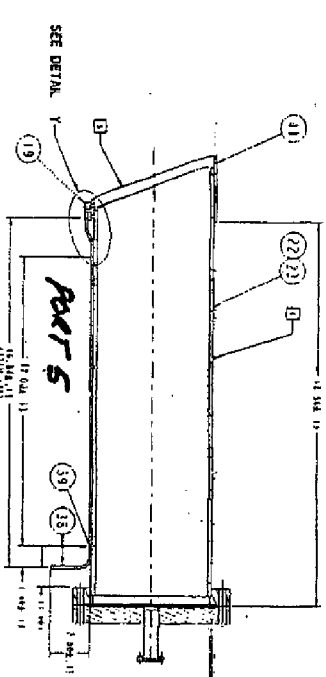
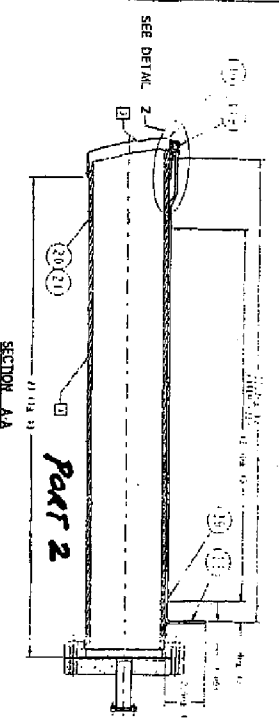
Quality Assurance Documentation for Part ID: SE120-004 PORT 6 - Item: 266

Workorder: 65678/8-0 Sub:197 Op:20

Part: SE120-004 PORT 6 - TUBE, 10.0 OD X 0.188 WALL - SE120-004-19 TUBE, 10.0 OD X 0.188 WALL

Drawing ID: SE120-004 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*				MFG			VISUAL ACCEPT PER	733-J.ST	712-W.	
(20)		VWI - COMPLETED WELD		AWI			PS-480 WPS 380 PPPL	06-21-05	06-21-05	

A



1. ALL DIMENSIONS ARE UNLESS OTHERWISE SPECIFIED IN FEET AND INCHES.  
 2. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.  
 3. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.  
 4. ALL DIMENSIONS ARE TO SURFACE UNLESS OTHERWISE SPECIFIED.  
 5. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE SPECIFIED.  
 6. ALL DIMENSIONS ARE TO CENTER OF GRAVITY UNLESS OTHERWISE SPECIFIED.  
 7. ALL DIMENSIONS ARE TO CENTER OF MASS UNLESS OTHERWISE SPECIFIED.  
 8. ALL DIMENSIONS ARE TO CENTER OF BUOYANCY UNLESS OTHERWISE SPECIFIED.  
 9. ALL DIMENSIONS ARE TO CENTER OF PRESSURE UNLESS OTHERWISE SPECIFIED.  
 10. ALL DIMENSIONS ARE TO CENTER OF GRAVITY AND CENTER OF BUOYANCY UNLESS OTHERWISE SPECIFIED.  
 11. ALL DIMENSIONS ARE TO CENTER OF GRAVITY AND CENTER OF MASS UNLESS OTHERWISE SPECIFIED.  
 12. ALL DIMENSIONS ARE TO CENTER OF GRAVITY AND CENTER OF BUOYANCY AND CENTER OF PRESSURE UNLESS OTHERWISE SPECIFIED.  
 13. ALL DIMENSIONS ARE TO CENTER OF GRAVITY AND CENTER OF MASS AND CENTER OF BUOYANCY UNLESS OTHERWISE SPECIFIED.  
 14. ALL DIMENSIONS ARE TO CENTER OF GRAVITY AND CENTER OF MASS AND CENTER OF BUOYANCY AND CENTER OF PRESSURE UNLESS OTHERWISE SPECIFIED.  
 15. ALL DIMENSIONS ARE TO CENTER OF GRAVITY AND CENTER OF MASS AND CENTER OF BUOYANCY AND CENTER OF PRESSURE AND CENTER OF GRAVITY UNLESS OTHERWISE SPECIFIED.  
 16. ALL DIMENSIONS ARE TO CENTER OF GRAVITY AND CENTER OF MASS AND CENTER OF BUOYANCY AND CENTER OF PRESSURE AND CENTER OF GRAVITY UNLESS OTHERWISE SPECIFIED.  
 17. ALL DIMENSIONS ARE TO CENTER OF GRAVITY AND CENTER OF MASS AND CENTER OF BUOYANCY AND CENTER OF PRESSURE AND CENTER OF GRAVITY UNLESS OTHERWISE SPECIFIED.  
 18. ALL DIMENSIONS ARE TO CENTER OF GRAVITY AND CENTER OF MASS AND CENTER OF BUOYANCY AND CENTER OF PRESSURE AND CENTER OF GRAVITY UNLESS OTHERWISE SPECIFIED.  
 19. ALL DIMENSIONS ARE TO CENTER OF GRAVITY AND CENTER OF MASS AND CENTER OF BUOYANCY AND CENTER OF PRESSURE AND CENTER OF GRAVITY UNLESS OTHERWISE SPECIFIED.  
 20. ALL DIMENSIONS ARE TO CENTER OF GRAVITY AND CENTER OF MASS AND CENTER OF BUOYANCY AND CENTER OF PRESSURE AND CENTER OF GRAVITY UNLESS OTHERWISE SPECIFIED.

NO.	DESCRIPTION	QTY.	UNIT	REMARKS
1	PIPE 12\"/>			

RELEASED FOR FABRICATION/INSTALLATION  
 Prof. Mod. by Jerry Siegel

WELDING ENGINEER  
 APPROVED: L. MARSHALL DATE: 1968

65678/80/79/30/818  
 SE130-004 Part 6B  
 8/26/68

NO.	DESCRIPTION	QTY.	UNIT	REMARKS
1	PIPE 12\"/>			

REVISIONS

NO.	DESCRIPTION	DATE
1	ISSUED FOR FABRICATION	8/26/68

NO.	DESCRIPTION	DATE
1	ISSUED FOR FABRICATION	8/26/68

NO.	DESCRIPTION	DATE
1	ISSUED FOR FABRICATION	8/26/68

NO.	DESCRIPTION	DATE
1	ISSUED FOR FABRICATION	8/26/68

NO.	DESCRIPTION	DATE
1	ISSUED FOR FABRICATION	8/26/68

NO.	DESCRIPTION	DATE
1	ISSUED FOR FABRICATION	8/26/68

NO.	DESCRIPTION	DATE
1	ISSUED FOR FABRICATION	8/26/68



4959  
10520 Chester Road  
Woodlawn, Ohio 45215

JAMES BERG

CLIENT: Major Tool + Machine  
 RADIOGRAPHER: Robert Weaver  
 ISOTOPE/RAY: IR 192  
 WELD PROCESS: PAW-MAC  
 DIM X LEN X THK: .118" x .054" x .151"  
 CURIES/MAX: 52.4  
 MATERIAL SPEC: 625 Inconel  
 DATE: 7-23-05  
 JOB NO: 13850252-4  
 FILM PROCESSING: AUTO  
 TIME: 2:00 min.  
 PENETRANT: ASTM 1A  
 SHIM: N/A  
 FILM TYPE: Kodak T  
 FILM TECHNIQUE: Double  
 PB SCREENS: .010"  
 ACCEPTANCE STANDARD: ASME VIII Div. 1 UW-51

FITTING, SEAM OR FITTING	FILM INTERVAL NUMBER	WELDER IDENTIFICATION	PENETRANT		SLAG	POROSITY	POROSITY WITH TAIL	CRACK	LACK OF PEN	LACK FUSION	INTERNAL CONVEXITY	INTERNAL CONCAVITY	TUNGSTEN	MELT-THROUGH	BURN-THROUGH	CRATER-FIT	OXIDATION	INTERNAL UNDERCUT	EXTERNAL UNDERCUT	ALIGNED INDICATIONS	WELD CONTOUR	MISMATCH	FILM ARTIFACT	VISUAL CONCERNS	FILM DENSITY	SEE REMARKS	ACCEPT	REJECT	End View	Side View		
			SIZE	QUALITY LEVEL																												
Seam	0-1	J.S.	1A	.008																												
	1-2																															

Robert Weaver 655514/II  
 CooperHeat-QIS Signature  
 James Berg 655506 II

Raymond P. Edwards  
 Customer Representative Signature

7-23-05  
 Date

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 6 - Item: 269

Workorder: 65678/8-0 Sub:197 Op:34

Part: SE120-004 PORT 6 - TUBE, 10.0 OD X 0.188 WALL - SE120-004-19 TUBE, 10.0 OD X 0.188 WALL

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*			MASTER GAGE	QA		J-1270	LESS THAN 1.01	840-G.M			A
(10)		Mag. Perm: 1.02 Mu Max						08-15-05			
*			CALIPER	QA		J-1103	.060	840-G.M			A
(20)		ROUNDNESS WITHIN .060"						08-15-05			

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 6 - Item: 270

Workorder: 65678/8-0 Sub:230 Op:20

Part: SE120-004 PORT 6 - TUBE, 10.0 OD X 0.188 WALL - SE120-004-19 TUBE, 10.0 OD X 0.188 WALL

Drawing ID: SE120-004 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*				MFG			VISUAL ACCEPT PER	733-J.ST	712-W.	
(20)		VWI - COMPLETED WELD		AWI			PS-480 WPS 380 PPPL	06-21-05	06-21-05	

A

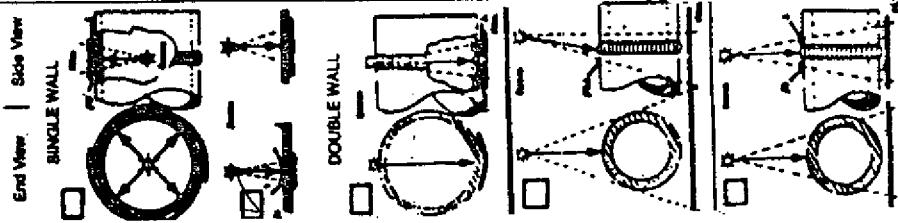


4959  
10520 Cheater Road  
Woodlawn, Ohio 45215



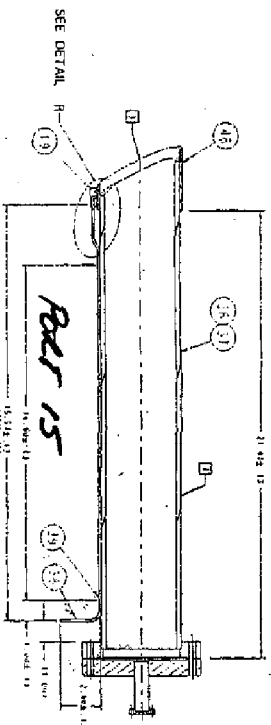
CLIENT	Major Tool + Machine	RADIOGRAPHER	Robert Weaver	JOB NO	13850052-1	P.O. NO		DATE	7/5/05
SOTOPRAY	IR 92	DIA X LENAV	.118" x .094"	CURIESMA	62	FILM TYPE	Kodak T	FILM TECHNIQUE	Double
WELD PROCESS	PAW-MAC	MATERIAL SPEC.	625 Inconel	FOCAL SPOT SIZE	.151"	TIME	1:25	PERMEAMETER	ASTM 1A
DESCRIPTION	65678/8.0/230/30/818 SE120-004 part 6	MATERIAL THICKNESS	.250"	SOD	14.75"	SHIM	N/A	ACCEPTANCE STANDARD	ASME VIII Div. 1 UW-51

FITTING, SEAM OR FITTING	FILM INTERVAL NUMBER	WELDER IDENTIFICATION	PENETRANT		SLAG	POROSITY	POROSITY WITH TAIL	CRACK	LACK OF PEN	LACK FUSION	INTERNAL CONVEXITY	INTERNAL CONCAVITY	TUNGSTEN	MELT-THROUGH	BURN-THROUGH	CRATER-PT	OXIDATION	INTERNAL UNDERCUT	EXTERNAL UNDERCUT	ALIGNED INDICATIONS	WELD CONTOUR	MIS-MATCH	FILM ARTIFACT	VISUAL CONCERNS	FILM DENSITY	SEE REMARKS	ACCEPT	REJECT			
			SIZE	QUALITY LEVEL																											
Seam	0-1	J.S.	1A	.008"																											
	1-2																														
	2-3																														



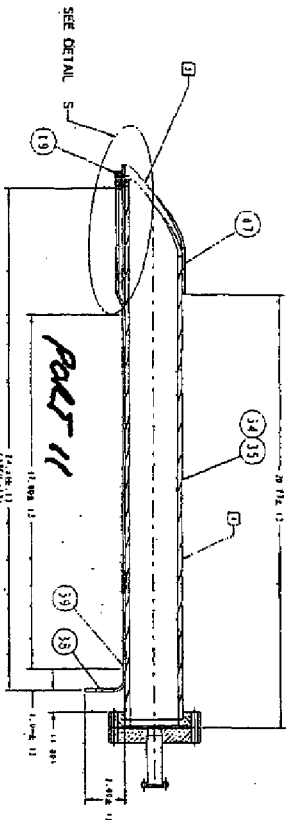
Penetrant  
 Shim  
 Location Marker  
 OTHER

Robert Weaver 655514/II  
 Customer Representative Signature  
 7/5/05  
 Date



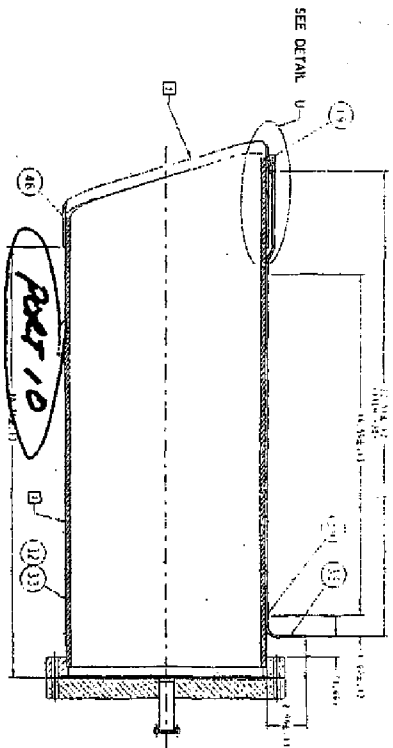
SECTION JJ

SCALE 1/2" = 1"



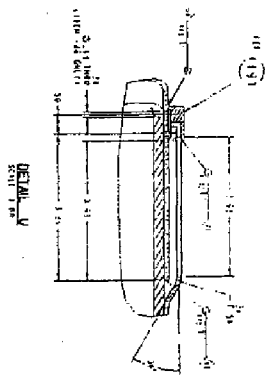
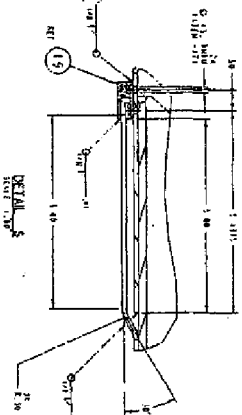
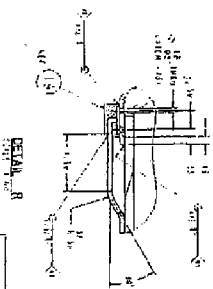
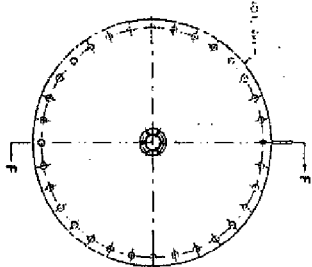
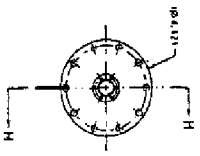
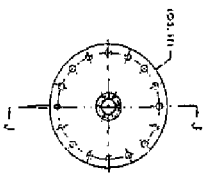
SECTION III

SCALE 1/2" = 1"



SECTION FE

SCALE 1/2" = 1"



65678/80/230/30/818  
 SE 120-004 part  
 8/16/05

RELEASED FOR  
 FABRICATION/INSTALLATION  
 PER: JERRY SIEGEL

DATE	BY	DESCRIPTION
11/11/05	JERRY SIEGEL	RELEASED FOR FABRICATION/INSTALLATION
11/11/05	JERRY SIEGEL	REVISION 1
11/11/05	JERRY SIEGEL	REVISION 2
11/11/05	JERRY SIEGEL	REVISION 3
11/11/05	JERRY SIEGEL	REVISION 4
11/11/05	JERRY SIEGEL	REVISION 5
11/11/05	JERRY SIEGEL	REVISION 6
11/11/05	JERRY SIEGEL	REVISION 7
11/11/05	JERRY SIEGEL	REVISION 8
11/11/05	JERRY SIEGEL	REVISION 9
11/11/05	JERRY SIEGEL	REVISION 10

MTM, INC. JUN 24 04

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 6A - Item: 273

Workorder: 65678/8-0 Sub:12 Op:10

Part: SE120-004 PORT 6A - PORT 6A SUB-ASSEMBLY - PORT 6A SUB-ASSEMBLY

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		VWI - INTERIOR COVER PASS / FILLET P6AF		MFG		VISUAL	OK	358-D.M	933-D.L		A
(30)				CWI				09-30-05	09-30-05		
*		VWI - EXTERIOR FILLETS P6AF		MFG		VISUAL	OK	358-D.M	933-D.L		A
(40)					CWI				09-30-05	09-30-05	

Quality Assurance Documentation for Part ID: SE120-004 PORT 6B - Item: 274

Workorder: 65678/8-0 Sub:13 Op:10

**Part: SE120-004 PORT 6B - PORT 6B SUB-ASSEMBLY - PORT 6B SUB-ASSEMBLY**

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		VWI - INTERIOR COVER PASS / FILLET P6BF		MFG		VISUAL	OK	358-D.M	933-D.L		A
(30)				CWI				09-30-05	09-30-05		
*		VWI - EXTERIOR FILLETS P6BF		MFG		VISUAL	OK	358-D.M	933-D.L		A
(40)					CWI				09-30-05	09-30-05	



2119 FULTON  
 P.O. BOX 120430  
 HOUSTON, TEXAS 77215  
 713/86-4000  
 FAX 713/86-6725  
 S/O NUMBER 250352

BUILD TO: HAYNES INTERNATIONAL  
 NORTHWOODS IND PARK  
 12241 FM 529  
 HOUSTON,  
 TX 77041  
 P.O. NUMBER 1552

DRIF TO: HAYNES INTERNATIONAL  
 12241 FM 529  
 HOUSTON,  
 TX 77041  
 TAG #:

METALLURGIC  
 TEST REPORT  
 DATE 3/22/05  
 PAGE

ITEM	DESCRIPTION	MATERIAL	SPEC	BASE SPEC	PIECES
001	8"OD, 1894W PIPE X 28"LG	FORM & TACK ENDS SQUARE &	525	B443	SB443
004	8"OD, 1894W PIPE X 28"LG	FORM & TACK ENDS SQ & DEBURRED	525	B443	SB443
005	8"OD, 1894W PIPE X 34"LG FORM	& TACK ENDS SQ & DEBURRED	525	B443	SB443

ITEM	HEAT #	C	MN	P	S	SI	CR	NI	MO	CU	CO	CB&TA	N	FE	V	U
001	2450-4-6731	.020	.260	.008		.200	21.510	59.880	8.590		.220	3.430		4.480		
004	2450-4-6731	.020	.260	.008		.200	21.510	59.880	8.590		.220	3.430		4.480		
005	2450-4-6731	.020	.260	.008		.200	21.510	59.880	8.590		.220	3.430		4.480		

ITEM	AL	TI	SM	PB	ZN	AS	MG	ALATI	Q	BASE MATERIAL MANUFACTURER	M.S.N.
001	.210	.290								HAYNES INTERNATIONAL	
004	.210	.290								HAYNES INTERNATIONAL	
005	.210	.290								HAYNES INTERNATIONAL	

ITEM	YIELD	TENSILE	ELONG		R7A	8MM	HEAT TREAT		QUENCH	IMPACT TEST	SIZE	TEMP	RESULTS (FT/LBS)			LATERAL EXPANSION			K QUCTILE FRACTURE			
			2	9			TEMP	TIME					1	2	3	1	2	3	1	2		
001	60,500	121,000	51.0																			
004	60,500	121,000	51.0																			
005	60,500	121,000	51.0																			

HT# 2450-4-6731 (TA) = <.05  
 GRAIN SIZE = 4.5  
 HT# 2450-4-6731 (TA) = <.05  
 GRAIN SIZE = 4.5  
 HT# 2450-4-6731 (TA) = <.05  
 GRAIN SIZE = 4.5

LABOR ONLY TO MANUFACTURE FROM CUSTOMER'S MATERIAL  
 \*\*\*\*\* MADE IN THE USA \*\*\*\*\*

MAY - 2 2005  
 95756

MTM 09  
 5/2/05

NOTARIZED WILL TEST REPORTS AVAILABLE UPON REQUEST.

W-WATER  
 A-AIR  
 FC-FURNACE COOL  
 O-OIL  
 Q1-AIR QUENCH  
 AND 1250F TEMPER

WE CERTIFY THAT ALL CHEMICAL ANALYSIS, MECHANICAL PROPERTIES, TEST RESULTS AND STATEMENTS OF PERFORMED OPERATIONS RECORDED HEREIN, ARE ACCORDING TO THE RECORDS OF MACH INTERNATIONAL. MATERIALS HEREIN STAY ARE IN COMPLIANCE WITH ALL SPECIFICATIONS LISTED ABOVE.

DATE 3/28/05 SIGNATURE *[Signature]*

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 7 - Item: 276

Workorder: 65678/8-0 Sub:202 Op:20

Part: SE120-004 PORT 7 - TUBE, 8.0 OD X 0.188 WALL - SE120-004-18 TUBE, 8.0 OD X 0.188 WALL

Drawing ID: SE120-004 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*				MFG			VISUAL ACCEPT PER	733-J.ST	712-W.	
(20)		VWI - COMPLETED WELD		AWI			PS-480 WPS 380 PPPL	06-21-05	06-21-05	

A

4959

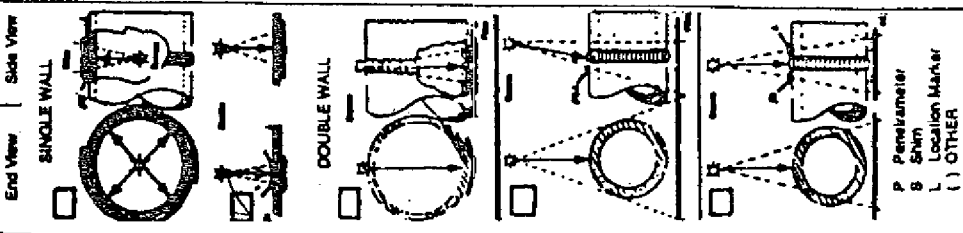
10520 Chester Road  
Woodlawn, Ohio 45215



James Berg

CLIENT	Major Tool + Machine	RADIOGRAPHER	Robert Weaver II	JOB NO.	13850252-4	DATE	7-23-05
ISO/FILM	IR 92	DIA X LENNY	.118" x .094"	FILM PROCESSING	Kodak T	FILM TECHNIQUE	Double
WELD PROCESS	PAW - MAC	CURIESMA	52.4	FILM TYPE	ASME VIII Div. 1	FB SCREENS	.010"
DESCRIPTION	65678/80/202/30/818 SE120-004 part 7	MATERIAL SPEC.	625 Inconel	SHIM	N/A	ACCEPTANCE STANDARD	UW-51
		MATERIAL THICKNESS	.187"	PENETRATOR	ASTM 1A		
		MATERIAL DIAMETER	8"	TIME	1.45		
		SFD	15"				
		FOCAL SPOT SIZE	.151"				
		INTERPRETER LEVEL	Robert Weaver II				

FITTING DESCRIPTION	FILM INTERVAL NUMBER	WELDER IDENTIFICATION	PENETRATOR		SLAG	POROSITY	POROSITY WITH TAIL	CRACK	LACK OF PEN	LACK FUSION	INTERNAL CONCAVITY	TUNGSTEN	MELT-THROUGH	BURN-THROUGH	CRATER PT	OXIDATION	INTERNAL UNDERCUT	EXTERNAL UNDERCUT	MIS-MATCH	FILM ARTIFACT	VISUAL CONCERNS	FILM DENSITY	SEE REMARKS	ACCEPT	REJECT	
			SIZE	QUALITY LEVEL																						
Seam 1-2	0-1	J.S.	1A	008																						

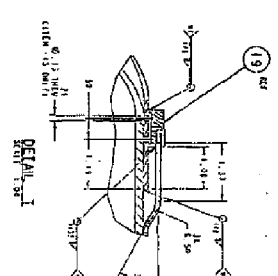
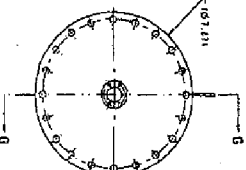
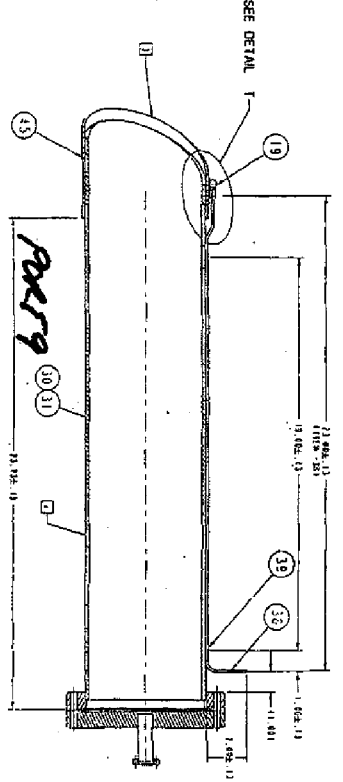
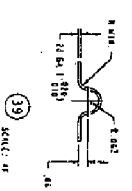
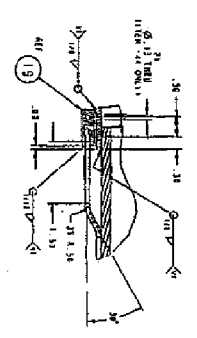
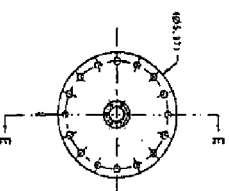
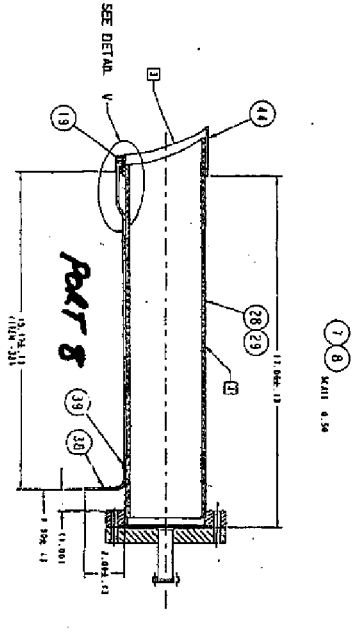
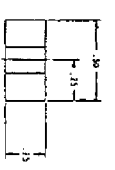
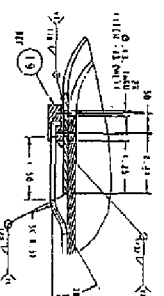
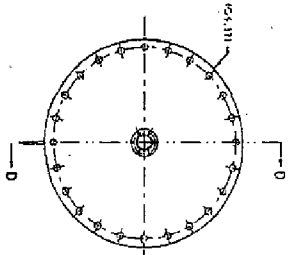
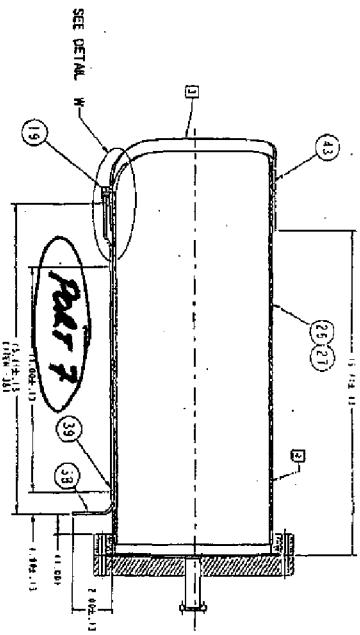


Robert Weaver 655574/II  
Cooperheat-MOS Signature

James Berg  
Customer Representative Signature

7-23-05  
Date

FOR HOLES AND PARTS LIST SEE SHEET 1



RELEASED FOR FABRICATION/INSTALLATION  
 FROM DRAWING OF Same Design

DATE	BY	CHKD	APP'D	REVISION
11/12/05	...	...	...	...
11/12/05	...	...	...	...
11/12/05	...	...	...	...
11/12/05	...	...	...	...
11/12/05	...	...	...	...

CSG 78/80/202/30/818  
 SE/30=004 Part 7A  
 7/23/05



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 7 - Item: 279

Workorder: 65678/8-0 Sub:202 Op:34

Part: SE120-004 PORT 7 - TUBE, 8.0 OD X 0.188 WALL - SE120-004-18 TUBE, 8.0 OD X 0.188 WALL

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*			MASTER GAGE	QA		J-1270	LESS THAN 1.01	840-G.M			A
(10)		Mag. Perm: 1.02 Mu Max						08-16-05			
*			CALIPER	QA		J-1103	.056	840-G.M			A
(20)		ROUNDNESS WITHIN .060"						08-16-05			

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 7 - Item: 281

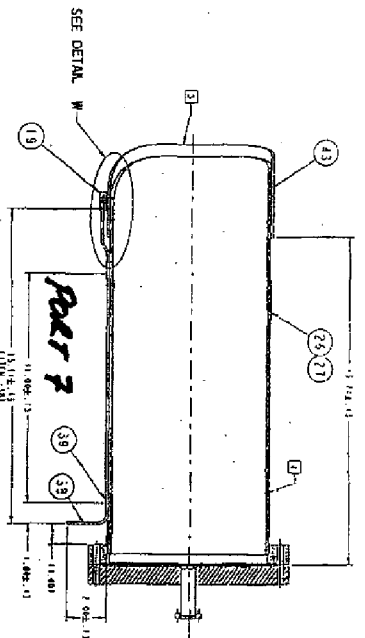
Workorder: 65678/8-0 Sub:208 Op:20

Part: SE120-004 PORT 7 - TUBE, 8.0 OD X 0.188 WALL - SE120-004-18 TUBE, 8.0 OD X 0.188 WALL

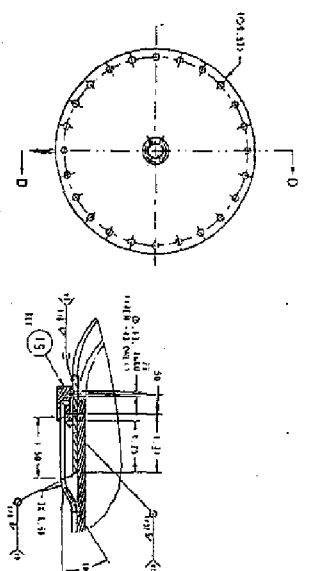
Drawing ID: SE120-004 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*				MFG			VISUAL ACCEPT PER	733-J.ST	712-W.	
(20)		VWI - COMPLETED WELD		AWI			PS-480 WPS 380 PPPL	06-21-05	06-21-05	

A

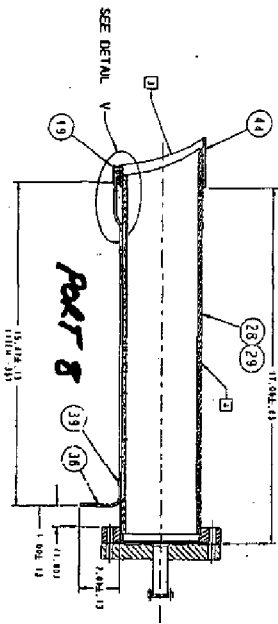
FOR NOTE AND PARTS LIST SHEET 1



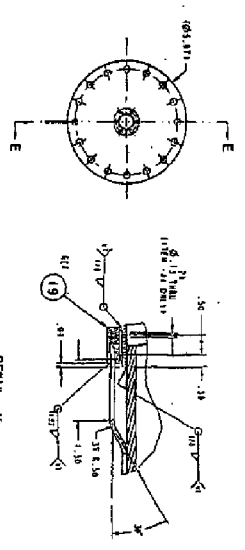
SECTION DD0  
SCALE 8:20



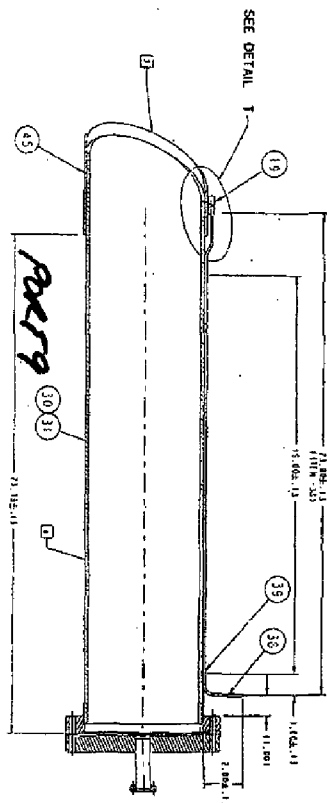
DETAIL X  
SCALE 1:20



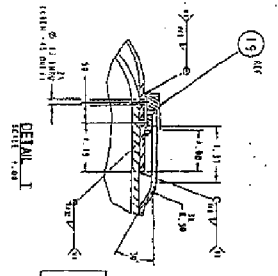
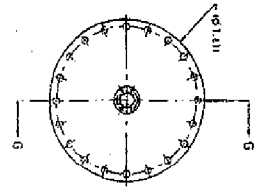
SECTION EE  
SCALE 8:20



SCALE 1:20



SECTION GG  
SCALE 8:20



USE 78/80/208/30/818  
SE/20-004 Part 78  
7/23/05

RELEASED FOR  
FABRICATION/INSTALLATION  
PROVIDED BY JERRY SHORR

DATE	BY	REVISION
11/11/05	JL	1
11/11/05	JL	2
11/11/05	JL	3
11/11/05	JL	4
11/11/05	JL	5
11/11/05	JL	6
11/11/05	JL	7
11/11/05	JL	8
11/11/05	JL	9
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11/11/05	JL	49
11/11/05	JL	50

MTA REV. 0 JUN 24 04

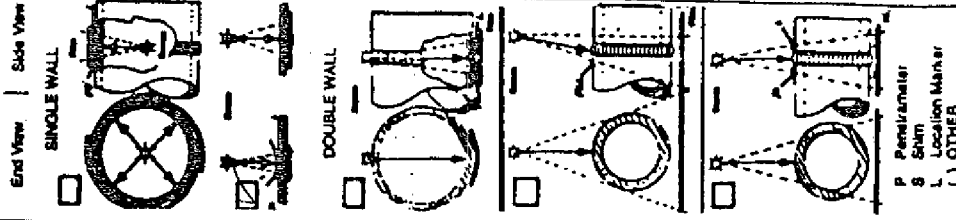


4959  
10520 Chester Road  
Woodlawn, Ohio 45215

**JAMES BERG**  
RADIOGRAPHER

CLIENT	Major Tool + Machine	INTERESTER LEVEL	Robert Weaver/II	RADIOGRAPHER	James Berg	JOB NO.	1385052-4	P.O. NO.		DATE	7-23-05
ISOTOPE/RAY	IR 192	FOCAL SPOT SIZE	.151"	WELDER	Robert Weaver	FILM PROCESSING	Auto	FILM TYPE	Kodak T	FILM TECHNIQUE	Double
WELD PROCESS	PAW-MAC	MATERIAL SPEC.	625 Inconel	TIME	1.45	SHIM	N/A	ACCEPTANCE STANDARD		PB SCREENS	.010"
DESCRIPTION	65678/80/208/30/818 SE120-004 part 7	MATERIAL DIAMETER	8"	PENETRATOR	ASTM 1A	REMARKS					ASME VIII Div. 1 UW-51

FITTING, SEAM OR FITTING	FILM INTERVAL NUMBER	WELDER IDENTIFICATION	PENETRATOR		SLAG	POROSITY	POROSITY WITH TAIL	CRACK	LACK OF PEN	LACK FUSION	INTERNAL CONCAVITY	INTERNAL CONVEXITY	TUNGSTEN	MELT-THROUGH	BURN-THROUGH	CRATER FIT	OXIDATION	INTERNAL UNDERCUT	EXTERNAL UNDERCUT	MIS-MATCH	FILM ARTIFACT	VISUAL CONCERNS	FILM DENSITY	SEE REMARKS	ACCEPT	REJECT	
			SIZE	QUANTITY LEVEL																							
Seam	0-1	J.S.	1A	008																							
	1-2																										



Robert Weaver 655514/II  
Cooperheat/MOS Signature

Raymond P. Edwards  
Customer Representative Signature

7-23-05  
Date

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 7 - Item: 284

Workorder: 65678/8-0 Sub:208 Op:34

Part: SE120-004 PORT 7 - TUBE, 8.0 OD X 0.188 WALL - SE120-004-18 TUBE, 8.0 OD X 0.188 WALL

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		Mag. Perm: 1.02 Mu Max	MASTER GAGE	QA		J-1270	LESS THAN 1.01	840-G.M			A
(10)								08-16-05			
*		ROUNDNESS WITHIN .060"	CALIPER	QA		J-1103	.060	840-G.M			A
(20)									08-16-05		

Quality Assurance Documentation for Part ID: SE120-004 PORT 7A - Item: 285

Workorder: 65678/8-0 Sub:14 Op:10

Part: SE120-004 PORT 7A - PORT 7A SUB-ASSEMBLY - PORT 7A SUB-ASSEMBLY

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		VWI - INTERIOR COVER PASS / FILLET P7AF		MFG		VISUAL	OK	197-T.FI	933-D.L		A
(30)				CWI				11-21-05	11-28-05		
*		VWI - EXTERIOR FILLETS P7AF		MFG		VISUAL	OK	197-T.FI	933-D.L		A
(40)					CWI				11-21-05	11-28-05	

---

**Customer: PRINCETON PLASMA PHYSICS LAB**

Contact: Frank Malinowski

E-Mail: [fmalinowski@pppl.gov](mailto:fmalinowski@pppl.gov)

Telephone: 609-243-2441

Fax: 609-243-2021

**Part: / SE122-112-3 (CF BLANK FLANGE)**

Drawing ID: SE122-113

Revision: 0

Customer P.O.: S005243-F

Serial No./Qty: N/A

Reported By: DOUG MCCORKLE

E-Mail: [dMcCorkle@MajorTool.com](mailto:dMcCorkle@MajorTool.com)

Telephone: 317-636-6433

Fax: 317-634-9420

Problem: Magnetic Permeability requirement 1.02 Max  
Checks >1.05, but < 1.1

---

**Proposed Disposition:**

CUSTOMER DISPOSITION REQUIRED

---

Number of additional pages: \_\_\_\_\_

---

**Customer Disposition:**     Use As Is     Rework     Repair     Scrap     Replace

**Technical Contact Approval:** \_\_\_\_\_

**Title:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Buyer Approval:** \_\_\_\_\_

**Title:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Major Tool Implemented By:** \_\_\_\_\_

**Title:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Quality Assurance Documentation for Part ID: SE120-004 PORT 7B - Item: 289

Workorder: 65678/8-0 Sub:15 Op:10

Part: SE120-004 PORT 7B - PORT 7B SUB-ASSEMBLY - PORT 7B SUB-ASSEMBLY

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		VWI - INTERIOR COVER PASS / FILLET P7BF		MFG		VISUAL	OK	197-T.FI	933-D.L		A
(30)				CWI				11-21-05	11-28-05		
*		VWI - EXTERIOR FILLETS P7BF		MFG		VISUAL	OK	197-T.FI	933-D.L		A
(40)					CWI				11-21-05	11-28-05	





4119 FULTON / 77022  
 P.O. BOX 130430  
 HOUSTON, TEXAS 77219-0430  
 (713) 695-6000  
 (713) 596-6725 FAX NUMBER

ORDER DATE 7/21/05 MACH S/O NUMBER 250875  
 \*\*\*\*\*  
 \*\*\* SHIPPING DEPT \*\*\*  
 \*\*\*\*\*

CUSTOMER #: 30800000  
 SOLD TO: MAJOR TOOL & MACHINE INC.  
 1458 E. 19TH. STREET

SHIPMENT #: 10000  
 CUSTOMER ORDER NUMBER: P05-03984  
 OFL ALI: DELIST: 9/04/05

INDIANAPOLIS  
 IN 46218  
 BUYER: BOB

SHIP VIA: AFB F.O.B.: OUR PLANT  
 FREIGHT BILL NUMBER:

SHIP TO: MAJOR TOOL & MACHINE INC  
 1458 E. 19TH STREET

PREPAID/CHG: PREPAID/COLLECT: COLLECT: X  
 TERMS: SEE BELOW

INDIANAPOLIS  
 IN 46218  
 ATTENTION:  
 TAG #:  
 TAG #:

MILL TEST REPORT:  
 X WITH SHIPMENT  
 X WITH INVOICE  
 NOT REQUIRED

ITEM	ORDER	QTY	SHIP DESCRIPTION	HEAT U/M NUMBER	MACH P.O. #
1	9	9pc. 34"lg	4"OD .2500W PIPE X 34"LG (-0 F1/4) FORM & TACK 625 SB443 NO LONG SEAM BEVEL TAG: 3PCS PART# SE120-004 PART 15 TAG: 3PCS PART# SE120-004 PART 17	EA 132793	814040
				99716	
				99715	
2	6	6pc. 42"lg	4"OD .2500W PIPE X 42"LG (-0 F1/2) FORM & TACK 625 SB443 NO LONG SEAM BEVEL TAG: PART# SE120-004 PART 17	EA 132793	814040
				99721	

Rel: 08.17.05 WX



6119 FULTON / 77022  
 P.O. BOX 130630  
 HOUSTON, TEXAS 77219-0630  
 (713) 495-6000  
 (713) 496-6725 FAX NUMBER

ORDER DATE: 7/21/05  
 MACH S/O NUMBER: 250875  
 \*\*\*\*\*  
 \*\*\* SHIPPING DEPT \*\*\*  
 \*\*\*\*\*

CUSTOMER #: 38800000  
 SOLD TO: MAJOR TOOL & MACHINE INC.  
 1458 E. 19TH. STREET

SLSPRN #: 10000  
 CUSTOMER ORDER NUMBER: POS-03984  
 DEL ACT: DEL EST: 8/04/05

INDIANAPOLIS  
 IN 46218  
 BUYER: BOB

SHIP VIA: ABF F.O.B.: OUR PLANT  
 FREIGHT BILL NUMBER:

SHIP TO: MAJOR TOOL & MACHINE INC.  
 1458 E. 19TH. STREET

PREPAID/CHG: PREPAID/ALLOW: COLLECT: X  
 TERMS: SEE BELOW

INDIANAPOLIS  
 IN 46218  
 ATTENTION:  
 TAG #:  
 TAG #:

MILL TEST REPORTS:  
 X WITH SHIPMENT  
 X WITH INVOICE  
 NOT REQUIRED

ITEM	ORDER	QTY	SHIP	DESCRIPTION	HEAT U/M NUMBER	MACH P.O. #
3	18	18 pcs. 52"lg		4"OD .250AW PIPE X 52"LG (-0,+1/2) FOM & TACK 625 SB443 NO LONG SEAM BEVEL TAG: 4PC PART# SE120-004 PORT 17 5PC PART# SE120-004 PORT 18 4PC PART# SE120-004 PORT 2 4PC PART# SE120-004 PORT 8	EA 132793	81404C
<p>99716A See last page for customer/                      vendor revision.</p> <p>99726                      99723                      99724</p>						
4	1			CONTACT MAJOR TOOL TRANS. LT DEPT FOR SHIPPING INSTRUCTIONS 317-917-2404. REFERENCE PRIME CONTACT #DE-AC02-76-CH03073		
5	1			BAND PIPE TO WOODEN PALLETS LT & SHRINK WRAP COMPLETELY		



6119 FULTON / 77022  
P.O. BOX 130630  
HOUSTON, TEXAS 77219-0630  
(713) 695-6000  
(713) 696-6725 FAX NUMBER

ORDER DATE MACH S/O NUMBER  
7/21/05 250875  
\*\*\*\*\*  
\*\*\* SHIPPING DEPT \*\*\*  
\*\*\*\*\*

CUSTOMER #: 38900000  
SOLD TO: MAJOR TOOL & MACHINE INC.  
1458 E. 19TH. STREET  
  
INDIANAPOLIS.  
IN 46218  
BUYER: BOB

SLSPRSN #: 10000  
CUSTOMER ORDER NUMBER: POS-03984  
DEL ACT: DEL EST: 8/04/05  
  
SHIP VIA: ABF F.O.B.: OUR PLANT  
FREIGHT BILL NUMBER:

SHIP TO: MAJOR TOOL & MACHINE INC.  
1458 E. 19TH. STREET  
  
INDIANAPOLIS  
IN 46218  
ATTENTION:  
TAG #:  
TAG #:

PREPAID/CHG: PREPAID/ALLOW: COLLECT: X  
TERMS: SEE BELOW  
  
MILL TEST REPORTS:  
X WITH SHIPMENT  
X WITH INVOICE  
NOT REQUIRED

ITEM	ORDER	QUANTITY	B/O	SHIP DESCRIPTION	HEAT U/M NUMBER	MACH P.O. #
6	1			MTM TO PAY \$31,500.00 PRIOR TO SHIPMENT	LT	
				FORWARD INVOICE TO BOB JOACHIM @ E.JOACHIM@MAJORTOOL.COM	RECV. 31,500 8/9/05 CHK# 60160	
				BALANCE OF FUNDS DUE NET 30 DAYS.		

RECEIVED BY Paul Smith  
DATE 8-9-05

DECLARED VALUE IS ----- \$48,400.00



6119 Fulton Street  
P. O. Box 130630  
Houston, Texas 77219  
(713) 695-6000  
(800) 231-6823  
(713) 696-6725 Fax

August 18, 2005

To: Major Tool & Machine

Attn: Dave Wilkinson

Re: **Marking Authorization**  
**Major Tool Po# P05-03984**  
**Mach S/O# 250875**

Dear Dave,

The Quality Control Department at Mach Industrial Group states the following material 4"OD .250AW Pipe x 52"LG Port 17, needs to be marked as follows:

4"OD .250AW Pipe x 52"LG Port 18 HT#132793

Let me know if we can help in any other way.

Sincerely,

A handwritten signature in black ink that reads "Denise Hernandez". The signature is written in a cursive style with a large, looping flourish at the end.

Denise Hernandez  
Sales Department

Quality Assurance Documentation for Part ID: SE120-004 PORT 8 - Item: 294

Workorder: 65678/8-0 Sub:212 Op:20

Part: SE120-004 PORT 8 - PIPE, 3.5" SCH. 40 - SE120-004-15 PIPE, 3.5" SCH. 40

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*				MFG		VISUAL	WELD ACCEPTABLE P CUSTOMER DRAWIN PECIFICATION REQUI EMENTS.	933-D.L	933-D.L	
(20)		VWI - COMPLETED WELD		CWI				09-09-05	09-09-05	A





**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 8 - Item: 297

Workorder: 65678/8-0 Sub:212 Op:50

Part: SE120-004 PORT 8 - PIPE, 3.5" SCH. 40 - SE120-004-15 PIPE, 3.5" SCH. 40

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (40)		○ 0.06	HEIGHT GAGE	QA		J-530	.050	854-R.U 10-20-05		

A



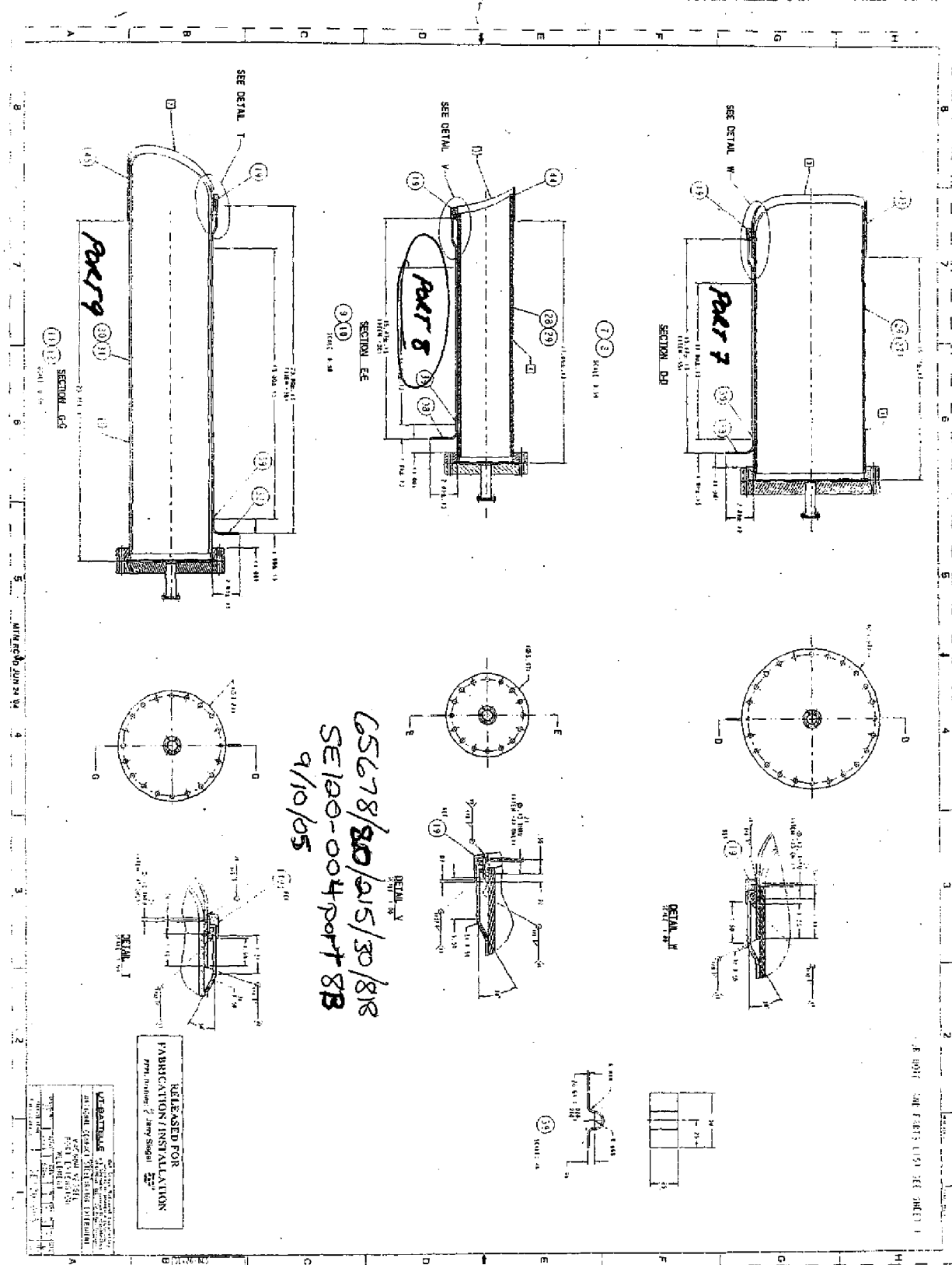
Quality Assurance Documentation for Part ID: SE120-004 PORT 8 - Item: 299

Workorder: 65678/8-0 Sub:215 Op:20

Part: SE120-004 PORT 8 - PIPE, 3.5" SCH. 40 - SE120-004-15 PIPE, 3.5" SCH. 40

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*				MFG		VISUAL	WELD ACCEPTABLE P CUSTOMER DRAWIN PECIFICATION REQUI EMENTS.	933-D.L	933-D.L	
(20)		VWI - COMPLETED WELD		CWI				09-09-05	09-09-05	

A



65678/800/015/30/818  
 SE 100-004 part 8B  
 9/10/05

RELEASED FOR  
 FABRICATORS/INSTALLATION  
 FROM DRAWING 2 Army Signal 52

DATE	BY	REVISION
10/10/05	...	...
...	...	...

DETAIL X	...
...	...

SEE PART 1091 SEE SHEET 1

4959

10520 Chester Road  
Woodlawn, Ohio 45215



CLIENT Major Tool & Machine	INTERPRET LEVEL Robert Weaver II	RADIOMETER Robert Weaver	JOB NO 13850291	P.O. NO N/A	DATE 9/10/05
WELD PROCESS PAW	MATERIAL SPEC 635 Inconel	MATERIAL THICKNESS .1875"	FILM PROCESSING Auto	FILM TYPE Kodak AA Double	FILM TECHNIQUE PB SCREENS
DESCRIPTION 65678/8.01215/30/818 SE 120-004 Part B	MATERIAL DIMETER 3.5"	PERMEAMETER ASTM 1A	TIME 14, 8, 125"	SHIM N/A	ACCEPTANCE STANDARD ASME VIII, UW-51
SEAM OR FITTING long	WELDER IDENTIFICATION J.S.	FILM INTERVAL NUMBER 0-1	SIZE 1A	QUALITY LEVEL 2008"	SLAG POROSITY POROSITY WITH TAIL CRACK LACK OF PEN LACK FUSION INTERNAL CONVEXITY INTERNAL CONCAVITY TUNGSTEN MELT-THROUGH BURN-THROUGH CRATER-PT OXIDATION INTERNAL UNDERCUT EXTERNAL UNDERCUT MIS-MATCH FILM ARTIFACT VISUAL CONCERNS FILM DENSITY SEE REMARKS ACCEPT
REJECT	REFLECT	DOUBLE WALL	SHOLE WALL	Side View	End View


*John Ballance II* Cooperheat-MOS Signature  
*Raymond P. Edwards* Customer Representative Signature  
 Date 9/10/05

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 8 - Item: 302

Workorder: 65678/8-0 Sub:215 Op:50

Part: SE120-004 PORT 8 - PIPE, 3.5" SCH. 40 - SE120-004-15 PIPE, 3.5" SCH. 40

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (40)		 0.06	HEIGHT GAGE	QA		J-530	.055	854-R.U 10-20-05		

A

Quality Assurance Documentation for Part ID: SE120-004 PORT 8A - Item: 303

Workorder: 65678/8-0 Sub:16 Op:10

Part: SE120-004 PORT 8A - PORT 8A SUB-ASSEMBLY - PORT 8A SUB-ASSEMBLY

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		VWI - INTERIOR COVER PASS / FILLET P8AF		MFG		VISUAL	OK	197-T.FI	933-D.L		A
(30)				CWI				11-23-05	11-28-05		
*		VWI - EXTERIOR FILLETS P8AF		MFG		VISUAL	OK	197-T.FI	933-D.L		A
(40)					CWI				11-23-05	11-28-05	

Quality Assurance Documentation for Part ID: SE120-004 PORT 8B - Item: 306

Workorder: 65678/8-0 Sub:17 Op:10

Part: SE120-004 PORT 8B - PORT 8B SUB-ASSEMBLY - PORT 8B SUB-ASSEMBLY

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		VWI - INTERIOR COVER PASS / FILLET P8BF		MFG		VISUAL	OK	197-T.FI	933-D.L		A
(30)				CWI				11-23-05	11-28-05		
*		VWI - EXTERIOR FILLETS P8BF		MFG		VISUAL	OK	197-T.FI	933-D.L		A
(40)					CWI				11-23-05	11-28-05	



6119 FULTON  
P.O. BOX 120630  
HOUSTON, TEXAS 77219  
713/495-6000  
FAX 713/496-6725  
S/O NUMBER 250332

SOLD TO: HAYNES INTERNATIONAL  
NORTHWOODS IND. PARK  
12241 FM 529  
HOUSTON,  
TX 77041  
P.O. NUMBER 1552

SHIP TO: HAYNES INTERNATIONAL  
12241 FM 529  
HOUSTON,  
TX 77041  
TAG #:

METALLURGICA  
TEST REPORT  
DATE 3/28/0  
PAGE

ITEM	DESCRIPTION	FORM & TACK ENDS	MATERIAL	SPEC	BASE SPEC	PIECES
001	8"OD, 188AW PIPE X 28"LG	SQUARE &	625	8443	S8443	
004	6"OD, 188AW PIPE X 28"LG	SQ & DEBURRED	625	8443	S8443	
005	4"OD, 188AW PIPE X 34"LG FORM	& DEBURRED	625	8443	S8443	

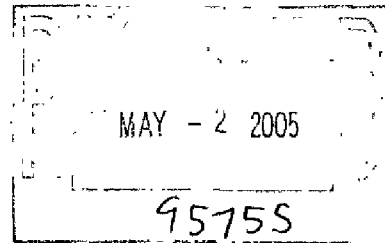
ITEM	HEAT #	C	MN	P	S	SI	CR	NI	MO	CU	CO	CB&TA	N	FE	V	W
001	2650-4-6731	.020	.260	.008		.200	21.510	59.880	8.590		.230	3.430		4.680		
004	2650-4-6731	.020	.260	.008		.200	21.510	59.880	8.590		.230	3.430		4.680		
005	2650-4-6731	.020	.260	.008		.200	21.510	59.880	8.590		.230	3.430		4.680		

ITEM	AL	TI	SN	PR	ZN	AS	MG	ALATI	G	BASE MATERIAL MANUFACTURER	M.S.N.
001	.210	.290								HAYNES INTERNATIONAL	
004	.210	.290								HAYNES INTERNATIONAL	
005	.210	.290								HAYNES INTERNATIONAL	

ITEM	YIELD	TENSILE	ELONG		R/A	SHM	HEAT TREAT		Q&CH	IMPACT TEST TYPE	SIZE (10mm X)	TEMP DEG-F	RESULTS (FT/LBS)			LATERAL EXPANSION			% DUCTILE FRACTURE	
			2	8			TEMP	TIME					1	2	3	1	2	3	1	2
001	60,500	121,000	51.0			235														
004	60,500	121,000	51.0			235														
005	60,500	121,000	51.0			235														

HT# 2650-4-6731 (TA) = <.05  
GRAIN SIZE = 4.5  
HT# 2650-4-6731 (TA) = <.05  
GRAIN SIZE = 4.5  
HT# 2650-4-6731 (TA) = <.05  
GRAIN SIZE = 4.5

LABOR ONLY TO MANUFACTURE FROM CUSTOMER'S MATERIAL  
\*\*\*\*\* MADE IN THE USA \*\*\*\*\*



5/2/05



1-12  
B.A.

NOTARIZED MILL TEST REPORTS AVAILABLE UPON REQUEST.

+W-WATER  
A-AIR  
FC-FURNACE COOL  
O-OIL  
QT-AIR QUENCH  
AND 1250F TEMPER

WE CERTIFY THAT ALL CHEMICAL ANALYSIS, MECHANICAL PROPERTIES, TEST RESULTS AND STATEMENTS OF PERFORMANCE OPERATIONS RECORDED HEREIN, ARE ACCORDING TO THE RECORDS OF MACH INTERNATIONAL. MATERIALS HEREIN ST. ARE IN COMPLIANCE WITH ALL SPECIFICATIONS LISTED ABOVE.

DATE 3/28/05 SIGNATURE *[Signature]*

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 9 - Item: 310

Workorder: 65678/8-0 Sub:218 Op:20

Part: SE120-004 PORT 9 - TUBE, 6.0 OD X 0.188 WALL - SE120-004-17 TUBE, 6.0 OD X 0.188 WALL

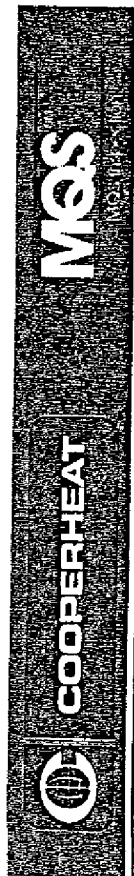
Drawing ID: SE120-004 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*				MFG			VISUAL ACCEPT PER	733-J.ST	712-W.	
(20)		VWI - COMPLETED WELD		AWI			PS-480 WPS 380 PPPL	06-21-05	06-21-05	

A





4959  
10520 Chester Road  
Woodlawn, Ohio 45215

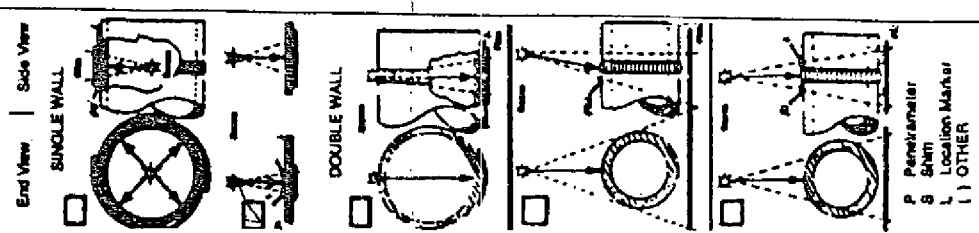


JAMES BORG

CLIENT: Major Tool + Machine  
 RADIOGRAPHER: Robert Weaver / II  
 JOB NO: 13850252-4  
 DATE: 7-24-05  
 ISOTOPE-RAY: IR 92  
 DIA X LENNY: .18" x .094"  
 CURIES/MA: 51.9  
 FOCAL SPOT SIZE: .151"  
 WELD PROCESS: PAW-MAC  
 MATERIAL SPEC: 625 Inconel  
 MATERIAL THICKNESS: .187"  
 PENETRANT: ASTM 1A  
 BRIM: N/A  
 FILM PROCESSING: AUTO  
 FILM TYPE: Kodak T  
 ACCEPTANCE STANDARD: ASME VIII Div. 1 UW-51  
 P.O. NO:  
 FILM TECHNIQUE: Double  
 PB SCREENS: .010"

DESCRIPTION: 65678/8.0/218/30/818  
 SE120-004 part 9

FITTING, SEAM OR FITTING	FILM INTERVAL NUMBER	WELDER IDENTIFICATION	PENETRANT		SLAG	POROSITY	POROSITY WITH TAIL	CRACK	LACK OF PEN	LACK OF FUSION	INTERNAL CONCAVITY	INTERNAL CONVEXITY	TUNGSTEN	MELT-THROUGH	BURN-THROUGH	GRAFFITI	OXIDATION	INTERNAL UNDERCUT	EXTERNAL UNDERCUT	ALIGNED INDICATIONS	WELD CONTOUR	MIS-MATCH	FILM ARTIFACT	VISUAL CONCERNS	FILM DENSITY	SEE REMARKS	ACCEPT	REJECT	
			SIZE	QUALITY LEVEL																									
Seam	0-1	J.S.	1A	1008																									
	1-2																												
	2-3																												



P Penetrant  
 S Grain  
 L Location Marker  
 ( ) OTHER

Robert Weaver 655514/II  
 CooperHeat-MOS Signature  
 James Borg 655506/II

Raymond O. Edwards  
 Customer Representative Signature

7-24-05  
 Date

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 9 - Item: 315

Workorder: 65678/8-0 Sub:221 Op:20

Part: SE120-004 PORT 9 - TUBE, 6.0 OD X 0.188 WALL - SE120-004-17 TUBE, 6.0 OD X 0.188 WALL

Drawing ID: SE120-004 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*				MFG			VISUAL ACCEPT PER	733-J.ST	712-W.	
(20)		VWI - COMPLETED WELD		AWI			PS-480 WPS 380 PPPL	06-21-05	06-21-05	

A

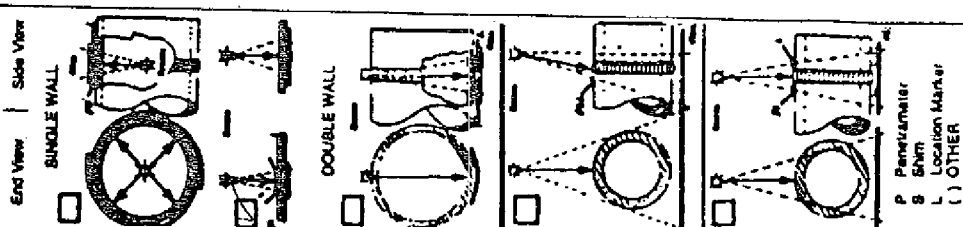


4959  
10520 Chester Road  
Woodlawn, Ohio 45215

JAMES BERG

CLIENT	Major Tool + Machine	RADIOGRAPHER	Robert Weaver	JOB NO	13850252-4	P.O. NO		DATE	7-24-05
WELD PROCESS	IR 92	FOCAL SPOT SIZE	.151"	FILM PROCESSING	AUTO	FILM TYPE	Kodak T	FILM TECHNIQUE	DOUBLE
WELD PROCESS	PAW-MAC	CURIES/MA	57.9	SHIM	N/A	ACCEPTANCE STANDARD		PS SCREENS	.010"
DESCRIPTION	65678/8.0/221/30/8/8 SE 120-004 part 9	MATERIAL THICKNESS	.187"	PENETRATOR	ASTM 1A				
		MATERIAL DIAMETER	6"						
		SFD	15"						
		INTERMETER LEVEL							
		REMARKS							ASME VIII Div. 1 UW-51

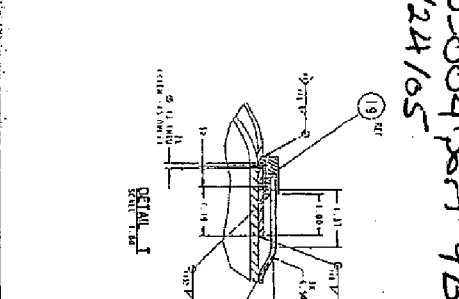
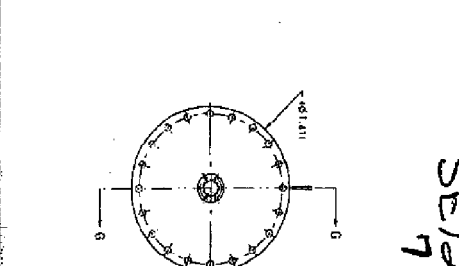
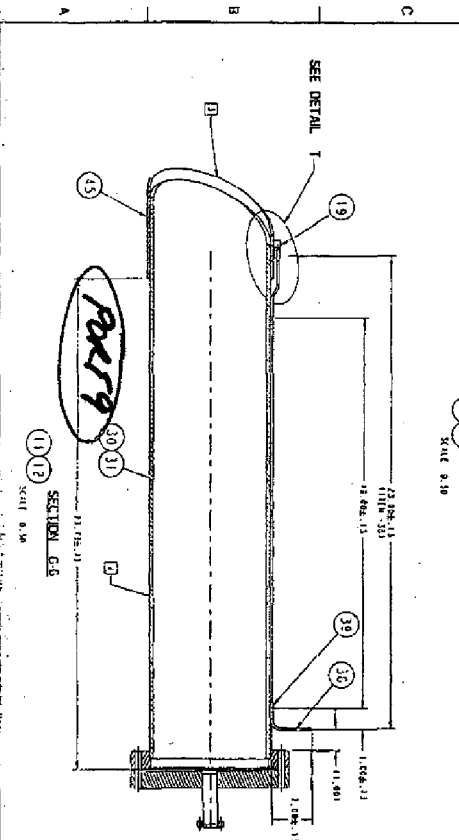
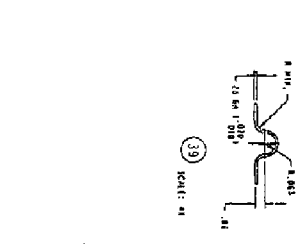
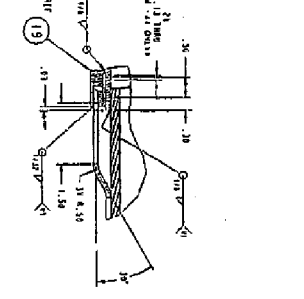
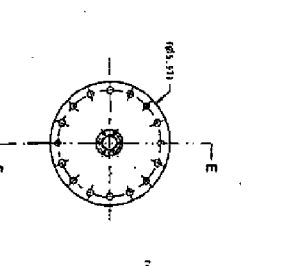
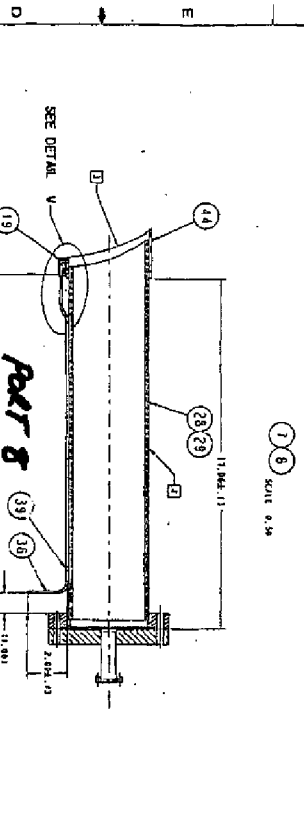
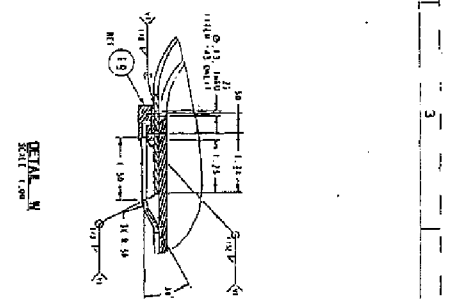
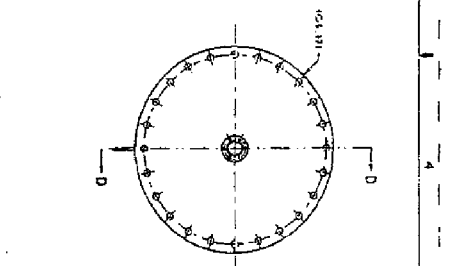
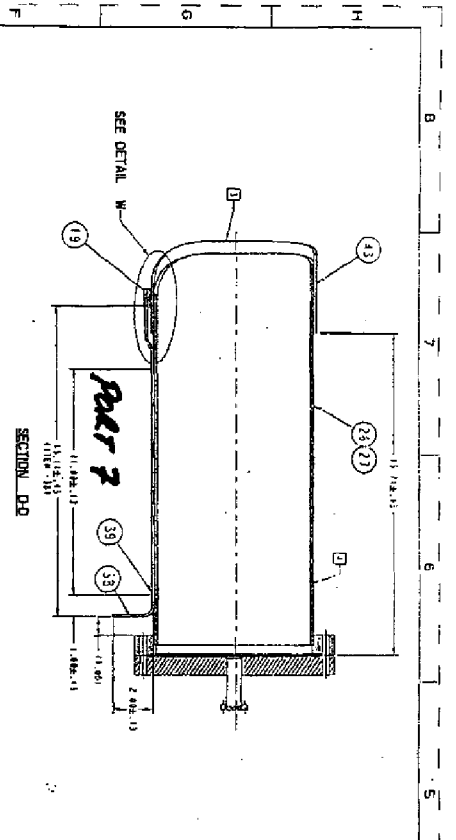
FITTING	SEAM OR FITTING	FILM INTERVAL NUMBER	WELDER IDENTIFICATION	PENETRATOR		SLAG	POROSITY	POROSITY WITH TAIL	CRACK	LACK OF PEN	LACK FUSION	INTERNAL CONVEXITY	INTERNAL CONCAVITY	TUNGSTEN	MELT-THROUGH	BURN-THROUGH	CRATER/FIT	OXIDATION	INTERNAL UNDERCUT	EXTERNAL UNDERCUT	ALIGNED INDICATIONS	WELD CONTOUR	MISMATCH	FILM ARTIFACT	VISUAL CONCERNS	FILM DENSITY	SEE REMARKS	ACCEPT	REJECT	
				SIZE	QUALITY LEVEL																									
Seam	0-1	J.S.	1A	1008																										
	1-2																													
	2-3																													



Robert Weaver 655514/JH  
 Cooperheat-MOS Signature  
 Ch Berg 65506/JH

Raymond D. Edwards  
 Customer Representative Signature

7-24-05  
 Date



USG78/80/221/30/818  
 SE/30-004 Part 9B  
 7/24/05

RELEASED FOR  
 FABRICATION/INSTALLATION  
 PART: DRAWING 5/07 Signal 500

COMPONENT	USG78/80/221/30/818
MATERIAL	VACUUM VESSEL
REV	1
DATE	7/24/05
BY	51720-005

NYM RC'D JUN 24 '04

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 9 - Item: 318

Workorder: 65678/8-0 Sub:221 Op:34

Part: SE120-004 PORT 9 - TUBE, 6.0 OD X 0.188 WALL - SE120-004-17 TUBE, 6.0 OD X 0.188 WALL

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*			MASTER GAGE	QA		J-1270	LESS THAN 1.01	840-G.M			A
(10)		Mag. Perm: 1.02 Mu Max						08-16-05			
*			CALIPER	QA		J-707	.030	840-G.M			A
(20)		ROUNDNESS WITHIN .030"						08-16-05			

Quality Assurance Documentation for Part ID: SE120-004 PORT 9A - Item: 319

Workorder: 65678/8-0 Sub:18 Op:10

**Part: SE120-004 PORT 9A - PORT 9A SUB-ASSEMBLY - PORT 9A SUB-ASSEMBLY**

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		VWI - INTERIOR COVER PASS / FILLET P9AF		MFG		VISUAL	OK	358-D.M	933-D.L		A
(30)				CWI				09-28-05	09-29-05		
*		VWI - EXTERIOR FILLETS P9AF		MFG		VISUAL	OK	358-D.M	933-D.L		A
(40)					CWI				09-28-05	09-29-05	

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT 9B - Item: 321

Workorder: 65678/8-0 Sub:19 Op:10

Part: SE120-004 PORT 9B - PORT 9B SUB-ASSEMBLY - PORT 9B SUB-ASSEMBLY

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		VWI - INTERIOR COVER PASS / FILLET P9BF		MFG		VISUAL	OK	358-D.M	933-D.L		A
(30)				CWI				09-28-05	09-29-05		
*		VWI - EXTERIOR FILLETS P9BF		MFG		VISUAL	OK	358-D.M	933-D.L		A
(40)					CWI				09-28-05	09-29-05	



Quality Assurance Documentation for Part ID: SE120-004 PORT FJS - Item: 323

Workorder: 65678/8-0 Sub:224 Op:10

**Part: SE120-004 PORT FJS - PORT FJS SUB-ASSEMBLY - PORT FJS SUB-ASSEMBLY**

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		VWI - INTERIOR COVER PASS / FILLET PFJF		MFG		VISUAL	OK	197-T.FI	933-D.L		A
(30)				CWI				11-22-05	11-28-05		
*		VWI - EXTERIOR FILLETS PFJF		MFG		VISUAL	OK	197-T.FI	933-D.L		A
(40)					CWI				11-22-05	11-28-05	



4119 FULTON / 77022  
 P.O. BOX 130430  
 HOUSTON, TEXAS 77219-0430  
 (713) 695-6000  
 (713) 696-6725 FAX NUMBER

ORDER DATE 7/21/05 MACH S/O NUMBER 250875  
 \*\*\*\*\*  
 \*\*\* SHIPPING DEPT \*\*\*  
 \*\*\*\*\*

CUSTOMER #: 28800000 SLS PRSN #: 10000  
 SOLD TO: MAJOR TOOL & MACHINE INC. CUSTOMER ORDER NUMBER: P03-03984  
 1458 E. 19TH. STREET DEL ACT: DEL EST: 8/04/05  
 INDIANAPOLIS SHIP VIA: ABF F.O.B.: OUR PLANT  
 IN 46218 FREIGHT BILL NUMBER:  
 BUYER: BOB

SHIP TO: MAJOR TOOL & MACHINE INC.  
 1458 E. 19TH. STREET PREPAID/CHG: PREPAID/ALLOW: COLLECT: X  
 INDIANAPOLIS TERMS: SEE BELOW  
 IN 46218  
 ATTENTION: MILL TEST REPORTS:  
 TAG #: X WITH SHIPMENT  
 TAG #: X WITH INVOICE  
 NOT REQUIRED

ITEM	ORDER	QTY	B/O	SHIP DESCRIPTION	HEAT U/M NUMBER	MACH P.O. #
1	9	9pc. 34"lg		4"OD .250AW PIPE X 34"LG (-0+1/4) FORM & TACK 625 SB443 NO LONG SEAM BEVEL TAG: 3PCS PART# SE120-004 PORT 15 TAG: 3PCS PART# SE120-004 PORT FJE	EA 132793	81404C
					99716	
					99715	
2	6	6pc. 42"lg		4"OD .250AW PIPE X 42"LG (-0 +1/2) FORM & TACK 625 SB443 NO LONG SEAM BEVEL TAG: PART# SE120-004 PORT '17	EA 132793	81404C
					99721	

Rez: 08.17.05 wx



6119 FULTON / 77022  
 P.O. BOX 130630  
 HOUSTON, TEXAS 77219-0630  
 (713) 695-6000  
 (713) 696-6725 FAX NUMBER

ORDER DATE: 7/21/05  
 MACH S/O NUMBER: 250875  
 \*\*\*\*\*  
 \*\*\* SHIPPING DEPT \*\*\*  
 \*\*\*\*\*

CUSTOMER #: 38800000  
 SOLD TO: MAJOR TOOL & MACHINE INC.  
 1458 E. 19TH. STREET

SLEPRN #: 10000  
 CUSTOMER ORDER NUMBER: P05-03984  
 DEL ACT: DEL EST: 9/04/05

INDIANAPOLIS  
 IN 46218  
 BUYER: BOB

SHIP VIA: ABF F.O.B.: OUR PLANT  
 FREIGHT BILL NUMBER:

SHIP TO: MAJOR TOOL & MACHINE INC.  
 1458 E. 19TH. STREET

PREPAID/CHG: PREPAID/ALLOW: COLLECT: X  
 TERMS: SEE BELOW

INDIANAPOLIS  
 IN 46218  
 ATTENTION:  
 TAG #:  
 TAG #:

MILL TEST REPORTS:  
 X WITH SHIPMENT  
 X WITH INVOICE  
 NOT REQUIRED

ITEM	ORDER	QUANTITY	B/D	SHIP DESCRIPTION	U/M	HEAT NUMBER	MACH P.O. #
3	18	18 pcs. 52"lg		4"OD .250AW PIPE X 52"LG (-0,+1/2) FORM & TACK 625 SB443 NO LONG SEAM BEVEL TAG: 1PC PART# SE120-004 PORT 17 5PC PART# SE120-004 PORT 18 4PC PART# SE120-004 PORT 2 5PC PART# SE120-004 PORT 8	EA	132792	81404C
4	1			CONTACT MAJOR TOOL TRANS. DEPT FOR SHIPPING INSTRUCTIONS 317-917-2604. REFERENCE PRIME CONTACT #DE-AC02-76-CH03073	LT		
5	1			BAND PIPE TO WOODEN PALLETS & SHRINK WRAP COMPLETELY	LT		

*9970A see last page for customer/  
 vendor revision.*

*99720  
 99723  
 99724*

*VJW*

*VJW*



6119 FULTON / 77022  
P.O. BOX 130630  
HOUSTON, TEXAS 77219-0630  
(713) 695-6000  
(713) 696-6725 FAX NUMBER

ORDER DATE MACH S/O NUMBER  
7/21/05 250875  
\*\*\*\*\*  
\*\*\* SHIPPING DEPT \*\*\*  
\*\*\*\*\*

CUSTOMER #: 38900000  
SOLD TO: MAJOR TOOL & MACHINE INC.  
1458 E. 19TH. STREET

SLSPRSN #: 10000  
CUSTOMER ORDER NUMBER: POS-03984  
DEL ACT: DEL EST: 8/04/05

INDIANAPOLIS  
IN 46218  
BUYER: BOB

SHIP VIA: ABF F.O.B.: OUR PLANT  
FREIGHT BILL NUMBER:

SHIP TO: MAJOR TOOL & MACHINE INC.  
1458 E. 19TH. STREET

PREPAID/CHG: PREPAID/ALLOW: COLLECT: X  
TERMS: SEE BELOW

INDIANAPOLIS  
IN 46218  
ATTENTION:  
TAG #:  
TAG #:

MILL TEST REPORTS:  
X WITH SHIPMENT  
X WITH INVOICE  
NOT REQUIRED

ITEM	ORDER	QUANTITY	B/O	SHIP DESCRIPTION	HEAT U/M NUMBER	MACH P.O. #
------	-------	----------	-----	------------------	-----------------	-------------

6	1			MTM TO PAY \$31,500.00 PRIOR TO SHIPMENT	LT	
---	---	--	--	--	----	--

RECV. 31,500 8/9/05  
CIC# 60160

FORWARD INVOICE TO  
BOB JOACHIM @  
BJOACHIM@MAJORTOOL.COM)  
BALANCE OF FUNDS DUE  
NET 30 DAYS.

RECEIVED BY

*Paul F. Smith*

DATE

*8-9-05*

DECLARED VALUE IS ----- \$48,400.00



6119 Fulton Street  
P. O. Box 130630  
Houston, Texas 77219  
(713) 695-6000  
(800) 231-6823  
(713) 696-6725 Fax

August 18, 2005

To: Major Tool & Machine

Attn: Dave Wilkinson

Re: **Marking Authorization**  
**Major Tool Po# P05-03984**  
**Mach S/O# 250875**

Dear Dave,

The Quality Control Department at Mach Industrial Group states the following material 4"OD .250AW Pipe x 52"LG Port 17, needs to be marked as follows:

4"OD .250AW Pipe x 52"LG Port 18 HT#132793

Let me know if we can help in any other way.

Sincerely,

A handwritten signature in cursive script that reads "Denise Hernandez".

Denise Hernandez  
Sales Department

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT FJS - Item: 325

Workorder: 65678/8-0 Sub:247 Op:20

Part: SE120-004 PORT FJS - PIPE, 3.5" SCH. 40 - SE120-004-15 PIPE, 3.5" SCH. 40

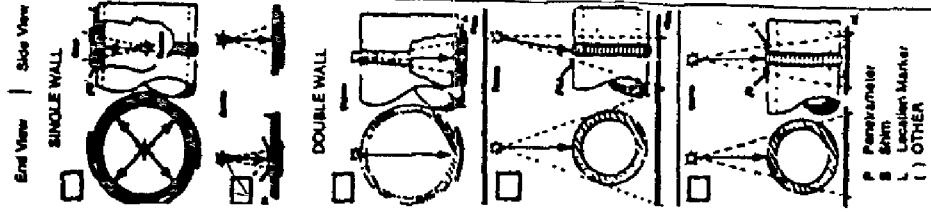
Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*				MFG			ACCEPT	733-J.ST	712-W.	
(20)		VWI - COMPLETED WELD		CWI				08-30-05	08-30-05	A

4959  
10520 Chester Road  
Woodlawn, Ohio 45215



CLIENT	Major Tool Machine	INDUSTRIAL	Robert Weaver II	JOB NO	13850091	P.O. NO	NA	DATE	9/11/05
COOPERHEAT	COOPERHEAT	COOPERHEAT	COOPERHEAT	COOPERHEAT	COOPERHEAT	COOPERHEAT	COOPERHEAT	COOPERHEAT	COOPERHEAT
WELD PROCESS	PAW	WELD PROCESS	PAW	WELD PROCESS	PAW	WELD PROCESS	PAW	WELD PROCESS	PAW
WELD SIZE	1/8" x .074"	WELD SIZE	1/8" x .074"	WELD SIZE	1/8" x .074"	WELD SIZE	1/8" x .074"	WELD SIZE	1/8" x .074"
WELD SPEED	33	WELD SPEED	33	WELD SPEED	33	WELD SPEED	33	WELD SPEED	33
WELD TEMPERATURE	15"	WELD TEMPERATURE	15"	WELD TEMPERATURE	15"	WELD TEMPERATURE	15"	WELD TEMPERATURE	15"
WELD THICKNESS	1.875"	WELD THICKNESS	1.875"	WELD THICKNESS	1.875"	WELD THICKNESS	1.875"	WELD THICKNESS	1.875"
WELD DIAMETER	3.5"	WELD DIAMETER	3.5"	WELD DIAMETER	3.5"	WELD DIAMETER	3.5"	WELD DIAMETER	3.5"
WELD MATERIAL	625 Inconel	WELD MATERIAL	625 Inconel	WELD MATERIAL	625 Inconel	WELD MATERIAL	625 Inconel	WELD MATERIAL	625 Inconel
WELD STANDARD	ASTM A	WELD STANDARD	ASTM A	WELD STANDARD	ASTM A	WELD STANDARD	ASTM A	WELD STANDARD	ASTM A
WELD ACCEPTANCE	ASME VIII, UW-51	WELD ACCEPTANCE	ASME VIII, UW-51	WELD ACCEPTANCE	ASME VIII, UW-51	WELD ACCEPTANCE	ASME VIII, UW-51	WELD ACCEPTANCE	ASME VIII, UW-51

FITTING	SEAM OR FITTING	FILM INTERVAL NUMBER	WELDER IDENTIFICATION	PENETRANT		SLAG	POROSITY	POROSITY WITH TAIL	CRACK	LACK OF PEN	LACK OF FUSION	INTERNAL CAVITY	INTERNAL CONVEXITY	INTERNAL UNDERCUT	EXTERNAL UNDERCUT	MISALIGNMENT	WELD CONTOUR	MISMATCH	FILM ARTIFACT	VISUAL CONCERNS	FILM DENSITY	SEE REMARKS	ACCEPT	REJECT	
				SIZE	QUALITY LEVEL																				
Long	0-1 J.S	1A	.008"																						



*Robert Weaver II*  
Customer Representative Signature

*Robert Weaver II*  
Customer Representative Signature

9/11/05  
Date





**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT FJS - Item: 328

Workorder: 65678/8-0 Sub:247 Op:50

Part: SE120-004 PORT FJS - PIPE, 3.5" SCH. 40 - SE120-004-15 PIPE, 3.5" SCH. 40

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (40)		○ 0.06	HEIGHT GAGE	QA		J-530	.022	131-W.A 10-17-05		

A

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT NB - Item: 331

Workorder: 65678/8-0 Sub:1 Op:30

**Part: SE120-004 PORT NB - NEUTRAL BEAM PORT EXTENSION SUB-ASSY - PORT NB SUB-ASSEMBLY PPPL NCSX VVSA NEUTRAL BEAM PORT EXT**

Drawing ID: SE120-004 Rev: 2		INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*				MFG		VISUAL	OK WELDED	093-M.S	581-D.E	
(10)		VWI ROOT PASS WELD PNB-1		CWI			BY 280	10-21-05	10-21-05	A
*				MFG		VISUAL	GOOD	358-D.M	933-D.L	
(50)		VWI COVER PASS WELD PNB-1		CWI				10-24-05	10-24-05	A
*				MFG		VISUAL	OK WELDED BY	093-M.S	581-D.E	
(60)		VWI ROOT PASS WELD PNB-2		CWI			280	10-21-05	10-21-05	A
*				MFG		VISUAL	GOOD	358-D.M	933-D.L	
(100)		VWI COVER PASS WELD PNB-2		CWI				10-24-05	10-24-05	A

Quality Assurance Documentation for Part ID: SE120-004 PORT NB - Item: 332

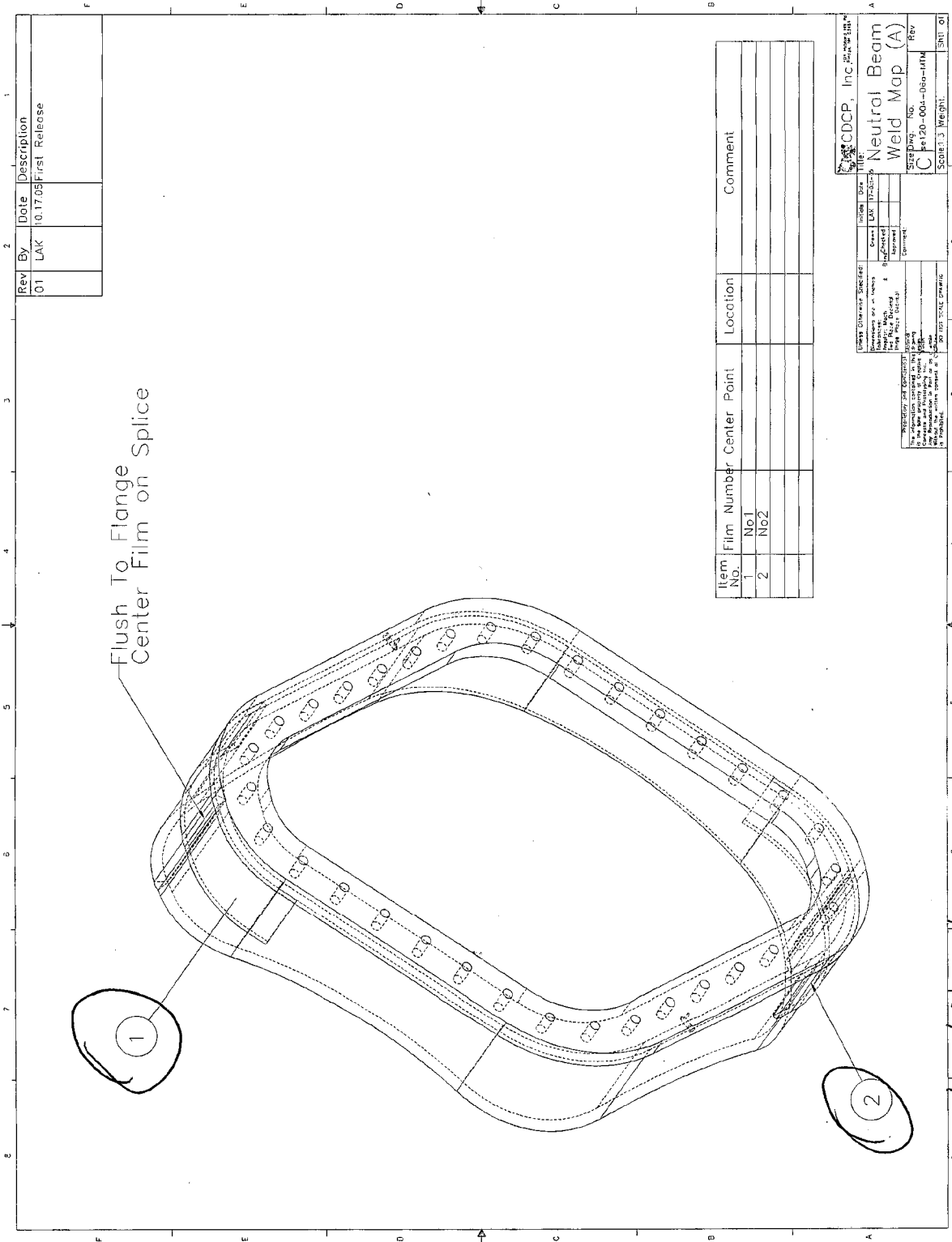
Workorder: 65678/8-0 Sub:1 Op:40

Part: SE120-004 PORT NB - NEUTRAL BEAM PORT EXTENSION SUB-ASSY - PORT NB SUB-ASSEMBLY PPPL NCSX VVSA NEUTRAL BEAM PORT EXT

Drawing ID: SE120-004 Rev: 2		INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY				
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*				MFG		VISUAL	ACCEPT	683-K.M	933-D.L		A
(20)		VWI - ROOT PASS WELD PNBFB		CWI				11-02-05	11-02-05		
*				MFG		VISUAL	ACCEPT	683-K.M	933-D.L		A
(50)		VWI - COVER PASS WELD PNBFB		CWI				11-04-05	11-04-05		



Rev	By	Date	Description
01	LAK	10.17.05	First Release



Flush To Flange  
Center Film on Splice

Item No.	Film Number	Center Point	Location	Comment
1	No 1			
2	No 2			

CDDCP, Inc. 2004  
**Neutral Beam Weld Map (A)**  
 SHEET NO. **C**  
 Rev **1**  
 SCALE: 3/16"=1"

65678/8.0/1170/818  
 SE 120-004 port NB  
 11/21/05  
 Page 2 of 2

Quality Assurance Documentation for Part ID: SE120-004 PORT NB - Item: 335

Workorder: 65678/8-0 Sub:1 Op:75


Part: SE120-004 PORT NB - NEUTRAL BEAM PORT EXTENSION SUB-ASSY - PORT NB SUB-ASSEMBLY PPPL NCSX VVSA NEUTRAL BEAM PORT EXT

Drawing ID: SE122-072 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
1* (10)	G8	$\varnothing .015$ A B C DIA. 0.531 THRU +/- 0.005" (34X)	PIN GAGE	MFG QA		J-669	0.004, .531	212-J.LE 12-29-05	576-J.G 12-23-05	A
1* (20)	D7	0.125 +/- 0.005" Dia. THROUGH TO ADJACENT HOLE (2X)	PIN GAGE	MFG QA		J-667	.124	184-T.HI 12-23-05	212-J.LE 12-29-05	A
1* (30)	G6	$\sphericalangle$ 0.015"	INDICATOR	MFG QA		P-3874	.004	688-S.A 12-23-05	212-J.LE 12-29-05	A
1* (40)	C6	0.750 +/- 0.005" (2X)	CALIPER	MFG QA		P-1237	.755	688-S.A 12-23-05	212-J.LE 12-29-05	A
1* (50)	B6	0.88 +/- 0.01" (2X)	DEPTH MICROMET	MFG QA		P-76	.875	688-S.A 12-23-05	212-J.LE 12-29-05	A
1* (60)	B5	0.625 +/- 0.005" (2X)	CALIPER	MFG QA		P-1237	.625	688-S.A 12-23-05	212-J.LE 12-29-05	A
1* (70)	B5	DIA. 0.250 +/- 0.005" (2X)	PIN GAGE	MFG QA		J-668	.25	688-S.A 12-23-05	212-J.LE 12-29-05	A
1* (80)	B5	1/8" NPT THREAD (2X)	THREAD PLUG GA	MFG QA		A-220	ACC. PER GAGE	688-S.A 12-23-05	212-J.LE 12-29-05	A
1* (90)	F8	26.5 DEG. +/- 0 DEG. 15' (2X)	MACHINE	MFG QA		523	26.5	688-S.A 12-23-05	212-J.LE 12-29-05	A

Quality Assurance Documentation for Part ID: SE120-004 PORT NB - Item: 336

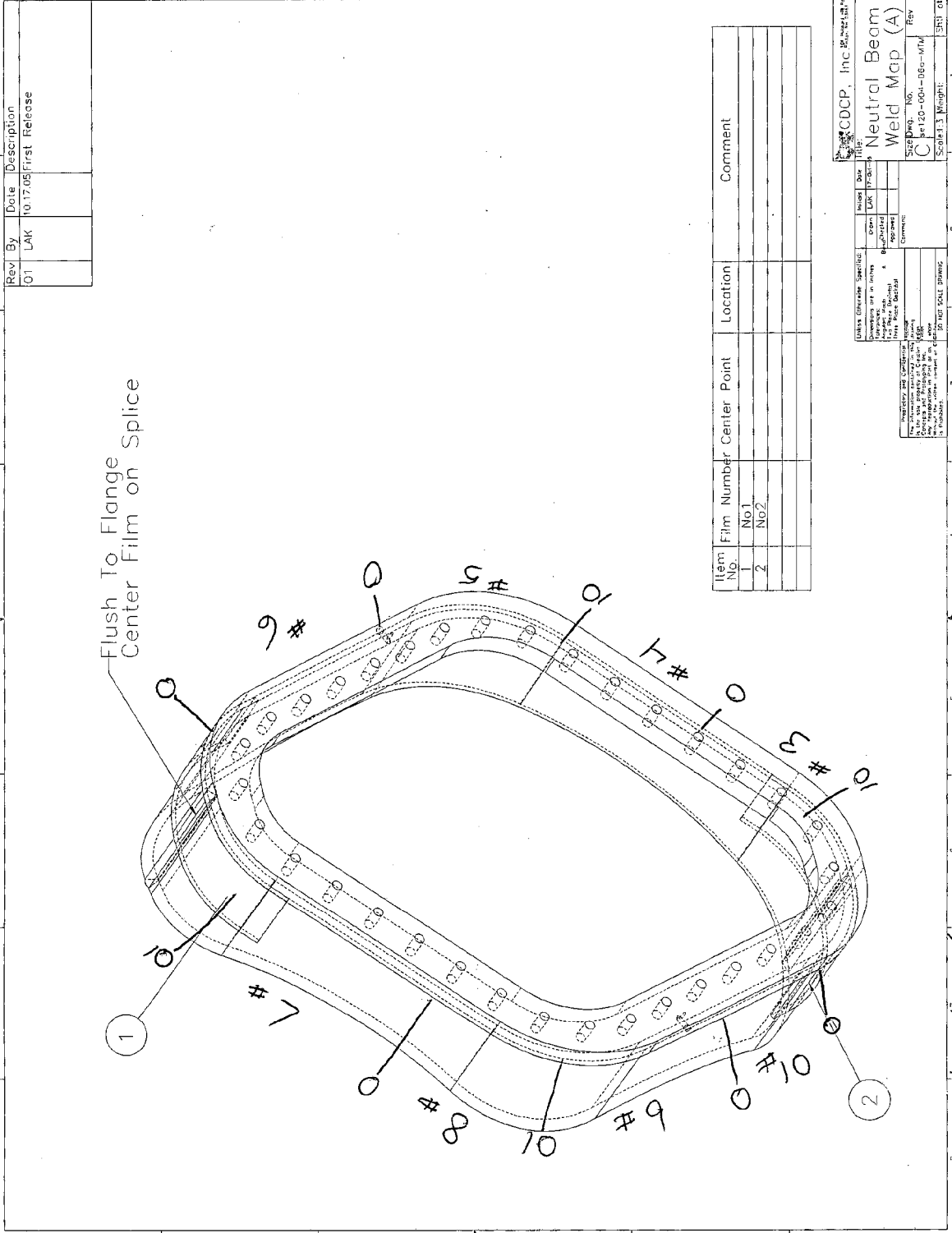
Workorder: 65678/8-0 Sub:1 Op:90

Part: SE120-004 PORT NB - NEUTRAL BEAM PORT EXTENSION SUB-ASSY - PORT NB SUB-ASSEMBLY PPPL NCSX VVSA NEUTRAL BEAM PORT EXT

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		 0.375 PROFILE VERIFICATION	LASER	QA		1444	-0.033 TO 0.116	137-G.F 12-30-05			A
*		Magnetic Permeability 1.02 Max	MASTER GAGE	QA		J-1271	LESS THAN 1.02	137-G.F 12-30-05			A
*		Interior Surface Finish 32 Micro-Inch RA	PROFILOMETER	QA		J-1308	12 - 32	137-G.F 12-30-05			A
*		Material Thickness: .500 +.04 / -.01"		QA		J-770	0.534 TO 0.540	137-G.F 12-30-05			A
*		CLEANLINESS PER PS483		QA		VISUAL	ACCEPT	137-G.F 12-30-05			A
*		Flange face Finish 32 Micro-Inch RA	MASTER GAGE	QA		J-1271	12-30	137-G.F 12-30-05			A







Rev	By	Date	Description
01	LAK	10.17.05	First Release

Item No.	Film Number	Center Point	Location	Comment
1	No1			
2	No2			

CDCCP, Inc. 3000 West 10th St. Suite 100, Anchorage, Alaska 99503

Neutral Beam Weld Misp (A)

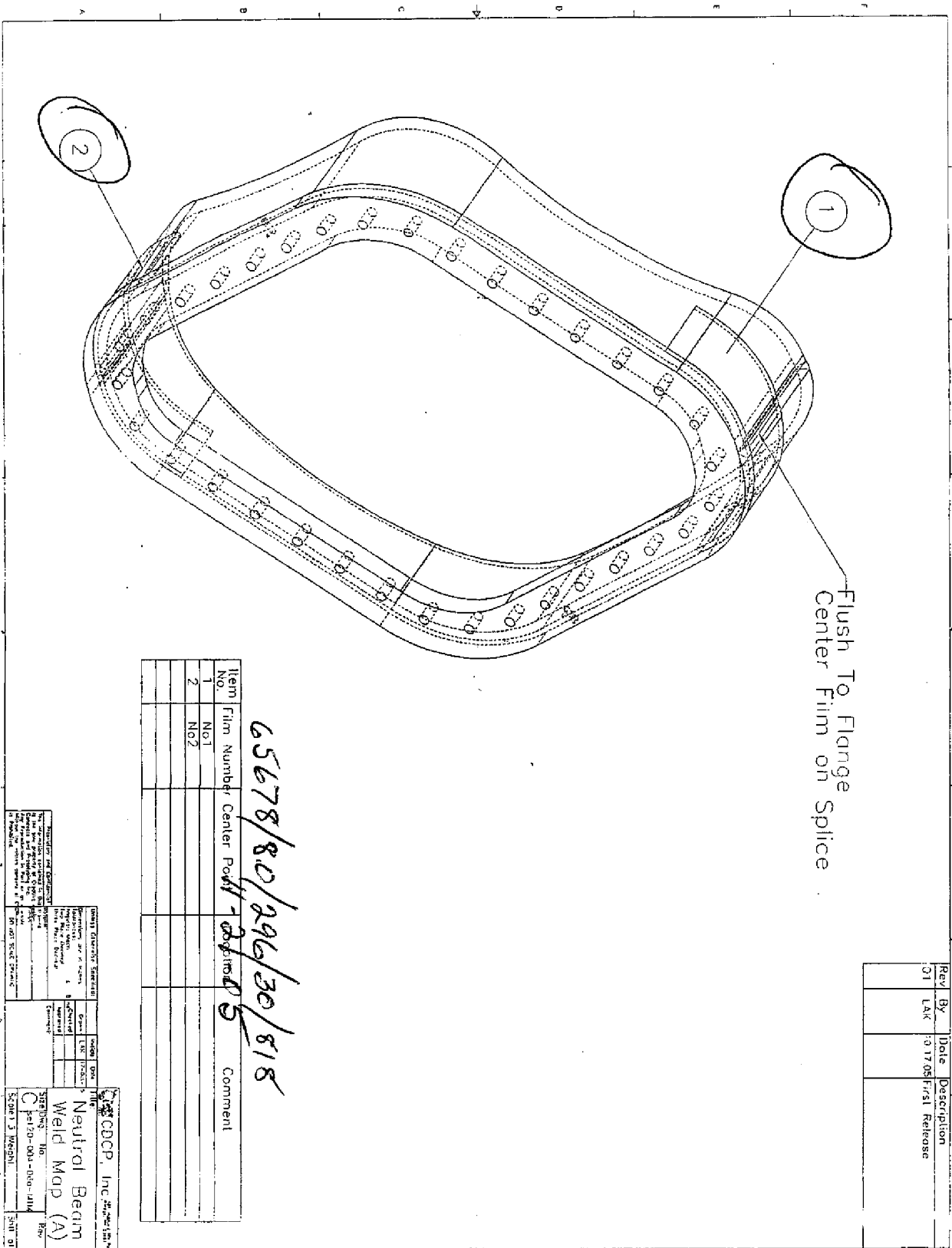
SIZE: 11.0 x 17.0 x 1.0  
 C 10120-004-060-M/M

Scale: 1:3

Sheet 1 of 2

65678/8.0/296/10/818  
 SE/20-004 part NB  
 11/22/05  
 Page 2 of 2





Rev	By	Date	Description
01	LAK	10/17/08	Final Release

Item No.	Film Number	Center Point	Comment
1	NO1		
2	NO2		

65678/80/296/30/818

**CDCCP, Inc.**  
 Neutral Beam  
 Weld Map (A)  
 Scale: 1/2" = 1'-0"

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004-16 - Item: 341

Workorder: 65678/8-0 Sub:235 Op:30

Part: SE120-004-16 - PIPE, 2.5" SCH. 10 - SE120-004-16 PIPE, 2.5" SCH. 10

Drawing ID: SE120-004 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		Interior Surface Finish: 32 Micro-Inch Ra M	PROFILOMETER	QA		J-1152	9/25	503-B.H			A
(10)								09-13-05			
*		Mag. Perm: 1.02 Mu Max	MASTER GAGE	QA		J-1270	LESS THAN 1.02	503-B.H			A
(20)								09-13-05			
*		Mtl. Thk: 0.120 +/- 0.015"	OD MICROMETER	QA		J-722	111/115	503-B.H			A
(30)								09-13-05			

JUL 29 2005 10:12AM

BRIGHTON TRU EDGE 513 771 2404

No.4876 P. 1/3

**BRIGHTON TRU-EDGE HEADS**

DIV OF ENERFAB

11861 MOSTELLER RD \* CINCINNATI OH 45241 \* (513)-771-2300

**MTR COVER LETTER**

MAJOR TOOL AND MACHINE  
1458 E 19TH ST  
INDIANAPOLIS IN 46218

ATTN : DOUG MCCORKLE  
REFERENCE : CUSTOMER P/O P05-01008  
BRIGHTON S/O 256223

TO WHOM IT MAY CONCERN:

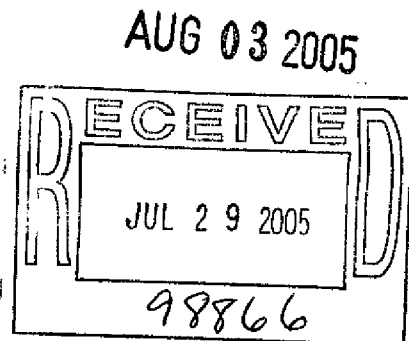
ATTACHED ARE COPIES OF MILL TEST REPORTS FOR THE FOLLOWING MATERIALS PROVIDED ON YOUR REFERENCED PURCHASE ORDER.

FORM ONLY

6-SB443-625 Style:2:1 Ellip Head Diam:18" OD 2:1 Ellip Head Diam:18" OD  
18" OD .3750"-NOM WITH 2" OAH:6.19" SP.

Qty	Heat Number
6	2650-4-6771

CERTIFICATE OF COMPLIANCE



*lines 1-6*

ALL HEADS WERE COLD FORMED AND ARE IN COMPLIANCE WITH REGULATION UG - 81 AND UG - 79 AS STATED IN SECTION VIII DIVISION I OF THE ASME BOILER AND PRESSURE VESSEL CODE. HEADS WERE FORMED WITHOUT COMING IN CONTACT WITH MERCURY OR ANY OF ITS COMPOUNDS.

IF YOU HAVE ANY FURTHER QUESTIONS CONCERNING MILL TEST REPORTS ONLY, PLEASE CONTACT ME IN CINCINNATI, OHIO AT 1-800-543-1644.

VERY TRULY YOURS,

*Rick Seiter*

BRIGHTON TRU-EDGE HEADS  
DIV OF ENERFAB

(4,8796)  
4.8.5488  
6.19-

18-00. Ye-Jual 30 in. in

NO.	CIRCUMFERENCE	O.A.H.	SF THK.	ICR THK.	ICR	SF		TEMP	OUT OF ROUND	LAND	BEVEL	FLANGER STAMP	REMARKS
						TOE	TOTAL						
1		0 8/8					2 1/2			1/16	70°	S	
2	4'8 1/2	6 7/8	9/8	9/8				10	18"00	1/16	30° FN 2X		
3													
4													
5													
6	4'8 1/2	6 1/4	9/8	9/8			2"	12	18"00	1/16	30° IS 2X		
7													
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RELEASED FOR SHIPMENT BY \_\_\_\_\_

DATE \_\_\_\_\_

DATE \_\_\_\_\_

INSPECTED BY \_\_\_\_\_

---

**Customer: PRINCETON PLASMA PHYSICS LAB**

Contact: Frank Malinowski

E-Mail: [fmalinowski@pppl.gov](mailto:fmalinowski@pppl.gov)

Telephone: 609-243-2441

Fax: 609-243-2021

**Part: / SE122-112-3 (CF BLANK FLANGE)**

Drawing ID: SE122-113

Revision: 0

Customer P.O.: S005243-F

Serial No./Qty: N/A

Reported By: DOUG MCCORKLE

E-Mail: [dMcCorkle@MajorTool.com](mailto:dMcCorkle@MajorTool.com)

Telephone: 317-636-6433

Fax: 317-634-9420

Problem: Magnetic Permeability requirement 1.02 Max  
Checks >1.05, but < 1.1

---

**Proposed Disposition:**

CUSTOMER DISPOSITION REQUIRED

---

Number of additional pages: \_\_\_\_\_

---

**Customer Disposition:**     Use As Is     Rework     Repair     Scrap     Replace

**Technical Contact Approval:** \_\_\_\_\_

**Title:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Buyer Approval:** \_\_\_\_\_

**Title:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Major Tool Implemented By:** \_\_\_\_\_

**Title:** \_\_\_\_\_ **Date:** \_\_\_\_\_

EASTWOOD MANUFACTURING  
CERTIFICATION OF COMPLIANCE

CUSTOMER : MAJOR TOOL AND MACHINE  
ORDER # : P05-03373

DATE : 8-11-05  
OUR NUMBER 33676

WE CERTIFY THAT THE MATERIALS SUPPLIED ON YOUR ORDER  
LISTED ABOVE COMPLIES WITH THE REQUIREMENTS OF YOUR ORDER  
AND OF THE SPECIFICATIONS LISTED BELOW

DESCRIPTION :

Lot No.:	Part :		
33676-1	552 PIECES	SE120-004-32	Heat No.: 062313725
		1/2-13 x 3 1/2	1/2" Round forged
		12-point screw	Heat treated per ASTM A453 Gr.660
		ASTM A453	Tensile : WH #05-0809-05
		Grade 660	

08.12.05  
99477 WK



DALE STARK  
EASTWOOD MANUFACTURING



Aug 11 05 04:23p



**ap alloys, inc.**

100 West Street Bridgewater, MA 02324-1095  
 (508) 580-1200 Outside Mass. 1-800-221-0786  
 FAX (508) 588-4726

**CERTIFICATE OF ANALYSIS**

Date JUNE 30, 2005

TO EASTWOOD MANUFACTURING  
 6825 BREEN STREET  
 HOUSTON, TX 77086

SHIPPED TO

Your Order 33541 Our Order 132634

1 BDL. 178# 1/2" DIA. X 12' R/L A-286 LAB NO. 062313725

Chemical Composition (When called for by specification)

AB/ Heat No.	C.	Mn.	P.	S.	SI.	NI.	Cr.	Cu.	Mo.	TI.	CB.
162313725	.036	1.00	.030	.004	.55	26.69	14.11	.25	1.33	1.95	.03
				AL	V	CO	B				
				.10	.11	.08	.005				

Heat No. Yield Strength lbs. per sq. in. Rockwell Tensile Strength lbs. per sq. in. Elong. % in 2" Red. of Area

I certify the above material to conform with A-286

Declared to under oath before me this

\_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_

**ap and alloys, inc.**

By John J. Parviz Jr.

**Tensile Test Report**

Company: Eastwood Mfg. Date: 8/10/2005

Attention: Dale Stark Lab Report #: 05-0809-05

P.O. #: 33676

Material: ASTM A286

Identification: 1/2"x3-1/2"-12-Point

**TENSILE TEST**

Lab ID	Dimensions	Area	Yield Lbs.	Ultimate Load Lbs.	Yield P.S.I.	Tensile P.S.I.
R	.257 round	.0519	5,540	8,620	106,900	166,100

Elongation	Reduction of Area	Fracture	Comments
27.5%	52.6%	Ductile	

Tests performed in accordance with ASTM A370, E8, and WH Laboratories Quality Assurance Manual.  
 0.2% Offset Yield. Testing performed in accordance with ASTM A370.  
 Test specimens retained for one (1) week maximum; unused material is retained for one (1) month.



Approved by: Robert French  
 Robert French

33676

33676

**E Wood Manufacturing**  
825 Breen Rd.  
ston, Texas 77086  
0081 fax (281) 447-0098  
(281)

**INSPECTION DATA CHECK LIST**

FOR  
Major Tool & Machine Inc.

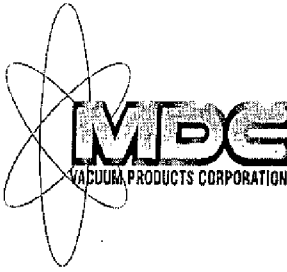
P.O. # Po5-03373

Part Number (Detail / Sub-Assy/ Assy) SE120-004-32	Rev#	Page 1	of 1
Part Name (Detail / Sub-Assy / Assy) 1/2-20 x 3.50 12 point screw		WORK ORDER # 33676	Quantity 552
MATERIAL: 660			

P.O. SHT	DRAWING - SPECIFICATION DESCRIPTION	INSPECTION INSTRUCTIONS			INSPECTION RESULTS			INSPECTED BY		
		GAGE/EQUIP.	BY	SAMPLE	DATA, CAR NO., REMARKS	MFG	QA	DATE		
	CHARACTERISTIC Length 3.50 <sup>-.06</sup> <sub>+ .00</sub>	Caliper #200	ns	50	3.48 - 3.46		NS	8-8-05		
	Flat .502-.493	Caliper#200	ns	50	.499 - .498		NS	8-8-05		
	Height .500 max.	Caliper#200	ns	50	.490 - .484		NS	8-8-05		
	Flange Dia. <sup>.750</sup> <sub>.735</sub>	Caliper#200	ns	50	.740 - .738		NS	8-8-05		
	Pitch Dia. <sup>.4662</sup> <sub>.4619</sub>	#205 Mic. 0-1	ns	50	.465 - .463		NS	8-8-05		
	Major Dia. .4987- .4906	Caliper#200	ns	50	.495 - .496		NS	8-8-05		
	Thread GO - NOGO	Gage #37	ns	50	ok		NS	8-8-05		
	Thread Length 1.50 MIN.	Caliper#200	ns	50	ok		NS	8-8-05		
	Marking				EM 660		ns	8-8-05		
					AUG 16 2005					
					8-12-05					
					99477					
					LINES 1,2,3					



COMMENT: RECORD ALL DIMENSIONS THAT CARRIES A TOLERANCE OF (+) .25mm OR LESS



**MDC VACUUM PRODUCTS CORP**

23842 Cabot Blvd., Hayward CA 94545-1651

Phone: 510.265.3500 - Fax: 510.887.0626 - Toll Free: 800.443.8817

E-Mail: [sales@mdcvacuum.com](mailto:sales@mdcvacuum.com) - Web: <http://www.mdcvacuum.com>

*HIGH VACUUM COMPONENTS from one source...*

# ***Certification of Conformance Catalog Products***

**COMPANY: MAJOR TOOL & MACHINE**

**ATTENTION: KATY DEBERNARDI**

**DATE: April 4, 2005**

**SUBJECT: CERTIFICATION OF PO# P05-00919**

This is to certify that the items shipped on the above referenced purchase order number comply with all standards in our MDC catalog.

***MIKE SCHULTZ***

Shipping/Receiving Supervisor

MDC Vacuum Product Corporation

e-mail: [tcasaray@mdcvacuum.com](mailto:tcasaray@mdcvacuum.com)

Phone: (510) 265-3500 x 3522

4/6/05  
95029  
94,95  
B.A.



4/6/05

*Dedicated to Quality and Service*



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Phone: 510.265.3500 - Fax: 510.887.0626 – Toll Free: 800.443.8817

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Phone: (510) 265-3500 x 3522

MTM 09 4/6/05

4/6/05  
95026  
88-90  
B.A.

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Phone: 510.265.3500 - Fax: 510.887.0626 – Toll Free: 800.443.8817  
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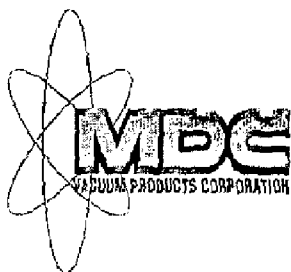
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**MIKE SCHULTZ**  
Shipping/Receiving Supervisor  
MDC Vacuum Product Corporation  
e-mail: [icasaray@mdcvacuum.com](mailto:icasaray@mdcvacuum.com)  
Phone: (510) 265-3500 x 3522

4/6/05 4/6/05  
95027  
91-93  
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e-mail: [fcasaray@mdcvacuum.com](mailto:fcasaray@mdcvacuum.com)

Phone: (510) 265-3500 x 3522

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B-A

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MDC Vacuum Product Corporation

e-mail: [tcasaray@mdcvacuum.com](mailto:tcasaray@mdcvacuum.com)

Phone: (510) 265-3500 x 3522

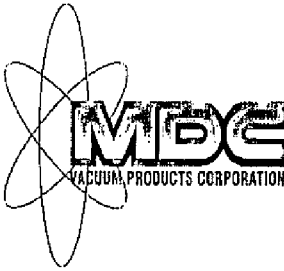
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95035  
100-102  
B.7



4/6/05

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Phone: 510.265.3500 - Fax: 510.887.0626 – Toll Free: 800.443.8817  
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**SUBJECT: CERTIFICATION OF PO# P05-00919**

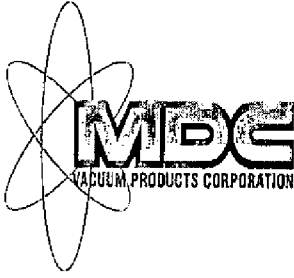
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Shipping/Receiving Supervisor  
MDC Vacuum Product Corporation  
e-mail: [icasaray@mdcvacuum.com](mailto:icasaray@mdcvacuum.com)  
Phone: (510) 265-3500 x 3522

4/6/05  
95036  
103-105  
B.J.

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Phone: 510.265.3500 - Fax: 510.887.0626 - Toll Free: 800.443.8817

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e-mail: [tcasaray@mdcvacuum.com](mailto:tcasaray@mdcvacuum.com)

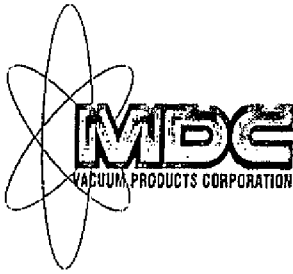
Phone: (510) 265-3500 x 3522



4/6/05

4/6/05  
95039  
106-108  
B.A.

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Shipping/Receiving Supervisor

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e-mail: [tcasaray@mdcvacuum.com](mailto:tcasaray@mdcvacuum.com)

Phone: (510) 265-3500 x 3522

4/6/05 4/6/05  
95043  
109-111  
B.J.



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**Hanna Rubber Company**  
 1511 Baltimore Avenue  
 Kansas City, MO 64108-1301  
 (816) 221-9600  
 (816) 421-0583 Fax  
 (800) 591-3035  
 www.hanna-kc.com

**Certification of Conformance**

MAJOR TOOL & MACHINE, INC.  
 1458 EAST 19TH STREET  
 INDIANAPOLIS, INDIANA 46218

Phone Number	317-636-6433
Fax Number	317-634-9420

Sales Order	231887
Purchase Order	P05-00998
Date	3/21/2005

Cure Date	4Q04
Shelf Life	4Q14
Batch Number	186407
Cage Code	99739

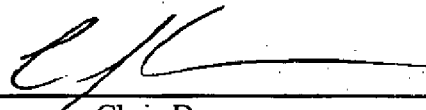
To Whom it May Concern:

This letter serves as certification that the materials in the parts stated below are in compliance with applicable specification requirements

Part Number	Quantity	Description
12Z-19.88X.210V	9 EA	VITON O-RING

Thank you,  
 Hanna Rubber Company

MAR 22 2005

  
 Chris Donovan  
 Government Contract Administrator

94447 12Z  
 Lines 1-6



3/30/05



**Hanna Rubber Company**  
 1511 Baltimore Avenue  
 Kansas City, MO 64108-1301  
 (816) 221-9600  
 (816) 421-0583 Fax  
 (800) 591-3035  
 www.hanna-ke.com

**Certification of Conformance**

MAJOR TOOL & MACHINE, INC.  
 1458 EAST 19TH STREET  
 INDIANAPOLIS, INDIANA 46218

Phone Number	317-636-6433
Fax Number	317-634-9420

Sales Order	231887
Purchase Order	P05-00998
Date	3/21/2005

Cure Date	4Q04
Shelf Life	4Q14
Batch Number	186407
Cage Code	99739

To Whom it May Concern:

This letter serves as certification that the materials in the parts stated below are in compliance with applicable specification requirements

Part Number	Quantity	Description
12Z-37.29X.210V	12 EA	VITON O-RING

Thank you,  
 Hanna Rubber Company

MAR 22 2005

Chris Donovan  
 Government Contract Administrator

94451 201

Series 7.12

MTM 09  
 3/30/05

MAJOR TOOL & MACHINE INC  
1458 E 19TH ST  
INDIANAPOLIS IN 46218

**YOUR PURCHASE ORDER NUMBER**  
P05-00869

MCMASTER-CARR  
600 COUNTY LINE ROAD  
ELMHURST IL 60126-2081  
IF THERE ARE ANY QUESTIONS ABOUT THIS SHIPMENT CONTACT OUR SALES DEPARTMENT  
(630)833-0300

**PAGE 1 (MORE)**  
**MCM NUMBER 5473894-01**

Today's Date:

Warehouse Location	McMaster Carr Part Number	Fill Quantity	Item Description	Your Line	Your Order	This Shipment
<b>PACKING LIST EXTRA</b>	91259 A141	4 EA	ALLOY STEEL STANDARD SHOULDER SCREW 1" SHOULDER DIA, 4" SHOULDER LENGTH, 3/4"-10 THRD 65737-67/1	1	4 EA	4
	98164 A133	1 PK	TYPE 316 SS BUTTON HEAD SOCKET CAP SCREW 8-32 THREAD, 1/4" LENGTH PKG = 100 EA/PK 65678-101/7	2	1 PK	1
	98164 A133	1 PK	TYPE 316 SS BUTTON HEAD SOCKET CAP SCREW 8-32 THREAD, 1/4" LENGTH PKG = 100 EA/PK 65678-112/7	3	1 PK	1
	98164 A133	1 PK	TYPE 316 SS BUTTON HEAD SOCKET CAP SCREW 8-32 THREAD, 1/4" LENGTH PKG = 100 EA/PK 65678-123/7	4	1 PK	1
	98164 A133	1 PK	TYPE 316 SS BUTTON HEAD SOCKET CAP SCREW 8-32 THREAD, 1/4" LENGTH PKG = 100 EA/PK 65678-134/7	5	1 PK	1
	98164 A133	1 PK	TYPE 316 SS BUTTON HEAD SOCKET CAP SCREW 8-32 THREAD, 1/4" LENGTH PKG = 100 EA/PK 65678-135/7	6	1 PK	1
	98164 A133	1 PK	TYPE 316 SS BUTTON HEAD SOCKET CAP SCREW 8-32 THREAD, 1/4" LENGTH PKG = 100 EA/PK 65678-101/8	7	1 PK	1

REFER TO: 5473894-01  
MAJOR TOOL & MACHINE INC

**TAG CCP**

2/14/05  
93238  
1-18  
B.J



PACKER	Number of CARTONS	FILLER

LNS 7

CYCLE

**CERTIFICATION OF COMPLIANCE**

This is to certify that, according to our records, the above item(s) furnished on your purchase order was supplied in accordance with the description and as illustrated in our catalog.

Sincerely,

*Brian Hedstrom*  
Brian Hedstrom  
Quality Manager

MCM NO. 5473894-01 04

**PURCHASE ORDER**  
P05-00869

FROM:  
MCMASTER-CARR  
600 COUNTY LINE ROAD  
ELMHURST IL 60126-2081 USA

SHIP TO:

MAJOR TOOL & MACHINE INC  
1458 E 19TH ST  
INDIANAPOLIS IN

46218

CCP

MAJOR TOOL & MACHINE INC  
1458 E 19TH ST  
INDIANAPOLIS IN 46218

**YOUR PURCHASE  
ORDER NUMBER**  
P05-00869

MCMASTER CARR  
600 COUNTY LINE ROAD  
ELMHURST IL 60126-2081

IF THERE ARE ANY QUESTIONS ABOUT THIS  
SHIPMENT CONTACT OUR SALES DEPARTMENT  
(630)833-0300

**2**  
**MCM NUMBER**  
5473894-01

Today's Date:

**EXTRA  
PACKING  
LIST**

Warehouse Location	McMaster Carr Part Number	Fill Quantity	Item Description	Your Line	Your Order	This Shipment
	98164 A133	1 PK	TYPE 316 SS BUTTON HEAD SOCKET CAP SCREW 8-32 THREAD, 1/4" LENGTH PKG = 100 EA/PK 65678-112/8	8	1 PK	1
	98164 A133	1 PK	TYPE 316 SS BUTTON HEAD SOCKET CAP SCREW 8-32 THREAD, 1/4" LENGTH PKG = 100 EA/PK 65678-123/8	9	1 PK	1
	98164 A133	1 PK	TYPE 316 SS BUTTON HEAD SOCKET CAP SCREW 8-32 THREAD, 1/4" LENGTH PKG = 100 EA/PK 65678-134/8	10	1 PK	1
	98164 A133	1 PK	TYPE 316 SS BUTTON HEAD SOCKET CAP SCREW 8-32 THREAD, 1/4" LENGTH PKG = 100 EA/PK 65678-153/8	11	1 PK	1
	98164 A133	1 PK	TYPE 316 SS BUTTON HEAD SOCKET CAP SCREW 8-32 THREAD, 1/4" LENGTH PKG = 100 EA/PK 65678-101/9	12	1 PK	1
	98164 A133	1 PK	TYPE 316 SS BUTTON HEAD SOCKET CAP SCREW 8-32 THREAD, 1/4" LENGTH PKG = 100 EA/PK 65678-112/9	13	1 PK	1
	98164 A133	1 PK	TYPE 316 SS BUTTON HEAD SOCKET CAP SCREW 8-32 THREAD, 1/4" LENGTH PKG = 100 EA/PK 65678-123/9	14	1 PK	1
	98164 A133	1 PK	TYPE 316 SS BUTTON HEAD SOCKET CAP SCREW 8-32 THREAD, 1/4" LENGTH PKG = 100 EA/PK 65678-134/9	15	1 PK	1
	98164 A133	1 PK	TYPE 316 SS BUTTON HEAD SOCKET CAP SCREW 8-32 THREAD, 1/4" LENGTH PKG = 100 EA/PK 65678-153/9	16	1 PK	1



2/14/05

WEIGHT  
5

16 5473894-01  
MAJOR TOOL & MACHINE INC

MCMASTER-CARR  
WAREHOUSE INSTRUCTIONS

**PURCHASE ORDER**  
P05-00869

CYCLE

T

CCP



Where Quality Isn't Expensive.....It's Priceless!

# DIVERSIFIED METALS

INCORPORATED

**TOLL FREE: 800-628-3035**  
**EMAIL: SALES@DIVERSIFIEDMETALS.COM**  
**WEBSITE: WWW.DIVERSIFIEDMETALS.NET**  
**49 MAIN STREET MONSON, MA 01057-0065**

**FAX: 413-267-3151**  
**PHONE: 413-267-5101**  
**CAGE CODE: 57067**  
**PO BOX 65**

## TEST CERTIFICATE

<b>Customer:</b> Major Tool & Machine 1458 East 19 <sup>th</sup> St Indianapolis, IN 46218  <b>Ship To Address:</b> Same	<b>Customer Order:</b> P05-05133  <b>Item No.:</b> 1  <b>PIN:</b> N/A  <b>Dimensions:</b> 2.000" DIA X 148.250" LONG  <b>Alloy/Grade:</b> NICKEL 625
--	--

**Specification/Grade:** ASTM-B-446

No. Of Cradles	No of Pieces	Length	Weight	Packing Slip No.	Heat No.	Lot No
1	1	148.250 INCHES	144.0 LBS	48278	900257	NONE

MILL TEST REPORT ATTACHED

MATERIAL HAS NOT BEEN EXPOSED TO MERCURY WHILE IN DIVERSIFIED METALS INC. FACILITY.

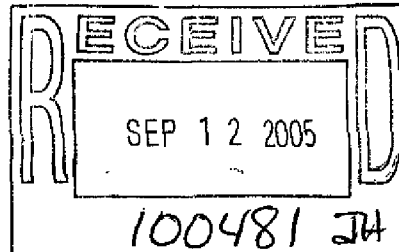
This is to certify that the material covered by this report and shipped on the above order has been inspected in accordance with, and has been found to meet the applicable requirements described herewith, involving any specifications forming a part of this description.

We certify that the Chemical Analysis and Physical Test Results applying on the above order number are correct and true.

QUALITY APPROVAL:

LeeAnn Goyette  
 Quality Control Administrator  
 Date: September 8, 2005

SEP 13 2005





Scanned

Zeugnis-Nr. 200001  
Certificate no.  
No. certificat

Bescheinigung über Werkstoffprüfung nach EN 10204. 3.1  
Certificate of material tests according to EN 10204  
Certificat des essais des matériaux selon EN 10204

Die Lieferung entspricht den vereinbarten Lieferbedingungen.  
The above mentioned material have been delivered in accordance with the terms of the order.  
La livraison correspond aux conditions de livraison convenues.

BGH Edelmetall Freital GmbH, Postfach 10 15 66, D-01691 Freital

BGH Speciality Steel Inc.

5430 Brystone Drive  
77041 Houston, Tx  
USA



EDELSTAHL FREITAL

Kunden-Bestell-Nr. 39127 Div. Metals  
Customer order no. BGH SO 1924  
Cde. no. du client

BGH Auftrags-Nr. 58459301/61492  
BGH works no.  
BGH reference:

Zeichen des Lieferwerkes Stempel des Werkstoffverständigen  
Trade mark Inspector's stamp  
Signé du fournisseur Poinçon de l'inspecteur



APPROVED BY CTR  
DATE 5/10/05  
CAROL RALPH  
Q.C. MANAGER

Eingangsform Produkt		Stab, rund, geschält Round bars, peeled		DIVERSIFIED METALS, INC. 49 MAIN STREET, MONSON, MA 01057 PH 413-267-5101/FAX 413-267-3151								
Werkstoffqualität Requirements		UNS N06625 ASTM B 446 2000 / ASTM B 446 2003 SAE AMS 5666 E-03/00 Nickel 625 - UNS N06625 HOT FINISHED AND ANNEALED DMI ordering data UNS N06625, Rev. 8/11/98 ASTM B446 / ASME SB446, SAE AMS 5666 E-03/00 Level 1 / subsafe		SOLD TO: CUSTOMER: <i>MADOL TOOL &amp; MACHINE</i> P.O.# <i>POS-05733</i> ITEM# <i>1</i>								
Besichtigung und Maßnachprüfung Inspection and dimensional control Inspection et contrôle de dimension ohne Beanstandung without objection		Erschmelzung/Nachbearbeitung Melting process/secondary refining Mode de fabrication/traitement ultérieur VIM		Verwechslungsprüfung (spektralanalytisch) Identification test (spectral analysis) examination d'identification (analyse spectrale) ohne Beanstandung without objection								
Pos. Item	Anzahl Quantity	Abmessung Dimension	Gewicht kg Weight kg	Schmelz-Nr. Heat No.								
1	10	2.00" dia	666 1468 lb	900257								
Schmelz-Heat %	C ✓	Si ✓	Mn ✓	P ✓	S ✓	Cr ✓	Mo ✓	Ni ✓	Nb X	Ti ✓	Al ✓	Co ✓
900257	0,028	0,19	0,21	0,004	0,003	21,30	8,38	64,80	3,390	0,060	0,130	0,010
	Ta	Fe ✓	Nb+Ta ✓									
	0,006	1,33	3,396									
Condition of heat treat Traitement thermique		hot finished, annealed annealed at 1616°F followed by water quenching										
Probe-Nr. Test-No. Soll/Req.	Lage L	Temp. °C RT	Rp0,2 ksi >=60	Rm ksi >=120	A4 %>=30	Kerbschlagarbeit Impact value	Probenform Shape of test piece	Härte HB Hardness				
04\$BML	L	RT	89	139	44			< 287		245		
us test : no objection crack test (Citrögraph): no objection.												
Sampling for tests was done in accordance with DMI ordering data latest revision Country of origin: GERMANY Rm ksi... Ultimate Tensile Strength      Rp0,2 ksi... Offset Yield Strength A4% ... Elongation on 4D												
Material no weld repair. Material free from Mercury or radium contamination. Each lot is sampled, tested and inspected in accordance with the specification and meets all specification requirements.												
grain size ASTM E 112: 5-6												
Abgaben Certificate of approval Encl. Annexe				Freilassen Place and date Libre et date 27.04.2005				modif. certificate			Abnahmebeauftragter Third Party Inspector Inspecteur de réception MUELLER <i>Mueller</i>	



SEP 13 2005

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004-48 - Item: 397

Workorder: 65678/8-0 Sub:284 Op:30

**Part: SE120-004-48 - VVSA CLEVIS BOSS "A" - CLEVIS BOSS "A" INTERFACING STRUCTURAL BOSS**

Drawing ID: SE124-047 Rev: 0A			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
1* (10)		1.02 Mu MAX	MASTER GAGE	QA		J-1270	LESS THAN 1.02	503-B.H 09-30-05		

A



Where Quality Isn't Expensive.....It's Priceless!

# DIVERSIFIED METALS

INCORPORATED

**TOLL FREE: 800-628-3035**  
**EMAIL: SALES@DIVERSIFIEDMETALS.COM**  
**WEBSITE: WWW.DIVERSIFIEDMETALS.NET**  
**49 MAIN STREET MONSON, MA 01057-0065**

**FAX: 413-267-3151**  
**PHONE: 413-267-5101**  
**CAGE CODE: 57067**  
**PO BOX 65**

## TEST CERTIFICATE

<b>Customer:</b> Major Tool & Machine 1458 East 19 <sup>th</sup> St Indianapolis, IN 46218  <b>Ship To Address:</b> Same	<b>Customer Order:</b> P05-05133  <b>Item No.:</b> 1  <b>PIN:</b> N/A  <b>Dimensions:</b> 2.000" DIA X 148.250" LONG  <b>Alloy/Grade:</b> NICKEL 625
--	--

**Specification/Grade:** ASTM-B-446

No. Of Cradles	No of Pieces	Length	Weight	Packing Slip No.	Heat No.	Lot No
1	1	148.250 INCHES	144.0 LBS	48278	900257	NONE

MILL TEST REPORT ATTACHED

MATERIAL HAS NOT BEEN EXPOSED TO MERCURY WHILE IN DIVERSIFIED METALS INC. FACILITY.

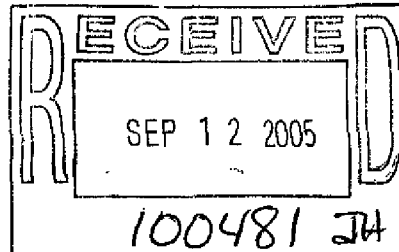
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We certify that the Chemical Analysis and Physical Test Results applying on the above order number are correct and true.

QUALITY APPROVAL:

LeeAnn Goyette  
 Quality Control Administrator  
 Date: September 8, 2005

SEP 13 2005



Scanned

Zeugnis-Nr. 200001  
Certificate no.  
No. certificat

Bescheinigung über Werkstoffprüfung nach EN 10204. 3.1  
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La livraison correspond aux conditions de livraison convenues.

BGH Edelmetall Freital GmbH, Postfach 10 15 66, D-01691 Freital

BGH Speciality Steel Inc.

5430 Brystone Drive  
77041 Houston, Tx  
USA



EDELSTAHL FREITAL

Kunden-Bestell-Nr. 39127 Div. Metals  
Customer order no.  
Cde. no. du client  
BGH SO 1924

BGH Auftrags-Nr. 58459301/61492  
BGH works no.  
BGH reference:

Zeichen des Lieferwerkes Stempel des Werkstoffverständigen  
Trade mark Inspector's stamp  
Signé du fournisseur Poinçon de l'inspecteur



APPROVED BY CTR  
DATE 5/10/05  
CAROL RALPH  
Q.C. MANAGER

Erzeugnisform Product		Stab, rund, geschält Round bars, peeled		DIVERSIFIED METALS, INC. 49 MAIN STREET, MONSON, MA 01057 PH 413-267-5101/FAX 413-267-3151								
Werkstoffqualität Material quality		UNS N06625		SOLD TO: CUSTOMER: <i>MADOL TOOL &amp; MACHINE</i> P.O.# <i>POS-05733</i> ITEM# <i>1</i>								
Anforderungen Requirements		ASTM B 446 2000 / ASTM B 446 2003 SAE AMS 5666 E-03/00 Nickel 625 - UNS N06625 HOT FINISHED AND ANNEALED DMI ordering data UNS N06625, Rev. 8/11/98 ASTM B446 / ASME SB446, SAE AMS 5666 E-03/00 Level 1 / subsafe										
Besichtigung und Maßnachprüfung Inspection and dimensional control Inspection et contrôle des dimensions ohne Beanstandung without objection		Erschmelzung/Nachbearbeitung Melting process/secondary refining Mode de fabrication/traitement ultérieur VIM		Verwechslungsprüfung (spektralanalytisch) Identification test (spectral analysis) examination d'identification (analyse spectrale) ohne Beanstandung without objection								
Pos. Item	Anzahl Quantity	Abmessung Dimension		Gewicht kg Weight kg	Schmelz-Nr. Heat No.							
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	Ta	Fe ✓	Nb+Ta ✓									
	0,006	1,33	3,396									
Condition of heat treat Traitement thermique		hot finished, annealed annealed at 1616°F followed by water quenching										
Probe-Nr. Test-No.	Lage Sol1/Req.	Temp. °C RT	Rp0,2 ksi >=60	Rm ksi >=120	A4 %>=30	Kerbschlagarbeit Impact value	Probenform Shape of test piece	Härte HB Hardness				
04\$BML	L	RT	89	139	44			< 287 245				
us test : no objection crack test (Citrögraph): no objection.												
Sampling for tests was done in accordance with DMI ordering data latest revision Country of origin: GERMANY Rm ksi... Ultimate Tensile Strength      Rp0,2% ksi... Offset Yield Strength A4% ... Elongation on 4D												
Material no weld repair. Material free from Mercury or radium contamination. Each lot is sampled, tested and inspected in accordance with the specification and meets all specification requirements.												
grain size ASTM E 112: 5-6												
Abgaben Certificate of approval Encl. Annexe			Freilagerden Place and date Libre et date 27.04.2005		modif. certificate	Abnahmebeauftragter Third Party Inspector Inspecteur de réception MUELLER <i>Mueller</i>						



SEP 13 2005

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004-48 - Item: 399

Workorder: 65678/8-0 Sub:290 Op:30

**Part: SE120-004-48 - VVSA CLEVIS BOSS "A" - CLEVIS BOSS "A" INTERFACING STRUCTURAL BOSS**

Drawing ID: SE124-047 Rev: 0A			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
1* (10)		1.02 Mu MAX	MASTER GAGE	QA		J-1270	LESS THAN 1.02	503-B.H 09-30-05		

A

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004-49 - Item: 401

Workorder: 65678/8-0 Sub:285 Op:30

Part: SE120-004-49 - VVSA CLEVIS BOSS "B" - CLEVIS BOSS "B" INTERFACING STRUCTURAL BOSS

Drawing ID: SE124-047 Rev: 0A			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
1* (10)		1.02 Mu MAX	MASTER GAGE	QA		J-1270	LESS THAN 1.02	503-B.H 09-30-05		

A

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004-50 - Item: 403

Workorder: 65678/8-0 Sub:286 Op:30

**Part: SE120-004-50 - VVSA CLEVIS BOSS "C" - CLEVIS BOSS "C" INTERFACING STRUCTURAL BOSS**

Drawing ID: SE124-047 Rev: 0A			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
1* (10)		1.02 Mu MAX	MASTER GAGE	QA		J-1270	LESS THAN 1.02	503-B.H 09-30-05		

A

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004-51 - Item: 405

Workorder: 65678/8-0 Sub:287 Op:30

Part: SE120-004-51 - VVSA CLEVIS BOSS "D" - CLEVIS BOSS "D" INTERFACING STRUCTURAL BOSS

Drawing ID: SE124-047 Rev: 0A			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
1* (10)		1.02 Mu MAX	MASTER GAGE	QA		J-1270	LESS THAN 1.02	503-B.H 09-30-05		

A



EASTWOOD MANUFACTURING  
CERTIFICATION OF COMPLIANCE

CUSTOMER : MAJOR TOOL AND MACHINE  
ORDER # : P05-03373

DATE : 7-15-05  
OUR NUMBER 33541

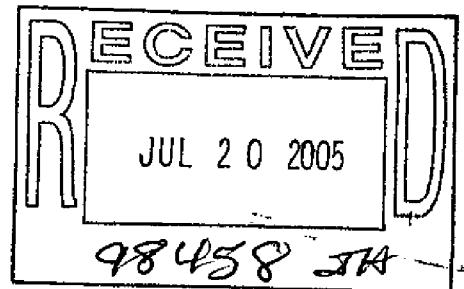
WE CERTIFY THAT THE MATERIALS SUPPLIED ON YOUR ORDER  
LISTED ABOVE COMPLIES WITH THE REQUIREMENTS OF YOUR ORDER  
AND OF THE SPECIFICATIONS LISTED BELOW

DESCRIPTION :

Lot No.:	Part :	
33541-2 552 PIECES	SE120-004-55	Heat No.: E28031
	1/2-20 Hex nut	
	A194 Gr 8	
33541-3 654 Pieces	SE120-004-56	Heat No.: 744072
	Washer	
	ASTM A286	
33541-4 102 Pieces	SE120-004-57	Heat No.: HT9618EY
	1/2-20 x 2 12-point	
	12-point screw	
	Inconel 718	



DALE STARK  
EASTWOOD MANUFACTURING



Lines 4-12  
10/10



JUL 22 2005

B&G Manufacturing Co., Inc  
 3067 Unionville Pike, P.O. Box 904, Hatfield, PA 19440-0904  
 General Telephone: 215-822-1925



Customer:  
 Eastwood Manufacturing  
 6825 Breen Street  
 HOUSTON TX 77086  
 USA

Quality certificate	
Date	06/16/2005
Purchase order item/date	33541 / 06/16/2005
Delivery item/date	80274266 000010 / 06/17/2005
Order item/date	206301 000010 / 06/16/2005
Page 1 of	1

We certify that the material supplied meets the requirements of the purchase order and the required material specification.

Material Number : 3692  
 Batch 009438A / Quantity 600 EA  
 Heat Number: E28031  
 Specification / Description  
 HVY HEX NUTS 304 SS  
 .500-20

33541

33541

Characteristic	Unit	Value
Specifications	-	ADDITIONAL SPECS MAY EXIST
	-	AISI 304*-CHEMS ONLY
	-	ASME SA193-92A B8A CL.1A-CHEMS
	-	ASME SA194-92A GR.8-CHEMS ONLY
	-	ASME SA194-92A GR.8A-CHEMS ONL
	-	ASTM A193-94B B8A CL.1A-CHEMS
	-	ASTM A194-94A GR.8-CHEMS ONLY
	-	ASTM A194-94A GR.8A-CHEMS ONLY
Carbon Content	%	0.0400
Chromium Content	%	18.0600
Manganese Content	%	1.0900
Nickel Content	%	9.0900
Phosphorus Content	%	0.0310
Silicon Content	%	0.3900
Sulfur Content	%	0.0050

B & G Manufacturing Co., Inc. By

*Margaret Guilian*

Certification Specialist

BAR STOCK SPECIALTIES, INC.

11625 CHARLES STREET

HOUSTON TEXAS 77041

PH# 713-849-0055

PH# 713-466-3460 EASTWOOD MANUFACTURING

TO: 6825 BREEN DR.

HOUSTON, TX 77086-3719

\* C E R T I F I C A T E \*  
\* O F T E S T \*

Customer P/O # 32770

Our Order # 011645

ITEM QUANTITY DESCRIPTION			LOT		
2 320 LB 1.125 (1 1/8 DIA.) ROUND BAR ASTM A193 GR.B7			3298		
ASTM SPEC DATE: 01B					
TEMPERING TEMP: 1340 F					
Heat No.	TENSILE (PSI)	YIELD (PSI)	PHOSPHORUS	CARBON	MANGANESE
744072	146500	134400	.02	.4	.83
ELONGATION	RED. OF AREA	HARDNESS (HB)	CHROMIUM	SULFUR	SILICON
20	60	293	.86	.02	.23
MACRO ETCH				MOLY.	
S1/R1/C1				.17	

ITEM QUANTITY DESCRIPTION			LOT		
3 404 LB 2.500 (2 1/2 DIA.) ROUND BAR ASTM A193 GR.B7			3025		
ASTM SPEC DATE: 01b					
TEMPERING TEMP: 1330 F					
Heat No.	TENSILE (PSI)	YIELD (PSI)	PHOSPHORUS	CARBON	MANGANESE
11628290	150600	135000	.012	.43	.8
ELONGATION	RED. OF AREA	HARDNESS (HB)	CHROMIUM	SULFUR	SILICON
19	56	302	.87	.034	.26
MACRO ETCH				MOLY.	
S1/R1/C2				.19	

Date: 01/14/05

We hereby certify that the foregoing data is a true copy of the data furnished to us by the producing mill.

BAR STOCK SPECIALTIES, INC.

BY

Authorized Test Clerk

*Greg Neal*

32770

RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS  
 ATTRIBUTED TO THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER  
 FEDERAL LAW, TITLE 18, CHAPTER 47  
 STERN U.S.

FORM D

HUNTINGTON ALLOYS  
 A Special Metals Company  
 HUNTINGTON, WEST VIRGINIA 25720

*51618 EVID*



**CERTIFIED MATERIAL TEST REPORT**

HA ORDER NO./ITEM	100011836 1	DATE	05/13/02	PAGE	1	OF	3
QUANTITY	2190 LBS	INSPECTED BY	HA/SMC				
CHARGE ORDER NO.	41137-5-S20062	MARK ORDER NO.	41137-5-S20062				
DESCRIPTION OF MATERIAL SHIPPED	INCONEL ALLOY 718 CD RND CENTERLESS GRD SOL TR .5160 IN 132-156 IN NOM						

THIS IS TO CERTIFY THAT ALL REQUIRED SAMPLINGS AND TESTS HAVE BEEN PERFORMED IN ACCORDANCE WITH THE ORDER AND SPECIFICATIONS. THE TEST REPORT REPRESENTS THE ACTUAL ATTRIBUTES OF THE MATERIAL INSPECTED AND THE VALUES SHOWN ARE CORRECT AND TRUE TO THE MATERIAL DESCRIBED BY THE CERTIFICATE. IN FULL COMPLIANCE WITH ALL ORDER AND INSPECTION REQUIREMENTS, WE HEREBY CERTIFY THAT THE FOLLOWING FIGURES MEET ALL REQUIREMENTS WITH THE SPECIFIED CONDITIONS.

QUALITY CERTIFICATION REPRESENTATIVE

*[Signature]*

\*\*\*\*\*THIS REPORT RELATES ONLY TO THE ITEM(S) TESTED AND MAY NOT BE REPRODUCED EXCEPT IN FULL.\*\*\*\*\*  
 UNS: N07718

PECIFICATIONS: ASTM B 637-98\ASME SB-637 2001 EDITION NO ADDENDA\  
 SAE AMS 5662L MARKING WAIVED WITH AMS 5663J CAPABILITY\  
 SPS-N-275M EXCEPT SOL TRT TIME\GE C50TF13 S16 AN 1 CHEM ONLY\  
 GE B50TF15 S29 CLASS D - CLASS E CAPABILITY MARKING WAIVED\  
 GE B50T69A-S6 AM 1 MARKING WAIVED\RBO 170-153 REV G CHEM ONLY\  
 HI SHEAR 156 REV D CHEM ONLY\GE S 400E\GE S-1000E\  
 QUALITY SYSTEM CERTIFICATION: ISO 9002 (ABS-QE CERT. 30125);  
 EN 10 204/DIN 50049 (CERT. 3.1.B)

CHEMICAL ANALYSIS (WT %)

HEAT#	C	MN	FE	SI	CU	NI	CR	AL
	TI	MG	CO	NB	TA	P	B	CA
	PB/PPM	BI/PPM	SE/PPM	NB+TA				
19618EY	0.03	0.08	17.78	0.10	0.07	53.85	18.14	0.62
	0.92	0.001	0.20	5.07	<0.01	0.006	0.003	0.001
	0.1	0.1	0.9	5.07				

TESTED BY HUNTINGTON ALLOYS, 3200 RIVERSIDE DR., HUNTINGTON, WV 25705, ACCREDITED FOR PASTERNEK QUALITY AC  
 VIA PR CERT 0029 (EXPIRES 10/31/2003).

DO CONVERT PPM TO WT.X, MOVE DECIMAL POINT FOUR PLACES TO THE LEFT.

MELT METHOD: DUVAC (VIM ELECTRODE; VAR INGOT)

MECHANICAL PROPERTIES

CAT/LOT	QUANTITY	HARDNESS	GRAIN SIZE	TENSILE YIELD	TENSILE	WELC	R/A	DEC
				2KPSI	PSI	4D	X	F
			X 100	X 100	X 100			
IT9618EY 12	232 PCS			1674	2105	21.7	36.4	LONG
TEMP-HRC	-CAPABILITY	43.8		1627	2096	22.2	40.7	LONG
TEMP-HRC	-CAPABILITY	42.6		1434	1712	34.2	65.6	1200 LONG
	-CAPABILITY			1378	1695	33.4	65.9	1200 LONG
	-AS SHIPPED	97.3						

31761-2

HUNTINGTON ALLOYS  
A Special Metals Company,  
HUNTINGTON, WEST VIRGINIA 25720



THIS IS TO CERTIFY THAT ALL REQUIRED SAMPLES (SECTIONS AND TESTS) HAVE BEEN PERFORMED IN ACCORDANCE WITH THE UNDER AND SPECIFIED REQUIREMENTS THE TEST REPORT REPRESENTS THE ACTUAL ATTRIBUTES OF THE MATERIAL FURNISHED AND THE VALUES SHOWN ARE CORRECT AND TRUE. ALL OTHERS AND INSPECTION REQUIREMENTS ARE HEREBY CERTIFIED TO BE BELOW REQUIREMENTS ARE IN ACCORDANCE WITH THE SPECIFIED CONTRACT TERMS.

*W. J. [Signature]*  
QUALITY CERTIFICATION REPRESENTATIVE

CERTIFIED MATERIAL TEST REPORT		No. 50179
HA ORDER NO./ITEM	DATE	PAGE OF
100011036 1	05/13/02	2 3
QUANTITY	INSPECTED BY	
2190 LBS	HA/SMC	
CHARGE ORDER NO.	MARK ORDER NO.	
41137-5-520062	41137-5-520062	
DESCRIPTION OF MATERIAL SHIPPED	INCONEL ALLOY 716 CD END CENTERLESS GRD SOL TR	
	5160 IN 132-156 IN NOM	

FORNE D

RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW, TITLE 18, CHAPTER 47

WESTERN U.S.

HARDNESS - HRC - CAPABILITY 43.7  
 HARDNESS - HRC - CAPABILITY 43.6  
 BRAIN SIZE - AS SHIPPED ACS ASTM NO. 10.0  
 NORMAL - TRAN  
 STRESS RUPTURE - CAPABILITY 1200 DEG F / 105,000 PSI STRESS / 091.5 HRS / 39.2XEL IN 4D / 62.8XR  
 STRESS RUPTURE SPECIMEN DIAMETER - .250"  
 HEAT TREAT #1  
 STRESS RUPTURE - CAPABILITY 1200 DEG F / 105,000 PSI STRESS / 083.7 HRS / 31.9XEL IN 4D / 63.7XR  
 STRESS RUPTURE SPECIMEN DIAMETER - .250"  
 HEAT TREAT #2  
 YIELD STRENGTH WAS DETERMINED USING A STRESS STRAIN CURVE

MACROETCH TEST(S) SATISFACTORY

MI ROSTRUCTURE TEST(S) SATISFACTORY  
ICROSTRUCTURE FREE OF LAVES PHASE AND BANDING OF ACICULAR PHASE

IT9610EY12 E50T133 GRAIN SIZE: A) NORMAL STRUCTURE; B) AVERAGE GRAIN SIZE ASTM #10 ; C) ALA ASTM # 9.5 ; D) N/A

NO WELD REPAIR HAS BEEN PERFORMED ON THIS MATERIAL.

MATERIAL WAS SOLUTION ANNEALED IN A CONTINUOUS FURNACE AT 1780 DEG F FOR 11.1 MINUTES THEN WATER QUENCHED.

CAPABILITY HEAT TREAT #1: MILL ANNEALED + AGED 1325 DEG. F 8 HOURS. FURNACE COOLED 100 DEG. F PER HOUR TO 1150 DEG. F HELD 8 HOURS. AIR COOLED.

CAPABILITY HEAT TREAT #2: MILL ANNEALED + SOLUTION TREATED 1780 DEG. F 1 HOUR. AIR COOLED. AGED 1325 DEG F 8 HOURS. COOLED 100 DEG. F PER HOUR TO 1150 DEG. F. WELD & COOLED.

31761-2

HUNTINGTON ALLOYS  
A Special Metals Company,  
HUNTINGTON, WEST VIRGINIA 25720

RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS  
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FEDERAL LAW, TITLE 18, CHAPTER 47  
EASTERN U. S.

FORM D

HA ORDER NO./ITEM		DATE	PAGE	No.
100011836 1		05/13/02	3	50179
QUANTITY		INSPECTED BY		
2190 LBS		HA/SNC		
CHARGE ORDER NO.		MARK ORDER NO.		
41137-5-S20062		41137-5-S20062		

THIS IS TO CERTIFY THAT ALL REQUIRED SAMPLES, INSPECTIONS AND TESTS  
HAVE BEEN PERFORMED IN ACCORDANCE WITH THE ORDER AND SPECIFIC  
REQUIREMENTS. THE TEST REPORT REPRESENTS THE ACTUAL ATTRIBUTES  
OF THE MATERIAL FURNISHED AND THE VALUES SHOWN ARE CORRECT AND TRUE  
TO THE MATERIAL DESCRIBED BY THIS CERTIFICATE IS IN FULL COMPLIANCE WITH  
ALL ORDER AND INSPECTION REQUIREMENTS. WE HEREBY CERTIFY THAT  
WE BELIEVE THESE VALUES ARE IN ACCORDANCE WITH THE SPECIFIED CONTRACT RE-  
QUIREMENTS.

QUALITY CERTIFICATION REPRESENTATIVE

*W. J. Bolen*

THIS IS TO CERTIFY THAT ALL REQUIRED SAMPLES, INSPECTIONS AND TESTS  
HAVE BEEN PERFORMED IN ACCORDANCE WITH THE ORDER AND SPECIFIC  
REQUIREMENTS. THE TEST REPORT REPRESENTS THE ACTUAL ATTRIBUTES  
OF THE MATERIAL FURNISHED AND THE VALUES SHOWN ARE CORRECT AND TRUE  
TO THE MATERIAL DESCRIBED BY THIS CERTIFICATE IS IN FULL COMPLIANCE WITH  
ALL ORDER AND INSPECTION REQUIREMENTS. WE HEREBY CERTIFY THAT  
WE BELIEVE THESE VALUES ARE IN ACCORDANCE WITH THE SPECIFIED CONTRACT RE-  
QUIREMENTS.

11

USUAL AND DIMENSIONAL EXAMINATION SATISFACTORY.  
MATERIAL, WHEN SHIPPED, IS FREE FROM CONTAMINATION BY MERCURY, RADIUM, ALPH  
AUTHORIZED QUALITY CERTIFICATION REPRESENTATIVES :  
W. J. BOLEN.

FILE COPY 2

Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

**HAYNES**  
**International**

Product Description • Description Produit • Material Beschreibung

0.375 x 25 x 25  
.SE120-004-20A REV:1  
HAYNES(R) 625 ALLOY PLATE -  
Nadcap CERTIFICATE NUMBER 0089  
S400E,S1000E, EN 10204 3.1.B, AS9100

<b>CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS</b>	
Invoice No No. De Facture Rechnungs Nr 435724001-0	Customer Reference Reference Client Kundenbestelldaten P05-01004
Date Entered Date De Commande Bestelldatum 03/09/05	Report No. Rapport No Zeugnis Nr 20050527112
Ship To • Destinataire • Bestellmenge MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA	
Sold To • Client • Bestelltranschrift MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA	

Quantity Ordered Quantité Commandée Bestellmenge 6 PC	Quantity Shipped Quantité Expédiée Liefermenge 6 PC
--	--

Specification • Spécification • Spezifikation  
ASTM-B-443 Chemistry Only, 00e1, UNS# N06625, Gr. 1; PS-489, E

Heat Number Numero De Charge Charge Nr	Chemical Analysis • Analyse Chimique • Chemische Analyse																	
	Al	B	C	Chits (NbrTo)	Co	Cr	Cu	Fe	Mn	Mo	Ni	P	S	Si	Ti	V	W	
2650 4 6771	0.213		0.021	3.4	0.2638	21.67	0.0581	4.8419	0.2641	8.53	59.82	0.0072	0.003	0.137	0.3317			BUTT END *02
2650 4 6771	3.3944	<0.05																BUTT END *02

5/27/2005

Certified By • Certifié Par • Bescheinigt Durch: Amanda Aguirre  
Certification Technician

*Amanda Aguirre*

016 JUN 09 2005

JUN 9 2005  
96872  
*Line 1.6*

THE DATA CONTACTED IF BEEN WAS OBTAINED FROM SAMPLES THAT ARE REPRESENTATIVE OF THE PRODUCTS IN THE SUBJECT REPORT. THIS MATERIAL MEETS THE REQUIREMENTS OF THE ORDER AS SHOWN BY THE ANALYSIS. THE BUYER SHALL NOT BE RESPONSIBLE FOR THE REPRODUCTION OF THIS DOCUMENT WITHOUT THE WRITTEN PERMISSION OF HAYNES INTERNATIONAL, INC. SPECIFICATION MARKING REQUIREMENTS MAY BE WAIVED ON ORDERS REQUIRING MULTIPLE MATERIAL SPECIFICATIONS.





FILE COPY 2

Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

**HAYNES**  
**International**

Product Description • Description Produit • Material Beschreibung  
**0.375 x 25 x 25**  
**SE120-004-20A REV:1**  
**HAYNES(R) 625 ALLOY PLATE**  
**Nadcap CERTIFICATE NUMBER 0089**  
**S400E,S1000E, EN 10204 3.1.B, AS9100**

CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEGUNIS																	
Invoice No No. De Facture Rechnungs Nr 435724001-0	Date Entered Date De Commande Bestelldatum 03/09/05	Customer Reference Référence Client Kundenbestellnummer P05-01004	Report No. Rapport No Zeugnis Nr 20050527112														
Sold To • Client • Bestelleranschrift <b>MAJOR TOOL AND MACHINE INC</b> <b>1458 E 19TH ST</b> <b>INDIANAPOLIS</b> <b>IN 46218 USA</b>		Ship To • Destinataire • Bestellmenge <b>MAJOR TOOL AND MACHINE INC</b> <b>1458 E 19TH ST</b> <b>INDIANAPOLIS</b> <b>IN 46218 USA</b>															
Specification • Spécification • Spezifikation <b>ASTM-B-443 Chemistry Only, 00c1, UNS# N06625, Gr. 1; PS-489, E</b>		Quantity Ordered Quantité Commandée Bestellmenge 6 PC	Quantity Shipped Quantité Expédiée Liefermenge 6 PC														
Annealed Hardness Dureté Vieilli Gealtert Haerte	Grain Size Grosseur De Grain Korngrösse	ICG Attack Depth	Corrosion Rate Corrosion	Oxidation Rate	Charpy Impact Test			Creep Rupture									
					Toughness Avg	Toughness Pl. Lbs.	Toughness Ft. Lbs.	Test Essai Versuch	Stress Constractive Spannung	Hours Heures Stunden	% Elong In % Allong EN % Dehnung	% Elong @ 15 Hrs					
<b>96 HRB</b>	<b>(1)(A) 5.5</b>																

(1) 2742656901

5/27/2005

Certified By • Certifié Par • Bescheinigt Durch: Amanda Aguirre  
Certification Technician

*Amanda Aguirre*

JUN 09 2005



THE DATA CONTAINED HEREIN WAS OBTAINED FROM SAMPLES THAT ARE REPRESENTATIVE OF THE PRODUCTS IN THE SUBJECT SHIPMENT. THIS MATERIAL MEETS THE REQUIREMENTS OF THE LISTED SPECIFICATIONS AS REQUIRED BY ANY EXCEPTIONS OR PURCHASE ORDER REQUIREMENTS SPECIFIED AS A PLANT UNDER FEDERAL STATUTES INCLUDING FEDERAL LAW, TITLE 18, CHAPTER 49. THIS DOCUMENT SHALL NOT BE REPRODUCED, IN WHOLE OR IN PART, WITHOUT THE WRITTEN CONSENT OF HAYNES INTERNATIONAL, INC.

FILE COPY 2

Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

**HAYNES**  
**International**

Product Description • Description Produit • Material Beschreibung

0.375 x 25 x 25  
.SE120-004-20A REV:1  
HAYNES(R) 625 ALLOY PLATE -  
Nadcap CERTIFICATE NUMBER 0089  
S400E,S1000E; EN 10204 3.1.B, AS9100

CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKZEUGNIS			
Invoice No No. de Facture Rechnungs Nr 435724001-0	Date Entered Date De Commande Bestelldatum 03/09/05	Customer Reference Reference Client Kundenbestellnr P05-01004	Report No. Rapport No Zeugnis Nr 20050527112
Sold To • Client • Bestellauftrag MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA		Ship To • Destinataire • Bestellmenge MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA	
Specification • Spezifikation ASTM-B-443 Chemistry Only, 00e1, UNS# N06625, Gr. 1; PS-489, E		Quantity Ordered Quantité Commandée Bestellemenge 6 PC	Quantity Shipped Quantité Expédiée Liefermenge 6 PC

All tests and inspections have been performed and results meet specification requirements.  
THIS MATERIAL IS FREE FROM MERCURY, CADMIUM, RADIUM, AND ALPHA SOURCE CONTAMINATION.  
Material conforms to PS-483 Revision H as applicable.  
Mill Orders Used: 2742656901 (6 PC)  
(A) 1750 °F to 1950 °F

5/27/2005

Certified By • Certifié Par • Bescheinigt Durch: Amanda Aguirre  
Certification Technician

*Amanda Aguirre*



JUN 09 2005

**Magnetic Permeability Test Witness**

Haynes observed Mr. Edwards of Major Tool test the orders listed below for Magnetic Permeability on April 19, 2005, using a Severn Engineering Permeability Indicator #6763, identified as gauge J-1165 in Major Tool's calibration system. The gauge was in calibration and was due for recalibration on December 27, 2005. All items tested below were <1.01 magnetic permeability.

**Heats Tested**

2650-4-6771

2650-5-6797

2650-5-6804

**Purchase Order Numbers**

P05-00965 – Panel 1

P05-00966 – Panel 10

P05-00967 – Panel 2

P05-00994 – Panel 3

P05-00996 – Panel 4

P05-00997 – Panel 5

P05-00999 – Panel 6

P05-01001 – Panel 7

P05-01002 – Panel 8

P05-01003 – Panel 9

P05-01004 – 25" dia discs

**JUN 09 2005**

Best Regards,

A handwritten signature in black ink, appearing to read "Marlin C. Losch III".

Marlin C. Losch III



# Certificate of Conformance

## EXOTIC METAL TREATING INC.

MC111911

6234 E. Hanna Avenue • Indianapolis, Indiana

Certificate # 50413

Vendor Code # 107576

NADCAP

P.O. # P05-05334

Exotic Metal Treating Inc. hereby certifies that all materials used in the manufacture of parts CONFORMS to the material and/or manufacturing specifications indicated in drawings or specifications as called for on purchase order referenced hereon. Test reports are on file with us or with our suppliers for examination and indicate conformance with the applicable requirements. The parts listed below are processed in accordance with the drawings or specifications called for on referenced purchase order that are current on the date on which the order was accepted. Pertinent details of the work performed are on file at this facility under the process heat number listed hereon.

HEAT # 05-1708

DATE SHIPPED 9-15-05

### QUANTITY

### DESCRIPTION

3 PCS

SE122-018-1A

JOB #65678-291/7, 65678-282/8, 65678-282/9 SEQ #50

3 PCS

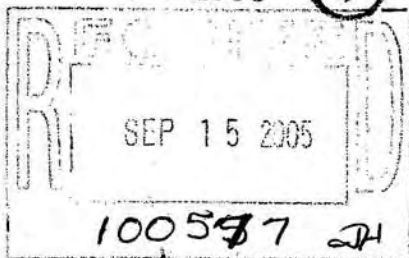
SE122-018-1B

JOB #65678-292/7, 65678-283/8, 65678-283/9 SEQ #50

MATERIAL: 316 SS

SOLUTION ANNEALED PER AMS-2759-4 REV: B IN VACUUM  
AT 2000°F ± 25°F FOR 90 MINUTES MINIMUM & GAS FAN COOLED.

SEP 19 2005



Sworn and subscribed to before me...

on 9-15-05

Notary Public Morgan County - State of Indiana

My commission expires 08-30-09



*Kurt Smith*

(Name)

QA

(Title)



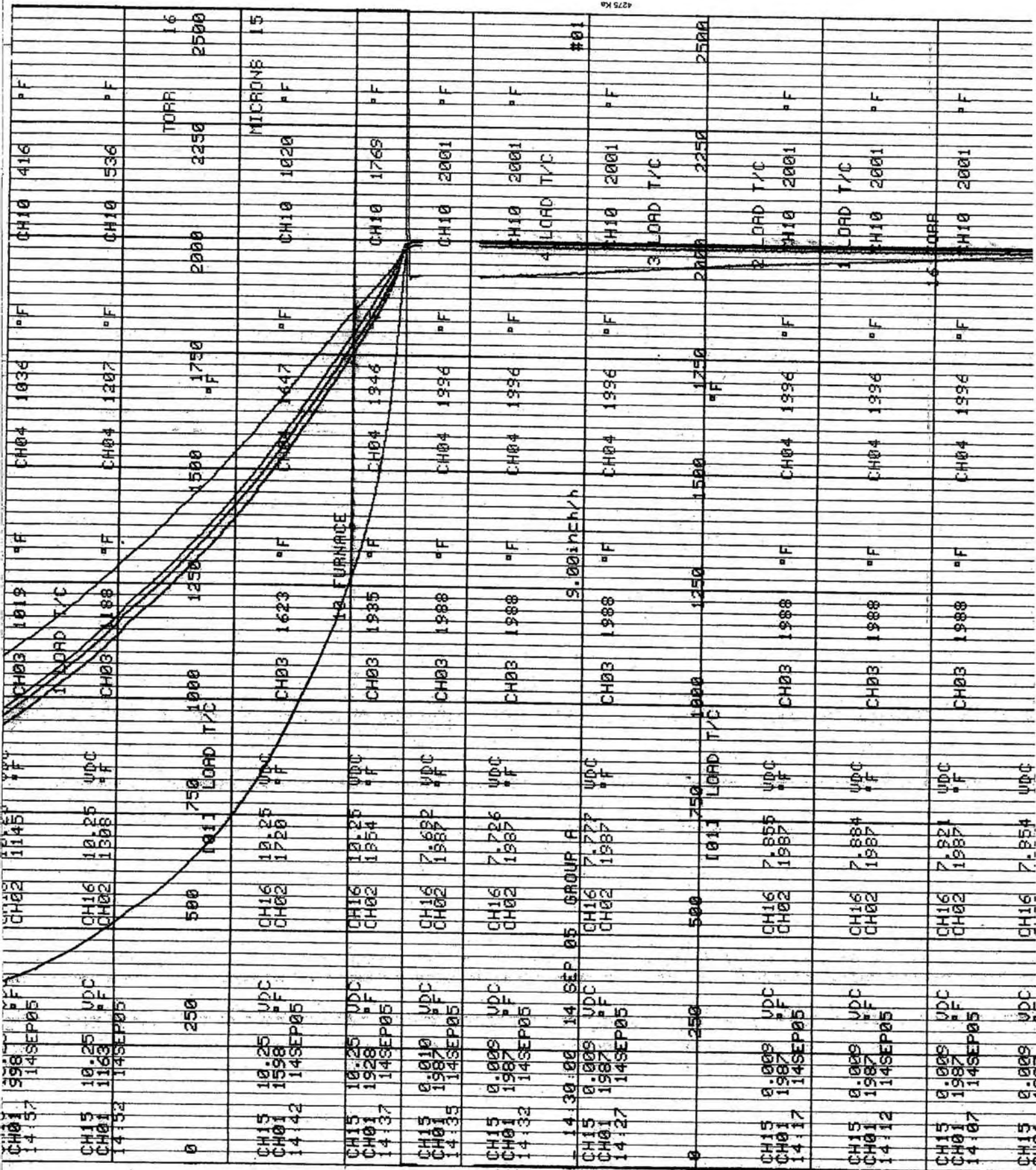




Time	Channel	Value	Unit	Channel	Value	Unit	Channel	Value	Unit	Channel	Value	Unit	Channel	Value	Unit	Channel	Value	Unit																		
13:03	CH15	0.008	VDC	CH16	8.348	VDC	CH01	1984	°F	CH02	1976	°F	CH03	1985	°F	CH04	1990	°F	CH10	2016	°F															
13:01	CH01	1982	°F	CH02	1972	°F	CH03	1982	°F	CH04	1987	°F	CH05	1985	°F	CH06	1987	°F	CH07	1987	°F	CH08	1987	°F	CH09	1987	°F	CH10	2016	°F						
13:00:00	14 SEP 05 GROUP A																																			
13:00	CH15	0.008	VDC	CH16	8.370	VDC	CH01	1969	°F	CH02	1955	°F	CH03	1969	°F	CH04	1973	°F	CH05	1969	°F	CH06	1973	°F	CH07	1969	°F	CH08	1973	°F	CH09	1973	°F	CH10	2012	°F
12:56	CH01	1969	°F	CH02	1955	°F	CH03	1969	°F	CH04	1973	°F	CH05	1969	°F	CH06	1973	°F	CH07	1969	°F	CH08	1973	°F	CH09	1973	°F	CH10	2012	°F	CH11	2012	°F			
12:51	CH15	0.008	VDC	CH16	8.375	VDC	CH01	1951	°F	CH02	1951	°F	CH03	1951	°F	CH04	1954	°F	CH05	1951	°F	CH06	1954	°F	CH07	1951	°F	CH08	1954	°F	CH09	1954	°F	CH10	2012	°F
12:46	CH15	0.008	VDC	CH16	8.444	VDC	CH01	1921	°F	CH02	1887	°F	CH03	1921	°F	CH04	1913	°F	CH05	1921	°F	CH06	1913	°F	CH07	1921	°F	CH08	1913	°F	CH09	1913	°F	CH10	2012	°F
0	250	500	750	1000	1250	1500	1750	2000	2250	2500																										
15 MICRONS																																				
12:36	CH15	0.008	VDC	CH16	8.371	VDC	CH01	1803	°F	CH02	1786	°F	CH03	1803	°F	CH04	1771	°F	CH05	1803	°F	CH06	1771	°F	CH07	1803	°F	CH08	1771	°F	CH09	1803	°F	CH10	1981	°F
12:31	CH01	1803	°F	CH02	1786	°F	CH03	1803	°F	CH04	1771	°F	CH05	1803	°F	CH06	1771	°F	CH07	1803	°F	CH08	1771	°F	CH09	1803	°F	CH10	1981	°F	CH11	1981	°F			
12:26	CH15	0.008	VDC	CH16	8.376	VDC	CH01	1726	°F	CH02	1625	°F	CH03	1726	°F	CH04	1695	°F	CH05	1726	°F	CH06	1695	°F	CH07	1726	°F	CH08	1695	°F	CH09	1726	°F	CH10	1969	°F
12:21	CH01	1726	°F	CH02	1625	°F	CH03	1726	°F	CH04	1695	°F	CH05	1726	°F	CH06	1695	°F	CH07	1726	°F	CH08	1695	°F	CH09	1726	°F	CH10	1969	°F	CH11	1969	°F			
12:16	CH15	0.008	VDC	CH16	8.311	VDC	CH01	1612	°F	CH02	1469	°F	CH03	1612	°F	CH04	1536	°F	CH05	1612	°F	CH06	1536	°F	CH07	1612	°F	CH08	1536	°F	CH09	1612	°F	CH10	1907	°F
12:11	CH01	1612	°F	CH02	1469	°F	CH03	1612	°F	CH04	1536	°F	CH05	1612	°F	CH06	1536	°F	CH07	1612	°F	CH08	1536	°F	CH09	1612	°F	CH10	1907	°F	CH11	1907	°F			
12:06	CH15	0.008	VDC	CH16	8.328	VDC	CH01	1512	°F	CH02	1386	°F	CH03	1512	°F	CH04	1398	°F	CH05	1512	°F	CH06	1398	°F	CH07	1512	°F	CH08	1398	°F	CH09	1512	°F	CH10	1878	°F
12:01	CH01	1512	°F	CH02	1386	°F	CH03	1512	°F	CH04	1398	°F	CH05	1512	°F	CH06	1398	°F	CH07	1512	°F	CH08	1398	°F	CH09	1512	°F	CH10	1878	°F	CH11	1878	°F			
0	250	500	750	1000	1250	1500	1750	2000	2250	2500																										
12:15:00 14 SEP 05 GROUP A																																				
12:15	CH15	0.008	VDC	CH16	8.376	VDC	CH01	1323	°F	CH02	1223	°F	CH03	1323	°F	CH04	1223	°F	CH05	1323	°F	CH06	1223	°F	CH07	1323	°F	CH08	1223	°F	CH09	1323	°F	CH10	1829	°F
12:11	CH01	1323	°F	CH02	1223	°F	CH03	1323	°F	CH04	1223	°F	CH05	1323	°F	CH06	1223	°F	CH07	1323	°F	CH08	1223	°F	CH09	1323	°F	CH10	1829	°F	CH11	1829	°F			













104 ENTERPRISE DRIVE  
P.O. BOX 419  
READING, MICHIGAN 49274  
(517) 283-3811  
FAX (517) 283-3696

### CERTIFICATE OF CONFORMANCE

DATE: December 21, 2005  
TO: Major Tool & Machine, Inc.  
ATTN: Dave Wilkinson

Part Number: SE1220-18-1A  
Purchase Order #: P05-06549  
Part Name: Port 12A Flange  
Work Order #: RL 10101  
Quantity: One (1)

This is to certify that the above order was processed in accordance with accepted industry standards; polished bottom and sides of groove to a 16 micro-inch surface finish.

Signature: *Michael [Signature]* Title: *President* Date: *12-21-05*



DEC 21 2005

RECEIVED  
DEC 21 2005  
103690  
*Line #2*  
*RFL*

Quality Assurance Documentation for Part ID: SE122-018-1A - Item: 416

Workorder: 65678/8-0 Sub:2 Op:118

**Part: SE122-018-1A - PORT 12A SUB-ASSEMBLY - PORT 12A SUB-ASSEMBLY (VERTICAL FABRICATED PORT)**

Drawing ID: SE122-018 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
1* (10)	D3	0.94 +/- 0.010"	CALIPER	QA		J-1099	.948	854-R.U 12-21-05			A
1* (20)	D3	R.005 MIN. (2X)	RADIUS GAGE	QA		R-24	.008 2X	854-R.U 12-21-05			A
1* (30)	D2	.149 + .000/- .008"	CALIPER	QA		J-1099	.142	854-R.U 12-21-05			A
1* (40)	D3	16 MICRO-INCH RA SURFACE FINISH	PROFILOMETER	QA		J-825	6	854-R.U 12-21-05			A
1* (50)	D3	63 MICRO-INCH RA SURFACE FINISH	PROFILOMETER	QA		J-825	30	854-R.U 12-21-05			A
1* (60)		32 MICRO-INCH RA SURFACE FINISH	PROFILOMETER	QA		J-825	20	854-R.U 12-21-05			A





METALLURGICAL TEST REPORT

6870 Highway 42 East  
Ghent, KY 41045-9615  
(502) 347-6000

Certificate: 269530 07  
Customer: 2830 004  
Mail To:  
ROLLED ALLOYS  
9818 EAST HARDY ROAD  
HOUSTON, TX 77093

Ship To:  
ROLLED ALLOYS  
9818 EAST HARDY ROAD  
HOUSTON, TX 77093

Date: 6/01/2005 Page: 1

Steel: 316/316L

Finish: BAAP

Your Order: J07509

NAS Order: AN 0318825 01

Corrosion: ASTM A262/262A;180Bend-OK

PRODUCT DESCRIPTION:

STAINLESS STEEL PLATE, HOT ROLLED, ANNEALED AND PICKLED.  
ASTMA240/04a, 480/04a, 666/03, ASME SA240/04, SA480/04, SA666/04  
(X GRAIN), Q08766D-A X MG PERM, AMS5507E/AMS5524J X MRK  
UNS S31600 / UNS S31603

REMARKS:

Material free from mercury contamination. No weld repairs.  
EN 10204 3.1.B Q08763F Cond A  
\* Melted & Manufactured in the USA  
Minimum anneal temperature 1950 F  
EN 10204 3.1.B/DIN 50049

Product ID #	Coil #	Thickness	Width	Weight	-----Length-----	Mark	Pieces
0565H7 CB	* 0565H7 CB	1.5000	48.0000	5,155	PLATE 240.00	1	1

CHEMICAL ANALYSIS

Heat	C	CO	CR	CU	MN	MO	N	NZ	P	S	SI
65H7	.022	.205	16.953	.417	1.633	2.109	.050	10.110	.034	< .001	.900

MECHANICAL PROPERTIES

Product ID #	Coil #	1 d o i c r	UTS KSI	.2% YS KSI	ELONG %-2"	Hard RB
0565H7 CB	0565H7	F T	80.35	42.09	57.50	80.00



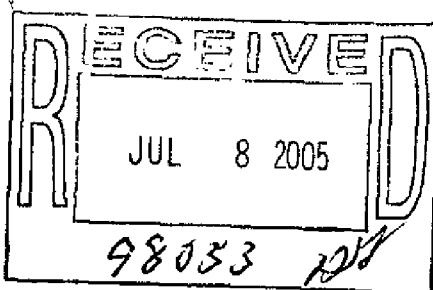
ROLLED ALLOYS QUALITY ASSURANCE  
APPROVED *M. Hess*  
DATE 6/9/05

QC ENGINEER

*E. Hess*

ERIC HESS

6/01/2005



*lines 1-12*

JUL 15 2005

Quality Assurance Documentation for Part ID: SE122-018-1A - Item: 418

Workorder: 65678/8-0 Sub:104 Op:20

Part: SE122-018-1A - NCSX VVSA PORT 12A FLANGE - SE120-004-2 / SE122-018A NCSX VVSA PORT 12A FLANGE

Drawing ID: SE122-018 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
1* (10)	C8	R2.69 +/- 0.010"	INDICATOR	QA		J-622	R 2.685	854-R.U 12-30-05			A
1* (20)	B8	R4.69 +/- 0.010"	INDICATOR	QA		J-622	R 4.695	854-R.U 12-30-05			A
1* (30)	F5	20 DEGREES	PROTRACTOR	QA		J-619	20	854-R.U 12-30-05			A
1* (40)	B5	R7.38 +/- 0.010"	INDICATOR	QA		J-622	R 7.386	854-R.U 12-30-05			A
1* (50)	B8	R5.38 +/- 0.010"	INDICATOR	QA		J-622	R 5.38	854-R.U 12-30-05			A



**Allegheny Ludlum** Jessop Plate Products Division  
An Allegheny Technologies Company

500 Green Street CERTIFIED MATERIAL TEST REPORT  
Washington, Pennsylvania 15301

Bill to:  
PLATE PROD DIV / A-L  
1201 VALLEY ROAD  
COATESVILLE PA

Shipto:  
PLATE PROD DIV / A-L  
1201 VALLEY ROAD  
COATESVILLE PA

19320

19320

PHIL CLADITIS  
Quality Assurance Represento

Memo No: 260311-00

Our Order no: RW4910400  
Your Order No: M E H D  
Date: 09/03/2004  
DUAL CERT

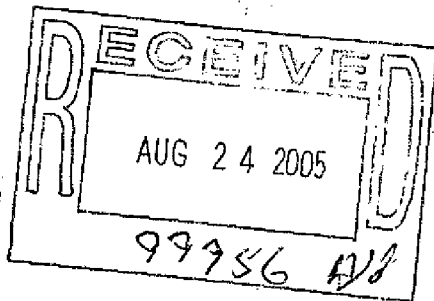
ALC 316/316L STAINLESS HRAP  
ASTM A240-04a ASME SA-240-01 ASTM A480-02 ASME SA-480-01  
AMS 5507F (316L) AMS 5524K (316) ASTM A666-03 COND A CHEM/PHYS TO  
ASTM A312-02 ASME SA-312-01 ASTM A479-02 ASME SA-479-01 ASTM A262-02  
PRACTICE E SCREEN PRAC A

Heat	Slip	Lot No	Size	Pcs	Weight
818102	34967 A	143182	1.5000 x 83.0000 x 260.0000	1	9488 GV-STOCK

Heat	C	MN	P	S	SI	NI	CR	MO	CO	CU	N
818102	.018	1.57	.027	.0004	.31	10.14	16.38	2.10	.25	.37	.069

Lot No	Gauge	Yield Strength	Tensile Strength	Elong	Red. of Area	Hardness	Bend	Corrosion	Grain Siz
143182	1.5000	33.9 KSI	81.5 KSI	61.0	81.0	BHN146		OK	

MATERIAL WAS NOT WELD REPAIRED  
MATERIAL WAS PRODUCED WITHOUT KNOWN CONTACT WITH MERCURY  
MATERIAL WAS SOLUTION ANNEALED (HEAT TREATED) ABOVE 1900F AND WATER QUENCHED  
DIN 50049 3.1.B AND EN 10204 3.1.B CERTIFICATE  
MATERIAL IS OF USA MELT AND MANUFACTURE



TRACER\* 109293

MTM 016

8.25.05

Len 1.6

ROLLED AND LOYS QUALITY ASSURANCE

APPROVED *M. Rain*

DATE 9/23/04

PAGE 1 FINAL PAGE

EXCEPT AS OTHERWISE NOTED, THIS MATERIAL HAS BEEN MANUFACTURED AND TESTED IN ACCORDANCE WITH THE LISTED SPECIFICATIONS AND RESULTS CONFORM TO THE SPECIFICATION AND ORDER REQUIREMENTS. THE ABOVE INFORMATION HAS BEEN REPRODUCED FROM THE ORIGINAL CERTIFIED MATERIAL TEST REPORT.

ORIGINAL





**METALLURGICAL TEST REPORT**

6870 Highway 42 East  
Ghent, KY 41045-9615  
(502) 347-6000

Certificate: 269530 07      Mail To:      Ship To:      Date: 6/01/2005      Page: 1  
 Customer: 2830 004      ROLLED ALLOYS      ROLLED ALLOYS      Steel: 316/316L  
 9518 EAST HARDY ROAD      9518 EAST HARDY ROAD      Finish: BRAP  
 HOUSTON, TX 77093      HOUSTON, TX 77093      Corrosion: ASTM A262/D2aE;180Rand-OR  
 Your Order: JO7509      NAS Order: AN 0316825 01

**PRODUCT DESCRIPTION:**

STAINLESS STEEL PLATE, HOT ROLLED, ANNEALED AND PICKLED.  
 ASTM A240/04a, 480/04a, 566/03, AMS 55240/04, SA 480/04, SA 666/04  
 (X GRAIN), Q08766D-A X NO PERM, AMS 5507E/AMS 5524J X NOX  
 UNS S31600 / UNS S31603

**REMARKS:**

Material free from mercury contamination. No weld repairs.  
 EN 10204 3.1.B Q08763F Cond A  
 \* Melted & Manufactured in the USA  
 Minimum anneal temperature 1950 F  
 EN 10204 3.1.B/DIN 50049

Product ID #	Coil #	Thickness	Width	Weight	Length	Mark	Pieces
0565H7 CB	* 0565H7 CB	1.5000	48.0000	5,155 PLATE	240.00	1	1

**CHEMICAL ANALYSIS**

Heat	C	CO	CR	CU	MN	MO	N	NI	P	S	SI
65H7	.022	.205	16.953	.417	1.633	2.109	.050	10.110	.034	< .001	.500

**MECHANICAL PROPERTIES**

Product ID #	Coil #	Id	UTS	% YS	ELONG	Hard
		o i	KSI	KSI	%-2"	RB
		c r				
0565H7 CB	0565H7	F T	80.35	42.09	57.50	80.00



ROLLED ALLOYS QUALITY ASSURANCE  
 APPROVED *M. Hess*  
 DATE 6/9/05

QC ENGINEER *E. Hess*      6/01/2005  
 ERIC HESS



8.28.08

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE122-018-1A - Item: 420

Workorder: 65678/8-0 Sub:282 Op:20

Part: SE122-018-1A - REWORK / REPAIR PER N/C - N/C # \_\_\_\_\_

Drawing ID: SE122-018 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
1* (10)	C8	R2.69 +/- 0.010"	CMM	MFG QA		00064	2.688	212-J.LE 09-01-05	212-J.LE 09-01-05	A
1* (20)	B8	R4.69 +/- 0.010"	CMM	MFG QA		00064	4.685	212-J.LE 09-01-05	212-J.LE 09-01-05	A
1* (30)	F5	20 DEGREES	CMM	MFG QA		00064	20.015	212-J.LE 09-01-05	212-J.LE 09-01-05	A
1* (40)	B5	R7.38 +/- 0.010"	CMM	MFG QA		00064	7.372	212-J.LE 09-01-05	212-J.LE 09-01-05	A
1* (50)	B8	R5.38 +/- 0.010"	CMM	MFG QA		00064	5.378	212-J.LE 09-01-05	212-J.LE 09-01-05	A



104 ENTERPRISE DRIVE  
P.O. BOX 419  
READING, MICHIGAN 49274  
(517) 283-3811  
FAX (517) 283-3696

### CERTIFICATE OF CONFORMANCE

DATE: December 21, 2005  
TO: Major Tool & Machine, Inc.  
ATTN: Dave Wilkinson

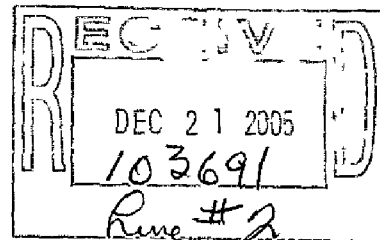
Part Number: SE1220-18-1B  
Purchase Order #: P05-06550  
Part Name: Port 12B Flange  
Work Order #: RL 10101  
Quantity: One (1)

This is to certify that the above order was processed in accordance with accepted industry standards; polished bottom and sides of groove to a 16-micro-inch surface finish.

Signature: *Michael J. ...* Title: President Date: 12-21-05



DEC 21 2005



*Rev # 2*  
*AKL*

Quality Assurance Documentation for Part ID: SE122-018-1B - Item: 426

Workorder: 65678/8-0 Sub:3 Op:118

Part: SE122-018-1B - PORT 12B SUB-ASSEMBLY - PORT 12B SUB-ASSEMBLY (VERTICAL FABRICATED PORT)

Drawing ID: SE122-018 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
1* (10)	D3	0.94 +/- 0.010"	CALIPER	QA		J-1099	.946	854-R.U 12-21-05			A
1* (20)	D3	R.005 MIN. (2X)	RADIUS GAGE	QA		R-24	.008 2X	854-R.U 12-21-05			A
1* (30)	D2	.149 + .000/- .008"	CALIPER	QA		J-1099	.146	854-R.U 12-21-05			A
1* (40)	D3	16 MICRO-INCH RA SURFACE FINISH	PROFILOMETER	QA		J-825	8	854-R.U 12-21-05			A
1* (50)	D3	63 MICRO-INCH RA SURFACE FINISH	PROFILOMETER	QA		J-825	30	854-R.U 12-21-05			A
1* (60)		32 MICRO-INCH RA SURFACE FINISH	PROFILOMETER	QA		J-825	20	854-R.U 12-21-05			A

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE122-018-1B - Item: 428

Workorder: 65678/8-0 Sub:283 Op:20

Part: SE122-018-1B - REWORK / REPAIR PER N/C - N/C # \_\_\_\_\_

Drawing ID: SE122-018 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
1* (10)	C8	R2.69 +/- 0.010"	CMM	MFG QA		00064	2.686	212-J.LE 09-01-05	212-J.LE 09-01-05	A
1* (20)	B8	R4.69 +/- 0.010"	CMM	MFG QA		00064	4.687	212-J.LE 09-01-05	212-J.LE 09-01-05	A
1* (30)	F5	20 DEGREES	CMM	MFG QA		00064	20.018	212-J.LE 09-01-05	212-J.LE 09-01-05	A
1* (40)	B5	R7.38 +/- 0.010"	CMM	MFG QA		00064	7.373	212-J.LE 09-01-05	212-J.LE 09-01-05	A
1* (50)	B8	R5.38 +/- 0.010"	CMM	MFG QA		00064	5.378	212-J.LE 09-01-05	212-J.LE 09-01-05	A

**Outokumpu Stainless Plate, Inc.**



**Certificate of Analysis and Tests**

OUR ORDER 0244161 - 01

HEAT & PIECE 604254-2B 03/28/05

SOLD TO: ROLLED ALLOYS  
P O BOX 310

SHIP TO: ROLLED ALLOYS  
125 WEST STERNS ROAD  
734-847-0561

TEMPERANCE MI 48182

TEMPERANCE MI 48182

----- YOUR ORDER & DATE -----

T51463

2/03/05

TAG# 3003-2599-00-1

----- ITEM DESCRIPTION -----

HEAT & PIECE 604254 - 2B  
WEIGHT 1516  
FINISH 1  
GRADE 316L / 316  
DIMENSIONS .187 X 96.000 X 265.000 EXACT  
UNS-S31603 / UNS-S31600

----- SPECIFICATIONS -----

\*\*\* MFG IN NEW CASTLE, IN, USA FROM SLABS IMPORTED FROM SWEDEN  
AMS 5507F EXCEPT LINE MARK AMS 5524K EXCEPT LINE MARK  
ASTMA240-04A ASMESA240 04 ED ASTM A480-04 ASME SA480 04ED  
ROLLED ALLOYS SPECS 316L/316 NAETA CTRY ORIGIN = SLB CTRY  
NO GRIPPER MARKS NO WELD REPAIRS  
ASTM A262-02A PRACTICE A ASTM A262-02A PRACTICE E

PLATES & TEST PCS SOLUTION ANNEALED @ 1950 DEGREES FAHRENHEIT MINIMUM.  
THEN WATER COOLED OR RAPIDLY COOLED BY AIR  
FREE FROM MERCURY CONTAMINATION AT CURRENT DETECTION LIMITS  
HOT ROLLED, ANNEALED & PICKLED (HRAP)

----- MECHANICAL & OTHER TESTS -----

HARDNESS RB 76  
GRAIN SIZE 5  
YIELD STRENGTH (PSI) 37198  
TENSILE STRENGTH (PSI) 83880  
BEND OK  
INTERGRANULAR CORROSION OK  
ELONGATION % IN 2" 50.1  
REDUCTION OF AREA % 64.7

ISO 9001-2000  
DIN Cert.#  
10380

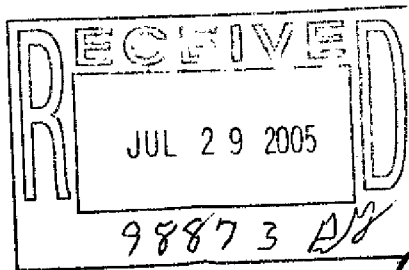


TRACER# 116158

----- CHEMICAL COMPOSITION -----

CARBON	(C)	.016
MANGANESE	(MN)	1.72
PHOSPHORUS	(P)	.032
SULFUR	(S)	.001
SILICON	(SI)	.35
CHROMIUM	(CR)	16.44
NICKEL	(NI)	10.16
COBALT	(CO)	.19
COPPER	(CU)	.47
MOLY	(MO)	2.04
NITROGEN	(N)	.04
COLUMBIUM	(CB)	.013
TITANIUM	(TI)	.004
ALUMINUM	(AL)	.007
TIN	(SN)	.008

AUG 03 2005



ROLLED ALLOYS QUALITY ASSURANCE

APPROVED *Car Reed*

DATE 3-29-05



WE HEREBY CERTIFY THAT THE MATERIAL HEREIN HAS BEEN MADE AND TESTED IN ACCORDANCE WITH THE LISTED SPECIFICATION(S) AND THAT THE RESULTS OF ALL TESTS ARE ACCEPTABLE.

JAMES DOUBMAN, QUALITY ASSURANCE MANAGER

CERTIFICATE IN CONFORMANCE WITH DIN50049 3.1.B/EN10204 3.1.B

*James Douberman*

Quality Assurance Documentation for Part ID: SE122-019-1A - Item: 430

Workorder: 65678/8-0 Sub:107 Op:20

Part: SE122-019-1A - PORT 12A SEAL RETAINER - SE120-004-3 / SE122-019-1A PORT 12A SEAL RETAINER

Drawing ID: SE122-019 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
1* (10)	F3	0.149 + 0 / - 0.008"	OD MICROMETER	MFG QA		P-4891	.1485 - .150	231-B.B 10-26-05	576-J.G 10-26-05	A
1* (20)	G4	0.54 +/- 0.010" (CONSTANT)	CALIPER	MFG QA		P-4901	.541 - .549	231-B.B 10-26-05	576-J.G 10-26-05	A
1* (30)	G3	75.0 deg. +/- 0 deg. 15' (2X)		MFG QA		PARALECT PROTRACTOR	75 DEG	231-B.B 10-26-05	576-J.G 10-26-05	A
1* (40)	F4	63 MICRO-INCH SURFACE FINISH (2X)	PROFILOMETER	MFG QA		J-1181	40 MICRO-INCH	231-B.B 10-26-05	576-J.G 10-26-05	A
1* (50)	D6	DIA. 0.187 (+/- 0.005") (8X)	CALIPER	MFG QA		P-4901	.184	231-B.B 10-26-05	576-J.G 10-26-05	A
1* (60)	D6	0.094 +/- 0.005 (8X)	DEPTH MICROMET	MFG QA		P-4900	.094	231-B.B 10-26-05	576-J.G 10-26-05	A
1* (70)	D6	DIA. 0.343 +/- 0.005" (8X)	CALIPER	MFG QA		P-4901	.340	231-B.B 10-26-05	576-J.G 10-26-05	A
1* (80)	D6	⊕ ∅0.012 A B C - D (8X)	INDICATOR	MFG QA		P-4898	WITHIN /.003	231-B.B 10-26-05	576-J.G 10-26-05	A

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE122-019-1A - Item: 431

Workorder: 65678/8-0 Sub:107 Op:30

Part: SE122-019-1A - PORT 12A SEAL RETAINER - SE120-004-3 / SE122-019-1A PORT 12A SEAL RETAINER

Drawing ID: SE122-019 Rev: 1		INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*			MASTER GAGE	QA		J-1270	LESS THAN 1.02	503-B.H		
(10)		Magnetic Permeability 1.02 Max						11-01-05		

A



Quality Assurance Documentation for Part ID: SE122-019-1B - Item: 433

Workorder: 65678/8-0 Sub:120 Op:20

Part: SE122-019-1B - PORT 12B SEAL RETAINER - SE120-004-3 / SE122-019-1B PORT 12B SEAL RETAINER

Drawing ID: SE122-019 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
1* (10)	F3	0.149 + 0 / - 0.008"	OD MICROMETER	MFG QA		P-3743	.1455 - .1485	445-J.PU 10-27-05	591-C.P 10-27-05	A
1* (20)	G4	0.54 +/- 0.010" (CONSTANT)	CALIPER	MFG QA		P-3738	.548	274-M. 10-26-05	591-C.P 10-27-05	A
1* (30)	G3	75.0 deg. +/- 0 deg. 15' (2X)		MFG QA		ZOLLER	75.	274-M. 10-26-05	591-C.P 10-27-05	A
1* (40)	F4	63 MICRO-INCH SURFACE FINISH (2X)	PROFILOMETER	MFG QA		J-1181	43.6	274-M. 10-26-05	591-C.P 10-27-05	A
1* (50)	D6	DIA. 0.187 (+/- 0.005") (8X)	PIN GAGE	MFG QA		J-667	.187	274-M. 10-26-05	591-C.P 10-27-05	A
1* (60)		0.094 +/- 0.005 (8X)	DEPTH MICROMET	MFG QA	D6	P-4363	.093	274-M. 10-26-05	591-C.P 10-27-05	A
1* (70)	D6	DIA. 0.343 +/- 0.005" (8X)	PIN GAGE	MFG QA		J-668	.343	274-M. 10-26-05	591-C.P 10-27-05	A
1* (80)	D6	⊕ ∅0.012 A B C - D (8X)	INDICATOR	MFG QA		P-4964	.003	274-M. 10-26-05	591-C.P 10-27-05	A

Quality Assurance Documentation for Part ID: SE122-019-1B - Item: 434

Workorder: 65678/8-0 Sub:120 Op:30

Part: SE122-019-1B - PORT 12B SEAL RETAINER - SE120-004-3 / SE122-019-1B PORT 12B SEAL RETAINER

Drawing ID: SE122-019 Rev: 1		INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*			MASTER GAGE	QA		J-1270	LESS THAN 1.02	503-B.H		
(10)		Magnetic Permeability 1.02 Max						11-01-05		

A



104 ENTERPRISE DRIVE  
P.O. BOX 419  
READING, MICHIGAN 49274  
(517) 283-3811  
FAX (517) 283-3696

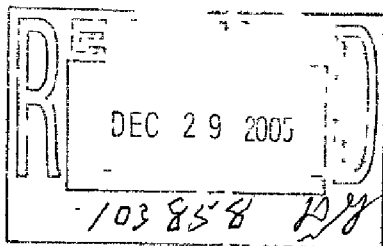
### CERTIFICATE OF CONFORMANCE

DATE: December 29, 2005  
TO: Major Tool & Machine, Inc.  
ATTN: Dave Wilkinson

Part Number: SE122-049-1A  
Purchase Order #: P05-06549  
Part Name: Port 4A Flange  
Work Order #: RL 10101  
Quantity: One (1)

This is to certify that the above order was processed in accordance with accepted industry standards; polished bottom and sides of groove to a 16 micro-inch surface finish.

Signature: *[Handwritten Signature]* Title: *President* Date: *12-29-05*



DEC 30 2005

*Line 1*

Quality Assurance Documentation for Part ID: SE122-049-1A - Item: 436

Workorder: 65678/8-0 Sub:8 Op:118

Part: SE122-049-1A - PORT 4A SUB-ASSEMBLY - PORT 4A SUB-ASSEMBLY (PERSONNEL ACCESS PORT)

Drawing ID: SE122-049 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
1* (10)	G5	0.94 +/- 0.010"	CALIPER	QA		J-707	0.943-0.947	212-J.LE 12-30-05			A
1* (20)	G5	R.005 MIN. (2X)	RADIUS GAGE	QA		R-25	0.010-0.015	212-J.LE 12-30-05			A
1* (30)	H5	.153 + .000/- .003"	DEPTH MICROMET	QA		J-520	.1527-.1505	212-J.LE 12-30-05			A
1* (40)	G5	16 MICRO-INCH RA SURFACE FINISH	PROFILOMETER	QA		J-1152	12-8	212-J.LE 12-30-05			A
1* (50)	G5	63 MICRO-INCH RA SURFACE FINISH	PROFILOMETER	QA		J-1152	20-25	212-J.LE 12-30-05			A
1* (60)	F4	R.03 2X	RADIUS GAGE	QA		R-25	0.031	212-J.LE 12-30-05			A

Quality Assurance Documentation for Part ID: SE122-049-1A - Item: 437

Workorder: 65678/8-0 Sub:126 Op:20

Part: SE122-049-1A - NCSX VVSA PORT 4A FLANGE - SE120-004-5 / SE122-049A NCSX VVSA PORT 4A FLANGE

Drawing ID: SE122-049 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
1* (10)		R4.33 +/- 0.010" (4x)	CMM	MFG QA		00064	4.327	688-S.A 08-16-05	591-C.P 08-16-05	A
1* (20)		23.66 +/- 0.010"	CALIPER	MFG QA		J-549	23.657	688-S.A 08-12-05	591-C.P 08-16-05	A
1* (30)		34.66 +/-0.010"	CALIPER	MFG QA		J-549	34.655	688-S.A 08-12-05	591-C.P 08-16-05	A
1* (40)		40.00 +/- 0.010"	CALIPER	MFG QA		J-549	39.995	688-S.A 08-12-05	591-C.P 08-16-05	A
1* (50)		29.00 +/- 0.010"	CALIPER	MFG QA		J-549	29.000	688-S.A 08-12-05	591-C.P 08-16-05	A
1* (60)		R7.00 +/- 0.010" (4x)	CMM	MFG QA		00064	6.997	688-S.A 08-16-05	591-C.P 08-16-05	A



# Certificate of Conformance

## EXOTIC METAL TREATING INC.

MC111897

6234 E. Hanna Avenue • Indianapolis, Indiana

Certificate # 50353

Vendor Code # 107576  
**NADCAP**

P.O. # P05-05154

Exotic Metal Treating Inc. hereby certifies that all materials used in the manufacture of parts CONFORMS to the material and/or manufacturing specifications indicated in drawings or specifications as called for on purchase order referenced hereon. Test reports are on file with us or with our suppliers for examination and indicate conformance with the applicable requirements. The parts listed below are processed in accordance with the drawings or specifications called for on referenced purchase order that are current on the date on which the order was accepted. Pertinent details of the work performed are on file at this facility under the process heat number listed hereon.

HEAT # 05-1647

DATE SHIPPED 9-2-05

**QUANTITY**

**DESCRIPTION**

2 PCS	SE122-049-1B
	JOB #65678-145/8, 65678-145/9 SEQ #50
2 PCS	SE122-049-1A
	JOB #65678-126/8, 65678-126/9 SEQ #50
	MATERIAL: 316 SS

SOLUTION ANNEALED PER AMS-2759-4 REV: B IN VACUUM  
AT 2000°F ± 25°F FOR 90 MINUTES MINIMUM & GAS FAN COOLED.



SEP 12 2005



100295 JH

Sworn and subscribed to before me...

09-2-05

Notary Public Morgan County, State of Indiana

My commission expires 9-30-09

*[Signature]*

(Name)

*[Signature]*

(Title)





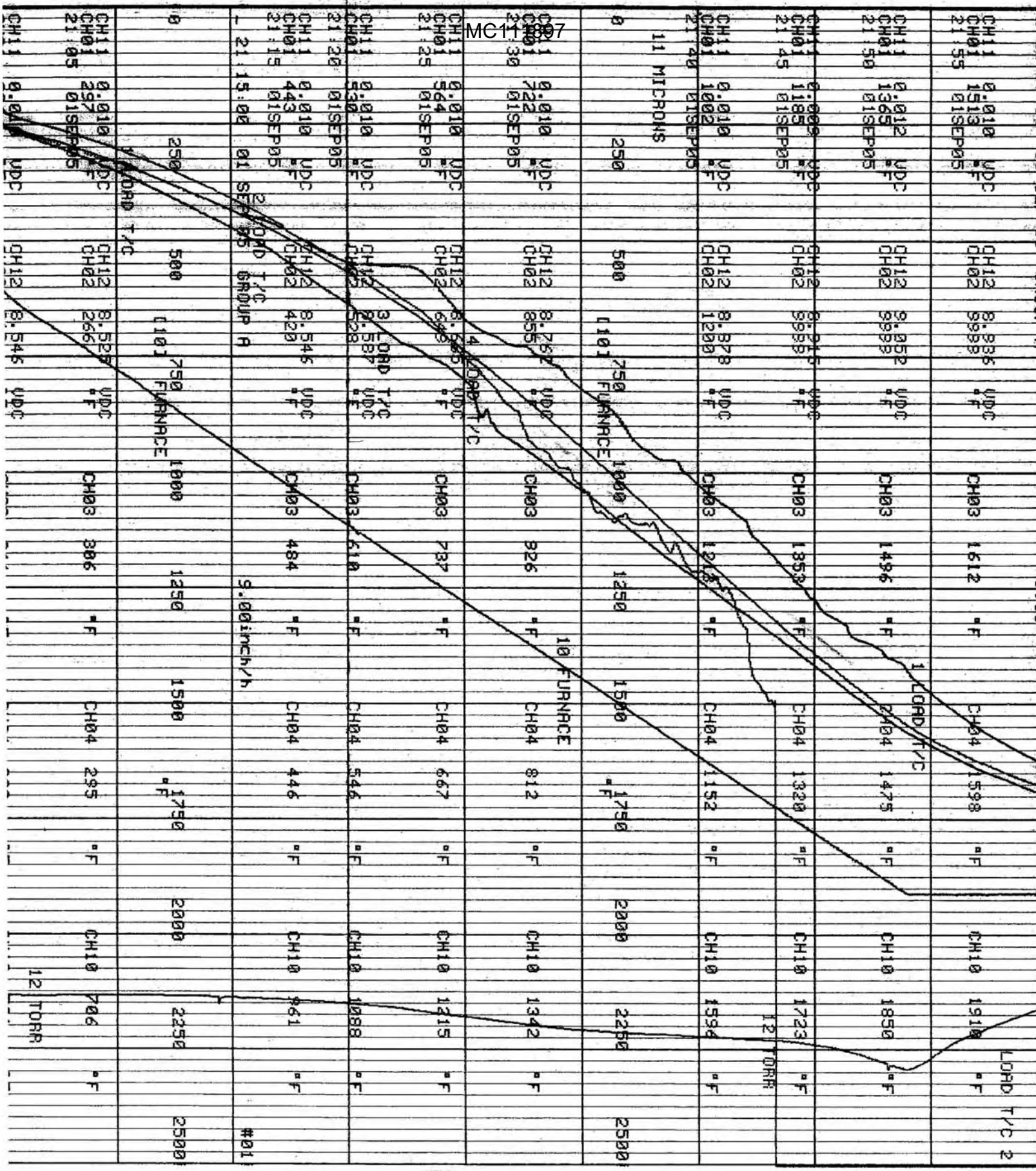




Table with columns: Channel (CH01-CH10), Date (01SEP85), Time (00:00-02:45), Value, and Unit (VDC, WDC, F). Includes a graph labeled '3/10RD T/C' and '12 TORR'.

23:35	01SEP05	CH11 0:010 UDC CH01 1998 *F	CH12 8:228 UDC CH02 2000 *F	CH03 2005 *F	CH04 2006 *F	CH10 2001 *F	4 LOAD T/C	#01
23:30	01SEP05	CH11 0:010 UDC CH01 1998 *F	CH12 8:228 UDC CH02 2000 *F	CH03 2005 *F	CH04 2006 *F	CH10 2001 *F	4 LOAD T/C	#01
23:30	01SEP05	CH11 0:010 UDC CH01 1998 *F	CH12 8:228 UDC CH02 2000 *F	CH03 2005 *F	CH04 2006 *F	CH10 2001 *F	4 LOAD T/C	#01
23:25	01SEP05	CH11 0:010 UDC CH01 1997 *F	CH12 8:238 UDC CH02 1998 *F	CH03 2005 *F	CH04 2005 *F	CH10 2001 *F	3 LOAD T/C	#01
23:20	01SEP05	CH11 0:010 UDC CH01 1997 *F	CH12 8:248 UDC CH02 1999 *F	CH03 2004 *F	CH04 2005 *F	CH10 2001 *F	2 LOAD T/C	#01
0	250	CH11 0:010 UDC CH01 1994 *F	CH12 8:284 UDC CH02 1997 *F	CH03 2002 *F	CH04 2003 *F	CH10 2001 *F	1 LOAD T/C	2500
0	500	CH11 0:010 UDC CH01 1992 *F	CH12 8:311 UDC CH02 1996 *F	CH03 2000 *F	CH04 2001 *F	CH10 2001 *F	12 TDRR	2500
0	750	CH11 0:010 UDC CH01 1999 *F	CH12 8:338 UDC CH02 1993 *F	CH03 1998 *F	CH04 1998 *F	CH10 2001 *F	10 FURNACE	2500
0	1000	CH11 0:010 UDC CH01 1999 *F	CH12 8:348 UDC CH02 1990 *F	CH03 1994 *F	CH04 1994 *F	CH10 2002 *F	10 FURNACE	2500
0	1250	CH11 0:010 UDC CH01 1978 *F	CH12 8:358 UDC CH02 1988 *F	CH03 1990 *F	CH04 1990 *F	CH10 2003 *F	4 LOAD T/C	2500
0	1500	CH11 0:010 UDC CH01 1978 *F	CH12 8:358 UDC CH02 1988 *F	CH03 1990 *F	CH04 1990 *F	CH10 2003 *F	4 LOAD T/C	2500
0	1750	CH11 0:010 UDC CH01 1978 *F	CH12 8:358 UDC CH02 1988 *F	CH03 1990 *F	CH04 1990 *F	CH10 2003 *F	4 LOAD T/C	2500
0	2000	CH11 0:010 UDC CH01 1978 *F	CH12 8:358 UDC CH02 1988 *F	CH03 1990 *F	CH04 1990 *F	CH10 2003 *F	4 LOAD T/C	2500
0	2250	CH11 0:010 UDC CH01 1978 *F	CH12 8:358 UDC CH02 1988 *F	CH03 1990 *F	CH04 1990 *F	CH10 2003 *F	4 LOAD T/C	2500
0	2500	CH11 0:010 UDC CH01 1978 *F	CH12 8:358 UDC CH02 1988 *F	CH03 1990 *F	CH04 1990 *F	CH10 2003 *F	4 LOAD T/C	2500



D101 FURNACE

MICRONS 11

CH11	10.23	UDC	CH12	10.24	UDC	CH03	1968	F	CH04	1974	F	CH10	1794	F
CH01	1949	F	CH02	1790	F									
00.25	02SEP05													

CH11	0.010	UDC	CH12	7.383	UDC	CH03	2005	F	CH04	2005	F	CH10	2000	F
CH01	1998	F	CH02	2000	F									
00.25	02SEP05													

CH11	0.010	UDC	CH12	7.412	UDC	CH03	2005	F	CH04	2005	F	CH10	2000	F
CH01	1998	F	CH02	2000	F									
00.20	02SEP05													

CH11	0.010	UDC	CH12	7.453	UDC	CH03	2005	F	CH04	2005	F	CH10	2000	F
CH01	1998	F	CH02	2000	F									
00.15	02SEP05													

CH11	0.010	UDC	CH12	7.532	UDC	CH03	2005	F	CH04	2005	F	CH10	2000	F
CH01	1998	F	CH02	2000	F									
00.10	02SEP05													

CH11	0.010	UDC	CH12	7.776	UDC	CH03	2005	F	CH04	2005	F	CH10	2000	F
CH01	1998	F	CH02	2000	F									
00.00	02SEP05													

CH11	0.010	UDC	CH12	7.837	UDC	CH03	2005	F	CH04	2005	F	CH10	2000	F
CH01	1998	F	CH02	1999	F									
00.00	02SEP05													

CH11	0.010	UDC	CH12	7.874	UDC	CH03	2005	F	CH04	2005	F	CH10	2000	F
CH01	1998	F	CH02	2000	F									
00.00	02SEP05													

CH11	0.010	UDC	CH12	7.964	UDC	CH03	2005	F	CH04	2005	F	CH10	2000	F
CH01	1998	F	CH02	1999	F									
00.00	02SEP05													

CH11	0.010	UDC	CH12	7.964	UDC	CH03	2005	F	CH04	2005	F	CH10	2000	F
CH01	1998	F	CH02	1999	F									
00.00	02SEP05													

CH11	0.010	UDC	CH12	7.964	UDC	CH03	2005	F	CH04	2005	F	CH10	2000	F
CH01	1998	F	CH02	1999	F									
00.00	02SEP05													

CH11	0.010	UDC	CH12	7.964	UDC	CH03	2005	F	CH04	2005	F	CH10	2000	F
CH01	1998	F	CH02	1999	F									
00.00	02SEP05													

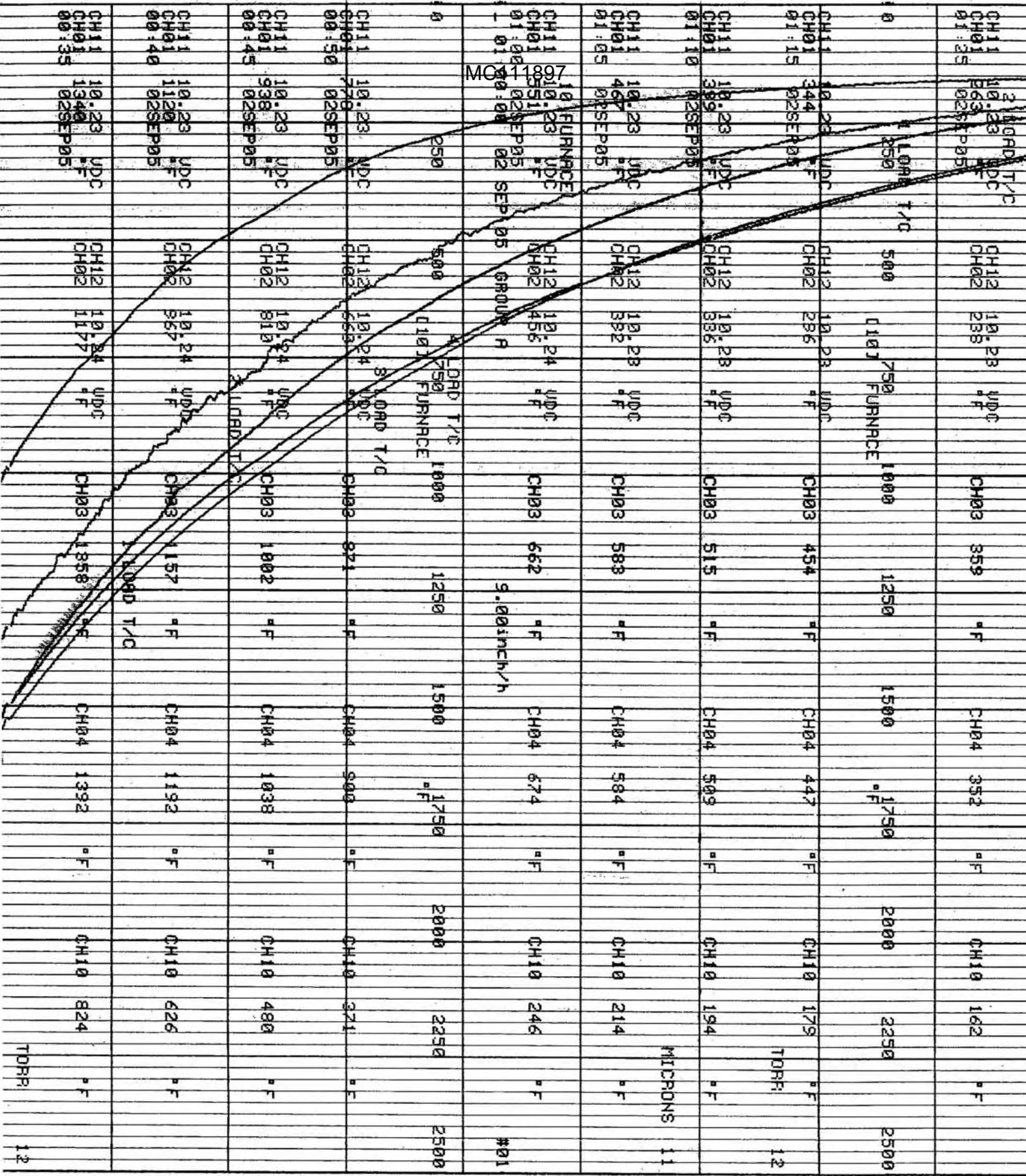
CH11	0.010	UDC	CH12	7.964	UDC	CH03	2005	F	CH04	2005	F	CH10	2000	F
CH01	1998	F	CH02	1999	F									
00.00	02SEP05													

CH11	0.010	UDC	CH12	7.964	UDC	CH03	2005	F	CH04	2005	F	CH10	2000	F
CH01	1998	F	CH02	1999	F									
00.00	02SEP05													

CH11	0.010	UDC	CH12	7.964	UDC	CH03	2005	F	CH04	2005	F	CH10	2000	F
CH01	1998	F	CH02	1999	F									
00.00	02SEP05													

CH11	0.010	UDC	CH12	7.964	UDC	CH03	2005	F	CH04	2005	F	CH10	2000	F
CH01	1998	F	CH02	1999	F									
00.00	02SEP05													

MC111897



Time	Temp (°F)	Channel
01:25	1823	CH01
01:25	1663	CH02
01:25	1025	CH03
01:25	1025	CH04
01:25	824	CH10
01:25	250	CH11
01:25	250	CH12
01:25	250	CH13
01:25	250	CH14
01:25	250	CH15
01:25	250	CH16
01:25	250	CH17
01:25	250	CH18
01:25	250	CH19
01:25	250	CH20
01:25	250	CH21
01:25	250	CH22
01:25	250	CH23
01:25	250	CH24
01:25	250	CH25
01:25	250	CH26
01:25	250	CH27
01:25	250	CH28
01:25	250	CH29
01:25	250	CH30
01:25	250	CH31
01:25	250	CH32
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01:25	250	CH34
01:25	250	CH35
01:25	250	CH36
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01:25	250	CH38
01:25	250	CH39
01:25	250	CH40
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01:25	250	CH43
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01:25	250	CH45
01:25	250	CH46
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01:25	250	CH93
01:25	250	CH94
01:25	250	CH95
01:25	250	CH96
01:25	250	CH97
01:25	250	CH98
01:25	250	CH99
01:25	250	CH100

MC111897

CH01	18:23	UDC	CH02	12:28	UDC	CH03	214	"F"	CH04	210	"F"	CH10	141	"F"
CH01	18:53	FURNACE	CH02	159	"F"	CH03	258	"F"	CH04	253	"F"	CH10	146	"F"
CH01	19:03	UDC	CH02	178	"F"	CH03	288	"F"	CH04	281	"F"	CH10	150	"F"
CH01	19:23	UDC	CH02	191	"F"	CH03	322	"F"	CH04	315	"F"	CH10	156	"F"
CH01	19:35	FURNACE	CH02	215	"F"	CH03	322	"F"	CH04	315	"F"	CH10	156	"F"
CH01	20:28	FURNACE	CH02	215	"F"	CH03	322	"F"	CH04	315	"F"	CH10	156	"F"
CH01	21:00	FURNACE	CH02	215	"F"	CH03	322	"F"	CH04	315	"F"	CH10	156	"F"
CH01	21:40	FURNACE	CH02	215	"F"	CH03	322	"F"	CH04	315	"F"	CH10	156	"F"
CH01	22:00	FURNACE	CH02	215	"F"	CH03	322	"F"	CH04	315	"F"	CH10	156	"F"
CH01	22:30	FURNACE	CH02	215	"F"	CH03	322	"F"	CH04	315	"F"	CH10	156	"F"
CH01	23:00	FURNACE	CH02	215	"F"	CH03	322	"F"	CH04	315	"F"	CH10	156	"F"
CH01	23:30	FURNACE	CH02	215	"F"	CH03	322	"F"	CH04	315	"F"	CH10	156	"F"
CH01	24:00	FURNACE	CH02	215	"F"	CH03	322	"F"	CH04	315	"F"	CH10	156	"F"



104 ENTERPRISE DRIVE  
P.O. BOX 419  
READING, MICHIGAN 49274  
(517) 283-3811  
FAX (517) 283-3696

### CERTIFICATE OF CONFORMANCE

DATE: December 29, 2005  
TO: Major Tool & Machine, Inc.  
ATTN: Dave Wilkinson

Part Number: SE122-049-1B  
Purchase Order #: P05-06550  
Part Name: Port 4B Flange  
Work Order #: RL 10101  
Quantity: One (1)

This is to certify that the above order was processed in accordance with accepted industry standards; polished bottom and sides of groove to a 16 micro-inch surface finish.

Signature: *[Handwritten Signature]* Title: *President* Date: *12-29-05*

DEC 29 2005  
*103859 PJ*



DEC 30 2005

*line 1*



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE122-049-1B - Item: 440

Workorder: 65678/8-0 Sub:9 Op:118

Part: SE122-049-1B - PORT 4B SUB-ASSEMBLY - PORT 4B SUB-ASSEMBLY (PERSONNEL ACCESS PORT)

Drawing ID: SE122-049 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
1* (10)	G5	0.94 +/- 0.010"	CALIPER	QA		P-2056	.940	503-B.H 12-30-05			A
1* (20)	G5	R.005 MIN. (2X)	RADIUS GAGE	QA		R-25	.005	503-B.H 12-30-05			A
1* (30)	H5	.153 + .000/- .003"	DEPTH MICROMET	QA		P-5018	.150/.1515	503-B.H 12-30-05			A
1* (40)	G5	16 MICRO-INCH RA SURFACE FINISH	PROFILOMETER	QA		J-1152	12	503-B.H 12-30-05			A
1* (50)	G5	63 MICRO-INCH RA SURFACE FINISH	PROFILOMETER	QA		J-1152	20	503-B.H 12-30-05			A
1* (60)	F4	R.03 2X	RADIUS GAGE	QA		R-25	.030	503-B.H 12-30-05			A

Quality Assurance Documentation for Part ID: SE122-049-1B - Item: 441

Workorder: 65678/8-0 Sub:145 Op:20

Part: SE122-049-1B - NCSX VVSA PORT 4B FLANGE -

Drawing ID: SE122-049 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
1* (10)		R4.33 +/- 0.010" (4x)	CMM	MFG QA		00064	4.323-4.328	212-J.LE 08-15-05	591-C.P 08-15-05	A
1* (20)		23.66 +/- 0.010"	CMM	MFG QA		00064	23.655	212-J.LE 08-15-05	591-C.P 08-15-05	A
1* (30)		34.66 +/-0.010"	CMM	MFG QA		00064	34.653	212-J.LE 08-15-05	591-C.P 08-15-05	A
1* (40)		40.00 +/- 0.010"	CMM	MFG QA		00064	40.004	212-J.LE 08-15-05	591-C.P 08-15-05	A
1* (50)		29.00 +/- 0.010"	CMM	MFG QA		00064	28.998	212-J.LE 08-15-05	591-C.P 08-15-05	A
1* (60)		R7.00 +/- 0.010" (4x)	CMM	MFG QA		00064	6.997	212-J.LE 08-15-05	591-C.P 08-15-05	A



Quality Assurance Documentation for Part ID: SE122-057-1A - Item: 445

Workorder: 65678/8-0 Sub:131 Op:20

Part: SE122-057-1A - PORT 4A SEAL RETAINER - SE122-057-1A PORT 4A SEAL RETAINER

Drawing ID: SE122-019 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
1* (10)	F3	0.149 + 0 / - 0.008"	OD MICROMETER	MFG QA		P-4485	.149-.151 (ACCEPT AFTER R.W. ON N.C. 18321-.144)	854-R.U 07-29-06	591-C.P 10-03-05	A
1* (20)	G4	0.54 +/- 0.010" (CONSTANT)	CALIPER	MFG QA		P-4483	.535-.545	315-C.L 10-02-05	591-C.P 10-03-05	A
1* (30)	G3	75.0 deg. +/- 0 deg. 15' (2X)		MFG QA		ZOLLER	74.98	315-C.L 10-02-05	591-C.P 10-03-05	A
1* (40)	F4	63 MICRO-INCH SURFACE FINISH (2X)		MFG QA			40	591-C.P 10-03-05	591-C.P 10-03-05	A
1* (50)	D6	DIA. 0.187 (+/- 0.005") (8X)	PIN GAGE	MFG QA		J-667	.183 GO .192 NOGO	315-C.L 10-02-05	591-C.P 10-03-05	A
1* (60)	D6	0.094 +/- 0.005 (8X)	DEPTH MICROMET	MFG QA		P-4481	.09-.097	315-C.L 10-02-05	591-C.P 10-03-05	A
1* (70)	D6	DIA. 0.343 +/- 0.005" (8X)	CALIPER	MFG QA		P-4483	.339-.341	315-C.L 10-02-05	591-C.P 10-03-05	A
1* (80)	D6	⊕ ∅0.012 A B C - D (8X)	INDICATOR MACHINE	MFG QA		P-4482 571	.003 MAX DEV.	315-C.L 10-02-05	591-C.P 10-03-05	A

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE122-057-1A - Item: 446

Workorder: 65678/8-0 Sub:131 Op:30

Part: SE122-057-1A - PORT 4A SEAL RETAINER - SE122-057-1A PORT 4A SEAL RETAINER

Drawing ID: SE122-019 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*			MASTER GAGE	QA		J-1270	LESS THAN 1.02	503-B.H		
(10)		Magnetic Permeability 1.02 Max						11-15-05		

A

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE122-057-1A - Item: 447

Workorder: 65678/8-0 Sub:292 Op:10

Part: SE122-057-1A - REWORK / REPAIR PER N/C - N/C # \_\_\_\_\_

Drawing ID: SE122-057 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
1* (10)	F3	0.149 +0/- .008"	OD MICROMETER	MFG QA		P-4957	.143-.145	274-M. 10-25-05	591-C.P 10-25-05	

A

Quality Assurance Documentation for Part ID: SE122-057-1B - Item: 448

Workorder: 65678/8-0 Sub:150 Op:20

Part: SE122-057-1B - PORT 4B SEAL RETAINER -

Drawing ID: SE122-019 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
1* (10)	F3	0.149 + 0 / - 0.008"	OD MICROMETER	MFG QA		P-4485	.148 -.151 (ACCEPT AFTER R.W. ON N.C . # 18324-.145)	854-R.U 07-29-06	591-C.P 10-03-05	A
1* (20)	G4	0.54 +/- 0.010" (CONSTANT)	CALIPER	MFG QA		P-4483	.535-.545	315-C.L 10-03-05	591-C.P 10-03-05	A
1* (30)	G3	75.0 deg. +/- 0 deg. 15' (2X)		MFG QA		ZOLLER	74.98	315-C.L 10-03-05	591-C.P 10-03-05	A
1* (40)	F4	63 MICRO-INCH SURFACE FINISH (2X)		MFG QA		VISUAL	40	445-J.PU 10-03-05	591-C.P 10-03-05	A
1* (50)	D6	DIA. 0.187 (+/- 0.005") (8X)	PIN GAGE	MFG QA		J-667	.182 GO .192 NOGO	315-C.L 10-03-05	591-C.P 10-03-05	A
1* (60)	D6	0.094 +/- 0.005 (8X)	DEPTH MICROMET	MFG QA		P-4481	.09-.095	315-C.L 10-03-05	591-C.P 10-03-05	A
1* (70)	D6	DIA. 0.343 +/- 0.005" (8X)	CALIPER	MFG QA		P-4483	.339-.341	315-C.L 10-03-05	591-C.P 10-03-05	A
1* (80)	D6	⊕ ∅0.012 A B C - D (8X)	INDICATOR MACHINE	MFG QA		P-4482 571	.003 MAX DEV.	315-C.L 10-03-05	591-C.P 10-03-05	A

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE122-057-1B - Item: 449

Workorder: 65678/8-0 Sub:150 Op:30

Part: SE122-057-1B - PORT 4B SEAL RETAINER -

Drawing ID: SE122-019 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*			MASTER GAGE	QA		J-1270	LESS THAN 1.02	503-B.H		
(10)		Magnetic Permeability 1.02 Max						11-15-05		

A

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE122-057-1B - Item: 450

Workorder: 65678/8-0 Sub:293 Op:10

Part: SE122-057-1B - REWORK / REPAIR PER N/C - N/C # \_\_\_\_\_

Drawing ID: SE122-057 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
1* (10)	F3	0.149 +0/-.008"	OD MICROMETER	MFG QA		P-4957	.144-.146	274-M. 10-25-05	854-R.U 10-25-05	

A

Quality Assurance Documentation for Part ID: SE122-072-1 - Item: 451

Workorder: 65678/8-0 Sub:82 Op:20

Part: SE122-072-1 - PORT NB FLANGE - SE120-004-8 / SE122-072-1 PORT NB FLANGE

Drawing ID: SE122-072 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
1* (10)	G8	R3.53 +/- 0.01"	CMM	MFG QA		00064	5.532	212-J.LE 08-23-05	212-J.LE 08-23-05	A
1* (20)	G7	R3.53 +/- 0.01"	CMM	MFG QA		00064	3.533	212-J.LE 08-23-05	212-J.LE 08-23-05	A
1* (30)	G7	2.75 +/- 0.01" CONSTANT	OD MICROMETER	MFG QA		P-3883	RANGE 2.753 / 2.756	184-T.HI 08-20-05	212-J.LE 08-23-05	A
1* (40)	F7	R5.53 +/- 0.01"	CMM	MFG QA		00064	3.523	212-J.LE 08-23-05	212-J.LE 08-23-05	A
1* (60)	E8	R3.53 +/- 0.01"	CMM	MFG QA		00064	3.531	212-J.LE 08-23-05	212-J.LE 08-23-05	A
1* (70)	E7	R3.53 +/- 0.01"	CMM	MFG QA		00064	3.523	212-J.LE 08-23-05	212-J.LE 08-23-05	A
1* (80)		125 MICRO-INCH RA SURFACE FINISH		MFG QA		VISUAL	63 OR BETTER	184-T.HI 08-20-05	212-J.LE 08-23-05	A
1* (90)	F8	R5.53 +/- 0.01"	CMM	MFG QA		00064	3.529	212-J.LE 08-23-05	212-J.LE 08-23-05	A

4502884-1 200



Jessop Specialty Products  
500 Green Street  
Washington, PA 15301

CERTIFIED MATERIAL  
TEST REPORT

Ship ROLLED ALLOYS  
To 125 W STERNS RD  
TEMPERANCE MI

ROLLED ALLOYS INC  
125 W STERNS RD  
P O BOX 310  
TEMPERANCE MI 48182

OUR ORDER NO. QP5081340  
YOUR ORDER NO. T51457  
MEMO NO. 274320-01 LCS  
DATE 05/20/2005  
SALESMAN NO. 584

*P.M. Claitor*  
P. M. Claitor - Product Quality Engineer



JESSOP UNS N06625 ALLOY HRAP  
ASTM B443-00 GRADE 1 ASME SB-443-04 GRADE 1 AMS 5599F  
S400E S1000E

Heat Slip Lot No Size Pcs Weight  
512120L04 19006 A 154296 1.5000 x 72.0000 x 160.0000 1 5414

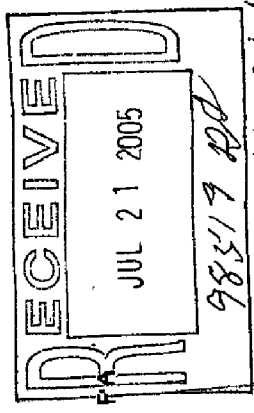
Heat C MN P S SI NI CR MO CO CU TI CB N AL FE  
512120L04 .073 .080 .009 .0003 .17 60.80 22.08 8.56 .07 .090 .16 3.41 .014 .05 4.39

TA  
512120L04 .003

Lot No Gauge 1.5000  
Yield Strength 65.5 KSI  
Tensile Strength 124.0 KSI  
Elong 40.0  
Red. of Area 37.0  
Hardness BHN207

MATERIAL IS OF USA MELT AND MANUFACTURE  
MATERIAL WAS PRODUCED WITHOUT KNOWN CONTACT WITH MERCURY  
MATERIAL WAS NOT WELD REPAIRED  
MATERIAL WAS ANNEALED ABOVE 1600F AND AIR COOLED  
NADCAP CERT #106684 ALLEGHENY LUDLUM BRACKENRIDGE, PA EXPIRES 4/30 YEARLY  
NADCAP: CHEMICAL LAB-TECHNICAL CENTER, NATRONA HEIGHTS, PA; MECHANICAL LAB-LEECHBURG,  
DIN 50049 3.1.1.B AND EN 10204 3.1.1.B CERTIFICATE

JUL 22 2005



**ROLLED ALLOYS**

Certification of Conformance: We certify that the above material meets all requirements of the purchase order and applicable specifications 18182

Customer: MAJOR TOOLING MACHINE  
P.O. # PMS-83834 IN Shpr-W41125  
1-1/2" PLATE 625 58 X 71"  
Tracer No. [119068] Heat No. [512120L04]  
Date: 07/19/2005 1 PC

ROLLED ALLOYS QUALITY ASSURANCE  
APPROVED *[Signature]*  
DATE 6-8-05  
Lines 1-4  
MTM 816

PAGE 1 FINAL PAGE

EXCEPT AS OTHERWISE NOTED, THIS MATERIAL HAS BEEN MANUFACTURED AND TESTED IN ACCORDANCE WITH THE LISTED SPECIFICATIONS AND RESULTS CONFORM TO THE SPECIFICATION AND ORDER REQUIREMENTS.





**Allegany Ludlum** Jessop Plate Products Division  
An Allegany Technologies Company

500 Green Street CERTIFIED MATERIAL TEST REPORT  
Washington, Pennsylvania 15301

Bill to:  
PLATE PROD DIV / A-L  
1201 VALLEY ROAD  
COATESVILLE PA

Shipto:  
PLATE PROD DIV / A-L  
1201 VALLEY ROAD  
COATESVILLE PA

19320

19320

PHIL CLADITIS  
Quality Assurance Representa

Memo No: 260311-00

Our Order no: RW4910400  
Your Order No: M E M G  
Date: 09/03/2004  
DUAL CERT

ALC 316/316L STAINLESS HRAP  
ASTM A240-04a ASME SA-240-01 ASTM A480-02 ASME SA-480-01  
AMS 5507F (316L) AMS 5524K (316) ASTM A666-03 COND A CHEM/PHYS TO  
ASTM A312-02 ASME SA-312-01 ASTM A479-02 ASME SA-479-01 ASTM A262-02  
PRACTICE E SCREEN PRAC A

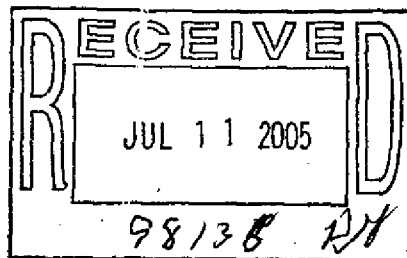
Heat Slip Lot No Size Pcs Weight  
818102 34967 A 143182 1.5000 x 83.0000 x 260.0000 1 9488 GV-STOCK

Heat C MN P S SI NI CR MO CO CU N  
818102 .018 1.57 .027 .0004 .31 10.14 16.38 2.10 .25 .37 .069

Lot No Gauge Yield Strength Tensile Strength Elong Red. of Area Hardness Bend Corrosion Grain Siz  
143182 1.5000 33.9 KSI 81.5 KSI 61.0 81.0 BHN146 OK

MATERIAL WAS NOT WELD REPAIRED  
MATERIAL WAS PRODUCED WITHOUT KNOWN CONTACT WITH MERCURY  
MATERIAL WAS SOLUTION ANNEALED (HEAT TREATED) ABOVE 1900F AND WATER QUENCHED  
DIN 50049 3.1.B AND EN 10204 3.1.B CERTIFICATE  
MATERIAL IS OF USA MELT AND MANUFACTURE

JUL 11 2005



TRACER# 109293

lines ~~17-24~~  
13-18

98,42  
lines 25-30

ROLLED AND LOYS QUALITY ASSURANCE  
APPROVED M. Rain  
DATE: 9/23/04

PAGE 1 FINAL PAGE

EXCEPT AS OTHERWISE NOTED, THIS MATERIAL HAS BEEN MANUFACTURED AND TESTED IN ACCORDANCE WITH THE LISTED SPECIFICATIONS AND RESULTS CONFORM TO THE SPECIFICATION AND ORDER REQUIREMENTS. THE ABOVE INFORMATION HAS BEEN REPRODUCED FROM THE ORIGINAL CERTIFIED MATERIAL TEST REPORT.

ORIGINAL



**Allegheny Ludlum** Jessop Plate Products Division  
An Allegheny Technologies Company

1201 Valley Road  
Coatesville, Pennsylvania 19320

CERTIFICATE OF CONFORMANCE

Our Order no: GU-098284  
Your Order No: J06587  
Memo No: 4261130-00  
Date: 09/15/2004  
516

Bill to:  
ROLLED ALLOYS INC  
125 W STERNS RD  
P O BOX 310  
TEMPERANCE MI

48182

Ship to:  
ROLLED ALLOYS INC  
9818 EAST HARDY ROAD  
HOUSTON TX

77093

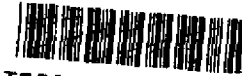
*Robert Campagna*  
Quality Assurance Representat:

ALC T-316/316L DUAL CERT HRAP STAINLESS  
ASTM A240-02 ASME SA240-01  
79" WIDE ROUGHING MILL EDGE PLATE

Item	Grade	Heat No	Slip	Size	Weight	Mill Cert	Ord
001	316L			1.5000 79.0000 WID 235.0000 LEN	1	LBS	
				PN:530034299001			
		818102	34967 A	1.5000 79.0000	1	8166 260311-00	Shi
				ITEM TOTAL:	1	8166	
				TOTAL ORDER:	1	8166	



JUL 11 2005



TRACER# 109293

CMTR (MANUFACTURER)  
 ULTRASONIC REPORT  
 OTHER

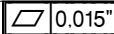
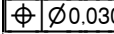
THE MATERIAL LISTED ABOVE IS SUPPLIED IN ACCORDANCE WITH THE ABOVE LISTED SPECIFICATIONS BASED ON THE REVIEW OF THE MATERIAL MANUFACTURER'S CERTIFIED MATERIAL TEST REPORT (ELECTRONICALLY EXCERPTED COPY ATTACHED) AND THE REQUIREMENTS OF THE PURCHASE ORDER.

ORIGINAL

Quality Assurance Documentation for Part ID: SE122-104-1A - Item: 455

Workorder: 65678/8-0 Sub:106 Op:20

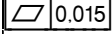
Part: SE122-104-1A - NCSX VVSA PORT 12A COVER ASSEMBLY - SE120-004-4 / SE122-104-1A NCSX VVSA PORT 12A COVER ASSEMBLY

Drawing ID: SE122-104 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
1* (10)	C8	 0.015" DATUM -A- FLATNESS	CMM	MFG QA		00064	0.002	212-J.LE 09-12-05	212-J.LE 09-12-05	A
1* (20)	G5	 0.030 A B C-D 0.531 +/-0.005" THRU (32X)	CMM	MFG QA		00064	0.531-0.533,0.014	212-J.LE 09-12-05	212-J.LE 09-12-05	A
1* (30)	G7	9.80 +/- 0.01" (2X)	INDICATOR	MFG QA		P-4964	9.8	274-M. 12-15-05	591-C.P 12-15-05	A
1* (40)	F8	R 4.69 +/- 0.01"	CMM	MFG QA		00064	4.688	212-J.LE 09-12-05	212-J.LE 09-12-05	A
1* (50)	F5	20 DEG. +/- 0 DEG. 15 MIN.	CMM	MFG QA		00064	20	212-J.LE 09-12-05	212-J.LE 09-12-05	A
1* (60)	F5	R 7.38 +/- 0.01"	CMM	MFG QA		00064	7.374	212-J.LE 09-12-05	212-J.LE 09-12-05	A
1* (80)	G4	1.25 +/- 0.01"	CALIPER	MFG QA		J-707	1.246-1.251	212-J.LE 09-12-05	212-J.LE 09-12-05	A
1* (90)	G3	0.63 +/- 0.01" (2X)	INDICATOR	MFG QA		P-3749	.630	274-M. 12-15-05	591-C.P 12-15-05	A
1* (100)	G3	DIA. 0.25 +/- 0.01" X 1.50 +/- 0.01" (2X)	PIN GAGE	MFG QA		J-667	GOOD	274-M. 12-15-05	591-C.P 12-15-05	A
1* (110)	F3	1.34 +/- 0.01" (2X)	CMM	MFG QA		00064	1.332	212-J.LE 09-12-05	212-J.LE 09-12-05	A
1* (120)	G4	1/8" NPT	THREAD PLUG GA	MFG QA		A-220	GOOD	274-M. 12-15-05	591-C.P 12-15-05	A
1* (130)	F3	DIA. 0.125 +/- 0.01" THRU TO 0.25 DIA (2X)	CMM	MFG QA		00064	0.125-0.127	212-J.LE 09-12-05	212-J.LE 09-12-05	A

Quality Assurance Documentation for Part ID: SE122-104-1A - Item: 456

Workorder: 65678/8-0 Sub:106 Op:50

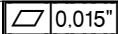
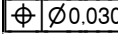
Part: SE122-104-1A - NCSX VVSA PORT 12A COVER ASSEMBLY - SE120-004-4 / SE122-104-1A NCSX VVSA PORT 12A COVER ASSEMBLY

Drawing ID: SE122-172 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
1* (10)	C7	16 MICRO-INCH RA SURFACE FINISH	PROFILOMETER	QA		J-825	13	854-R.U 12-30-05			A
Drawing ID: SE122-104 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
* (20)		Magnetic Permeability 1.02 MAX	MASTER GAGE	QA		J-1270	>1.02 LESS THAN 1.0 5 (REF. N.C. # 1766 4)	854-R.U 12-30-05			A
* (30)		 0.015 Datum -A- Flatness	INDICATOR	QA		J-622	.014	854-R.U 12-30-05			A

Quality Assurance Documentation for Part ID: SE122-104-1B - Item: 457

Workorder: 65678/8-0 Sub:117 Op:20

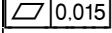
Part: SE122-104-1B - NCSX VVSA PORT 12B COVER ASSEMBLY - SE120-004-4 / SE122-104-1B NCSX VVSA PORT 12B COVER ASSEMBLY

Drawing ID: SE122-104 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
1* (10)	C8	 0.015" DATUM -A- FLATNESS	CMM	MFG QA		00064	0.002	212-J.LE 09-12-05	212-J.LE 09-12-05	A
1* (20)	G5	 0.030 A B C-D 0.531 +/-0.005" THRU (32X)	CMM	MFG QA		00064	.531-.533 ,0.018	212-J.LE 09-12-05	212-J.LE 09-12-05	A
1* (30)	G7	9.80 +/- 0.01" (2X)	INDICATOR	MFG QA		P-4469	9.8	274-M. 12-15-05	591-C.P 12-15-05	A
1* (40)	F8	R 4.69 +/- 0.01"	CMM	MFG QA		00064	4.687	212-J.LE 09-12-05	212-J.LE 09-12-05	A
1* (50)	F5	20 DEG. +/- 0 DEG. 15 MIN.	CMM	MFG QA		00064	20	212-J.LE 09-12-05	212-J.LE 09-12-05	A
1* (60)	F5	R 7.38 +/- 0.01"	CMM	MFG QA		00064	7.374	212-J.LE 09-12-05	212-J.LE 09-12-05	A
1* (80)	G4	1.25 +/- 0.01"	CALIPER	MFG QA		J-707	1.254-1.256	212-J.LE 09-12-05	212-J.LE 09-12-05	A
1* (90)	G3	0.63 +/- 0.01" (2X)	INDICATOR	MFG QA		P-3749	.630	274-M. 12-15-05	591-C.P 12-15-05	A
1* (100)	G3	DIA. 0.25 +/- 0.01" X 1.50 +/- 0.01" (2X)	PIN GAGE	MFG QA		J-667	GOOD	274-M. 12-15-05	591-C.P 12-15-05	A
1* (110)	F3	1.34 +/- 0.01" (2X)	CMM	MFG QA		00064	1.335	212-J.LE 09-12-05	212-J.LE 09-12-05	A
1* (120)	G4	1/8" NPT	THREAD PLUG GA	MFG QA		A-220	GOOD	274-M. 12-15-05	591-C.P 12-15-05	A
1* (130)	F3	DIA. 0.125 +/- 0.01" THRU TO 0.25 DIA (2X)	CMM	MFG QA		00064	.126	212-J.LE 09-12-05	212-J.LE 09-12-05	A

Quality Assurance Documentation for Part ID: SE122-104-1B - Item: 458

Workorder: 65678/8-0 Sub:117 Op:50

**Part: SE122-104-1B - NCSX VVSA PORT 12B COVER ASSEMBLY - SE120-004-4 / SE122-104-1B NCSX VVSA PORT 12B COVER ASSEMBLY**

Drawing ID: SE122-172 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
1* (10)	C7	16 MICRO-INCH RA SURFACE FINISH	PROFILOMETER	QA		J-825	13	854-R.U 12-30-05			A
Drawing ID: SE122-104 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
* (20)		Magnetic Permeability 1.02 MAX	MASTER GAGE	QA		J-1270	>1.02<1.05 (REF. N .C. 17664)	854-R.U 12-30-05			A
* (30)		 0.015 Datum -A- Flatness	INDICATOR	QA		J-622	.011	854-R.U 12-30-05			A



**METALLURGICAL TEST REPORT**

6870 Highway 42 East  
Ghent, KY 41045-9615  
(502) 347-6000

Certificate: 266390 01  
Customer: 2830 004

Mail To:  
ROLLED ALLOYS  
9818 EAST HARDY ROAD  
HOUSTON, TX 77093

Ship To:  
ROLLED ALLOYS  
9818 EAST HARDY ROAD  
HOUSTON, TX 77093

Date: 5/05/2005 Page: 1

Steel: 316/316L

Finish: HRAP

Corrosion: ASTM A262/C2a;180Bend-0k

Your Order: J07342

NAS Order: AN 0316945 01

**PRODUCT DESCRIPTION:**

STAINLESS STEEL PLATE, HOT ROLLED, ANNEALED AND PICKLED.  
ASTMA240/04a, 480/04a, 666/03, ASME SA240/04, SA480/04, SA666/04  
(X GRAIN), Q35766D-A X MG PERM, AMS5507E/AMS5524J X MFR  
UNS S31600 / UNS S31603

**REMARKS:**

Material free from mercury contamination. No weld repairs.  
EN 10204 3.1.B Q35763F Cond A  
\* Melted & Manufactured in the USA  
Minimum anneal temperature 1950 F  
EN 10204 3.1.B/DIN 50049

Product ID #	Coil #	Thickness	Width	Weight	-----Length-----	Mark	Pieces
0565X9 BB	* 0565X9 BB	1.5000	60.0000	6,260	PLATE 240.00	1	1

**CHEMICAL ANALYSIS**

Heat	C	CO	CR	CU	MB	MO	N	NI	P	S	SI
65X9	.018	.211	16.770	.458	1.623	2.114	.048	10.233	.032	.002	.290

**MECHANICAL PROPERTIES**

Product ID #	Coil #	Id	UTS	.2% YS	ELONG	Hard
		o i	KSI	KSI	%-2"	RB
		c r				
0565X9 BB	0565X9	F T	77.15	40.05	66.00	81.00



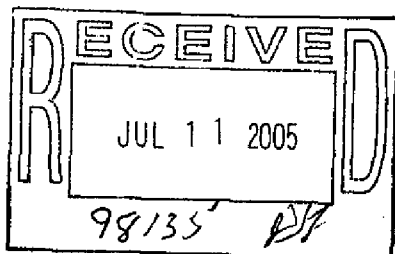
TRACER# 118248

ROLLED ALLOYS QUALITY ASSURANCE  
APPROVED M. Ramm  
DATE 5/18/05

QC ENGINEER Eric Hess

ERIC HESS

5/05/2005



Lines 19-24

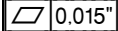
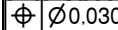


JUL 11 2005

Quality Assurance Documentation for Part ID: SE122-149-1A - Item: 460

Workorder: 65678/8-0 Sub:128 Op:20

Part: SE122-149-1A - PORT 4A COVER PLATE ASSEMBLY - SE120-004-7 / SE122-149-1A PORT 4A COVER PLATE ASSEMBLY

Drawing ID: SE122-149 Rev: 0			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
1* (10)	D5	 0.015" DATUM -A- FLATNESS	MACHINE INDICATOR	MFG QA		570 P-4760	WITHIN - .007	445-J.PU 12-06-05	591-C.P 12-06-05	A
1* (20)	F5	 0.030 A B C 0.531 +/-0.005" THRU (60X)	PIN GAGE	MFG QA		J-669	.531	274-M. 12-22-05	854-R.U 12-30-05	A
1* (30)	G7	6.50 +/- 0.01" (2X)	INDICATOR	MFG QA		P-4964	6.5	274-M. 12-22-05	854-R.U 12-30-05	A
1* (40)	D8	R 7.00 +/- 0.01" (4X)		MFG QA		TEMPLATE	GOOD 7.0	274-M. 12-22-05	854-R.U 12-30-05	A
1* (50)	E8	40.00 +/- 0.01"	CALIPER	MFG QA		J-1297	39.998	315-C.L 12-07-05	576-J.G 12-07-05	A
1* (60)	C7	29.00 +/- 0.01"	CALIPER	MFG QA		J-1297	29.005	315-C.L 12-07-05	576-J.G 12-07-05	A
1* (80)	F5	1.25 +/- 0.01"	INDICATOR	MFG QA		P-4482	1.246 - 1.259	315-C.L 12-07-05	576-J.G 12-07-05	A
1* (90)	F5	0.63 +/- 0.01"	CALIPER	MFG QA		P-3736	.625	274-M. 12-22-05	854-R.U 12-30-05	A
1* (100)	C4	DIA. 0.25 +/- 0.01" X 1.75 +/- 0.01" (2X)	PIN GAGE	MFG QA		J-667	GOOD	274-M. 12-22-05	854-R.U 12-30-05	A
1* (110)	B4	1.66 +/- 0.01" (2X)	CALIPER	MFG QA		P-3736	1.66	274-M. 12-22-05	854-R.U 12-30-05	A
1* (120)	C4	1/8" NPT (2X)	THREAD PLUG GA	MFG QA		A-220	GOOD	274-M. 12-22-05	854-R.U 12-30-05	A
1*	B5	DIA. 0.125 +/- 0.01" THRU TO 0.25 DIA	PIN GAGE	MFG		J-667	.125	274-M.	854-R.U	A



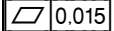
**INSPECTION DATA CHECKLIST**

(130)		(2X)		QA				12-22-05	12-30-05	
1*	H7	.750-10 UNC 1.00 MIN DP. BOTH ENDS	THREAD PLUG GA	MFG		A-232	GOOD	274-M.	854-R.U	A
(140)		(4X)		QA				12-22-05	12-30-05	

Quality Assurance Documentation for Part ID: SE122-149-1A - Item: 461

Workorder: 65678/8-0 Sub:128 Op:50

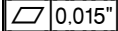
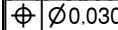
Part: SE122-149-1A - PORT 4A COVER PLATE ASSEMBLY - SE120-004-7 / SE122-149-1A PORT 4A COVER PLATE ASSEMBLY

Drawing ID: SE122-172 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
1* (10)	C7	16 MICRO-INCH RA SURFACE FINISH	PROFILOMETER	QA		J-825	12	854-R.U 12-30-05			A
Drawing ID: SE122-104 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
* (20)		Magnetic Permeability 1.02 MAX	MASTER GAGE	QA		J-1270	>1.02 <1.05 (REF. N.C. 17664)	854-R.U 12-30-05			A
* (30)		 0.015 Datum -A- Flatness	INDICATOR	QA		J-622	.011	854-R.U 12-30-05			A

Quality Assurance Documentation for Part ID: SE122-149-1B - Item: 463

Workorder: 65678/8-0 Sub:147 Op:20

Part: SE122-149-1B - PORT 4B COVER PLATE ASSEMBLY -

Drawing ID: SE122-149 Rev: 0			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
1* (10)	D5	 0.015" DATUM -A- FLATNESS	MACHINE INDICATOR	MFG QA		570 P-4760	WITHIN - .010	445-J.PU 12-07-05	854-R.U 12-07-05	A
1* (20)	F5	 0.030   A   B   C   0.531 +/-0.005" THRU (60X)	PIN GAGE	MFG QA		J-669	.531	274-M. 12-22-05	854-R.U 12-30-05	A
1* (30)	G7	6.50 +/- 0.01" (2X)	INDICATOR	MFG QA		P-4964	6.5	274-M. 12-22-05	854-R.U 12-30-05	A
1* (40)	D8	R 7.00 +/- 0.01" (4X)		MFG QA		TEMPLATE	GOOD	274-M. 12-22-05	854-R.U 12-30-05	A
1* (50)	E8	40.00 +/- 0.01"	SQUARE	MFG QA		J-1295	40.0035	445-J.PU 12-07-05	576-J.G 12-07-05	A
1* (60)	C7	29.00 +/- 0.01"	SQUARE	MFG QA		J-1295	29.002	445-J.PU 12-07-05	576-J.G 12-07-05	A
1* (80)	F5	1.25 +/- 0.01"	CALIPER	MFG QA		P-4483	1.260 - 1.250	854-R.U 07-29-06	576-J.G 12-07-05	A
1* (90)	F5	0.63 +/- 0.01"	CALIPER	MFG QA		P-3736	.625	274-M. 12-22-05	854-R.U 12-30-05	A
1* (100)	C4	DIA. 0.25 +/- 0.01" X 1.75 +/- 0.01" (2X)	PIN GAGE	MFG QA		J-667	GOOD	274-M. 12-22-05	854-R.U 12-30-05	A
1* (110)	B4	1.66 +/- 0.01" (2X)	CALIPER	MFG QA		P-3736	1.66	274-M. 12-22-05	854-R.U 12-30-05	A
1* (120)	C4	1/8" NPT (2X)	THREAD PLUG GA	MFG QA		A-220	GOOD	274-M. 12-22-05	854-R.U 12-30-05	A
1*	B5	DIA. 0.125 +/- 0.01" THRU TO 0.25 DIA	PIN GAGE	MFG		J-667	.125	274-M.	854-R.U	A

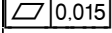
**INSPECTION DATA CHECKLIST**

(130)	(2X)		QA				12-22-05	12-30-05	
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Quality Assurance Documentation for Part ID: SE122-149-1B - Item: 464

Workorder: 65678/8-0 Sub:147 Op:50

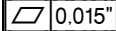




Part: SE122-149-1B - PORT 4B COVER PLATE ASSEMBLY -

Drawing ID: SE122-172 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
1* (10)	C7	16 MICRO-INCH RA SURFACE FINISH	PROFILOMETER	QA		J-825	10	854-R.U 12-30-05			A
Drawing ID: SE122-104 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
* (20)		Magnetic Permeability 1.02 MAX	MASTER GAGE	QA		J-1270	>1.02 & < 1.05 (RE F. N.C. 17664)	854-R.U 12-30-05			A
* (30)		 0.015 Datum -A- Flatness	INDICATOR	QA		J-622	.010	854-R.U 12-30-05			A

Quality Assurance Documentation for Part ID: SE122-172-1 - Item: 466

Workorder: 65678/8-0 Sub:84 Op:20

Part: SE122-172-1 - PORT NB COVER - SE120-004-10 / SE122-172-1 PORT NB COVER

Drawing ID: SE122-172 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
1* (10)	G8	 0.015" DATUM -D- FLATNESS	INDICATOR	MFG QA		P-4158	.003	688-S.A 08-27-05	591-C.P 12-09-05	A
1* (20)	G3	 $\varnothing$ 0.015"  D B A 0.50-20 UNF X 0.75 MIN DEPTH (34X)	THREAD PLUG GA	MFG QA		A-27	ACC. PER GAGE	688-S.A 08-27-05	591-C.P 12-09-05	A
1* (30)	G2	 $\varnothing$ 0.012"  D B A #8-32 UNC-2B X 0.25" MIN THREAD DEP (8X)	THREAD PLUG GA	MFG QA		A-75	ACC. PER GAGE	688-S.A 08-27-05	591-C.P 12-09-05	A

Quality Assurance Documentation for Part ID: SE122-172-1 - Item: 467

Workorder: 65678/8-0 Sub:84 Op:50

Part: SE122-172-1 - PORT NB COVER - SE120-004-10 / SE122-172-1 PORT NB COVER

Drawing ID: SE122-172 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
1* (10)	C7	0.941 +/- 0.010"	CALIPER	QA		J-1099	.942	854-R.U 12-28-05		A
1* (20)	C7	R.005 MIN. (2X)	RADIUS GAGE	QA		R-24	>.005 (2X)	854-R.U 12-28-05		A
1* (30)	C7	0.25 +/- 0.010"	CALIPER	QA		J-1099	.251	854-R.U 12-28-05		A
1* (40)	C7	.153 + 0 / - 0.003"	CALIPER	QA		J-1099	.153	854-R.U 12-28-05		A
1* (50)	C7	R 0.030" (2X)	RADIUS GAGE	QA		R-24	.030 (2X)	854-R.U 12-28-05		A
1* (60)	C7	16 MICRO-INCH RA SURFACE FINISH	PROFILOMETER	QA		J-825	13	854-R.U 12-28-05		A
1* (70)	C7	63 MICRO-INCH RA SURFACE FINISH	PROFILOMETER	QA		J-825	42	854-R.U 12-28-05		A

Quality Assurance Documentation for Part ID: SE122-173-1 - Item: 468

Workorder: 65678/8-0 Sub:98 Op:20

Part: SE122-173-1 - PORT NB SEAL RETAINER - SE120-004-9 / SE122-173-1 PORT NB SEAL RETAINER (INCONEL 625 MATERIAL)

Drawing ID: SE122-173 Rev: 1			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
1* (10)	C6	0.149 + 0 / - 0.008"	OD MICROMETER	MFG QA		P-4891	.147 - .149	231-B.B 10-31-05	591-C.P 10-31-05	A
1* (20)	D6	0.541 +/- 0.010" (CONSTANT)	CALIPER	MFG QA		P-3738	.539 - .543	445-J.PU 10-29-05	591-C.P 10-31-05	A
1* (30)		75.0 deg. +/- 0 deg. 15' (2X)		MFG QA		PROTRACTOR	75.0	231-B.B 10-31-05	591-C.P 10-31-05	A
1* (40)	C7	63 MICRO-INCH SURFACE FINISH	PROFILOMETER	MFG QA		J-1181	23 MICRO-INCH SURF CE FINISH	231-B.B 10-31-05	591-C.P 10-31-05	A
1* (50)	C6	63 MICRO-INCH SURFACE FINISH	PROFILOMETER	MFG QA		J-1181	23 MICRO-INCH SURF CE FINISH	231-B.B 10-31-05	591-C.P 10-31-05	A
1* (60)	G5	$\varnothing \varnothing .012$ D A B DIA. 0.187 +/- 0.005" THRU (8X) DIA .343 +/- .005" .094 DP OTHER SIDE	PIN GAGE  DEPTH MICROMET	MFG  QA		J-667  P-4900	.186 THRU, .342, .093 - .096 DP OTHE R SIDE	231-B.B 10-31-05	591-C.P 10-31-05	A



REV. 604

NOTE: THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTE.

HUNTINGTON ALLOYS  
A Special Metals Company  
HUNTINGTON, WEST VIRGINIA 25720

FORM E D

ROLLED ALLOYS INC 125 W STERNS RD TEMPERANCE MI 48182-0310		CERTIFIED MATERIAL TEST REPORT No. 97210	
ROLLED ALLOYS INC 125 W STERNS RD TEMPERANCE MI 48182-0310		HA ORDER NO./ITEM 100023551 2	PAGE OF 1 2
		DATE 07/10/05	INSPECTED BY <i>[Signature]</i>
		QUANTITY 3204 LBS	HA/S/MC MARK ORDER NO. 138032599001-01
		CHARGE ORDER NO. T50706	QUALITY CERTIFICATION REPRESENTATIVE <i>[Signature]</i>
DESCRIPTION OF MATERIAL SHIPPED INCONEL ALLOY 625 HR PLATE DESCALED ANN .1875 IN 36.0000 IN 240.000 IN SHR			



THIS IS TO CERTIFY THAT ALL REQUIRED SAMPLINGS AND TESTS HAVE BEEN PERFORMED IN ACCORDANCE WITH THE ORDER AND SPECIFICATION REQUIREMENTS. THE TEST REPORT REPRESENTS THE ACTUAL ATTRIBUTES OF THE MATERIAL FURNISHED AND THE VALUES SHOWN ARE CORRECT AND TRUE. THE MATERIAL DESCRIBED BY THIS CERTIFICATE IS IN FULL COMPLIANCE WITH ALL ORDER AND INSPECTION REQUIREMENTS. THE HEREBY CERTIFY THAT THE BELOW FEATURES HAVE BEEN INSPECTED AND FOUND TO BE IN ACCORDANCE WITH THE SPECIFIED CONTRACT REQUIREMENTS.

\*\*\*\*\*THIS REPORT RELATES ONLY TO THE ITEM(S) TESTED AND MAY NOT BE REPRODUCED EXCEPT IN FULL.\*\*\*\*\*

UNSN: N06625

SPECIFICATIONS: SAE AMS 5599F\ASTM B 443-00 GRADE 1\  
 ASME SB-443 2004 EDITION NO ADDENDA GRADE 1\  
 GE S 400E\GE S-1000E\  
 ROLLS-ROYCE RR9000; SABRE ISSUE 006 PER ROLLS-ROYCE APPROVAL NO.  
 82960 DTD 30 OCT 1996.  
 QUALITY SYSTEM CERTIFICATION: ISO 9001:2000 (ABS-QE CERT. 30125);  
 EN 10 204/DIN 50049 (CERT.3.1.B)

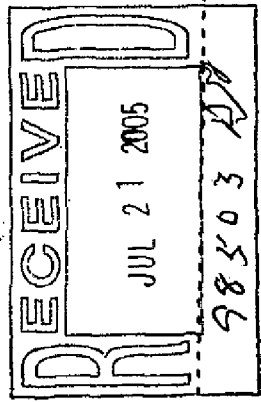
HEAT#	CHEMICAL ANALYSIS (WT. %)							
	C	MN	FE	S	SI	NI	AL	TI
NX4533AG	0.02	0.10	3.67	<0.001	0.15	61.43	21.54	0.14
	0.06	9.17	3.46	<0.01	0.007	3.46		0.23

MELT METHOD: AIR + ESP

HEAT/LOT  
 NX4533AG 13 6 PCS  
 ROOM TEMP-HRB -AS SHIPPED 98.5  
 P75260 (2) P75270 (2) P75280 (2)  
 GRAIN SIZE-AS SHIPPED AGS ASTM NO. 7.5  
 NORMAL - TRAN

MECHANICAL PROPERTIES  
 HARD GRAIN YIELD TENSILE XELOG R/A DEG  
 SIZE .2XPSI PSI 2" X F  
 X 100 X 100 0840 1351 41.6

DEG F  
 JUL 22 2005  
 INSURER# 114185



YIELD STRENGTH WAS DETERMINED USING A STRESS STRAIN CURVE  
 COUNTRY OF ORIGIN AND MELT: UNITED STATES OF AMERICA  
 VISUAL AND DIMENSIONAL EXAMINATION SATISFACTORY.

*Line 1.3*

REV. 904

NOTE: THIS RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS FOR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTE.

EASTERN U.S.

FORM D

# HUNTINGTON ALLOYS A Special Metals Company

HUNTINGTON, WEST VIRGINIA 25720



## CERTIFIED MATERIAL TEST REPORT

No. 97210

HA ORDER NO./ITEM 100023551 2 DATE 02/10/05 PAGE 2 OF 2

THIS IS TO CERTIFY THAT ALL REQUIRED SAMPLINGS INSPECTIONS AND TESTS HAVE BEEN PERFORMED IN ACCORDANCE WITH THE ORDER AND SPECIFICATION REQUIREMENTS. THE TEST REPORT REPRESENTS THE ACTUAL ATTRIBUTES OF THE MATERIAL FURNISHED AND THE VALUES SHOWN ARE CORRECT AND TRUE. THE MATERIAL DESCRIBED BY THIS CERTIFICATE IS IN FULL COMPLIANCE WITH ALL ORDER AND INSPECTION REQUIREMENTS. WE HEREBY CERTIFY THAT THE BELOW FIGURES ARE IN ACCORDANCE WITH THE PRESCRIBED CONTRACT REQUIREMENTS.

ROLLED ALLOYS INC  
125 W STERNS RD  
TEMPERANCE MI 48182-0310

ROLLED ALLOYS INC  
125 W STERNS RD  
TEMPERANCE MI 48182-0310

QUANTITY 3204 LBS  
CHARGE ORDER NO. 138032599001-01  
MARK ORDER NO. 138032599001-01

DESCRIPTION OF MATERIAL SHIPPED INCONEL ALLOY 625 HR PLATE DESCALE ANN  
1.875 IN 36.0000 IN 240.000 IN SHR

*[Signature]*  
QUALITY CERTIFICATION REPRESENTATIVE

MATERIAL, WHEN SHIPPED, IS FREE FROM CONTAMINATION BY MERCURY, RADIUM, ALPHA SOURCE, & LOW MELTING ELEMENTS.  
"CHEMICAL ANALYSIS AS REQUIRED FOR CARBON, SULFUR, NITROGEN OR OXYGEN IS PERFORMED BY COMBUSTION TECHNIQUES.  
ALL OTHER REPORTED ELEMENTS ARE ANALYZED BY X-RAY AND/OR EMISSION SPECTROSCOPY."

AUTHORIZED QUALITY CERTIFICATION REPRESENTATIVES :

W. E. BOLEN, P.D. CUSTER, M.A. MORRISON, D.L. SMITH, P.P. WAUGH

CERTIFIED TESTING LABORATORY DATA SOURCE IAI

AEBG VENDOR NO. 47150  
M.R.B. CASE RECORD NO. 1 NONE  
AUTHORIZED VENDOR SIGNATURE  
DATE: 02/10/05

*[Signature]*



Certification of Conformance: We certify that the above material meets all requirements of the purchase order and applicable specifications.

Customer: MAJOR TOOL & MACHINE Shpr-MA0459 Date 07/20/2005  
P.O.# P05-03069 TN  
.149" 6ROUND SHEET 625 26- 7/16 X 32-33/64 3 PC  
Heat No. [NY453306]

Tracer No. [114185]

ROLLED ALLOYS QUALITY ASSURANCE  
APPROVED *[Signature]*  
DATE 2-11-05

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE122-174-1 - Item: 470

Workorder: 65678/8-0 Sub:280 Op:10

Part: SE122-174-1 - -

Drawing ID: SE122-174 Rev: 0			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
1* (10)		Dia. 0.189 +/-0.005	CALIPER	QA		J-707	.190"	840-G.M 12-30-05		

A

Quality Assurance Documentation for Part ID: SE122-174-2 - Item: 474

**Workorder: 65678/8-0 Sub:281 Op:10**

Part: SE122-174-2 - -

Drawing ID: SE122-174 Rev: 0			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
1* (10)		Dia. 0.189 +/-0.005	CALIPER	QA		J-707	.1905"	840-G.M 12-30-05		

A

Employees: 085-D.Gregory / 093-M.Stewart / 131-W.Allen / 137-G.Ford / 182-J.Lewis / 184-T.Hicks / 197-T.Fischer / 212-J.Lehr / 231-B.Blankenberger / 234-E.Booher / 274-M.Moorman / 307-D.Jett / 315-C.Land / 339-E.Root / 358-D.Mcnew / 445-J.Purkhiser / 503-B.Houk / 506-R.Liston / 576-J.Geisinger / 581-D.Edwards / 591-C.Pritchett / 683-K.Mcnew / 688-S.Atchison / 709-K.Appleby / 712-W.Miller / 733-J.Stone Ii / 763-R.Mieth / 771-B.Schultz / 837-J.Deverter / 840-G.Masood / 854-R.Upchurch / 933-D.Leapley