

PRINCETON PLASMA  
PHYSICS LAB

Purchase Order Number:

S005243-F

Part Number:

SE120-002

Part Name:

VVSA 120 DEGREE VESSEL PERIOD

MTM Work Order Number:

65678/1.0



*Major*

Tool & Machine, Inc.

**Customer: 8780 - PRINCETON PLASMA PHYSICS LAB**  
**Customer P.O.: S005243-F**  
**Customer Part ID: SE120-002 - VVSA 120 DEGREE VESSEL PERIOD**

Item#	Document Description / Material Description / File Name / Heat Lot
1	CERTIFICATE OF CONFORMANCE

**190045 - BOLT SET, .312-24 X 2.0" 12PT**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
2	5	250	150	Material Certification: / 190045 - BOLT SET, .312-24 X 2.0" 12PT - mc118213.TIF / CERTIFIED

**REWORK - REWORK / REPAIR PER N/C**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
3	219	30		Inspection Data Checklist: 6 steps
4	234	20		Map(s): MAP - mc115733.tif
5	234	20		Certification: X RAY CERT - Same as Item #4
6	242	30		Inspection Data Checklist: 1 steps
7	247	20		Inspection Data Checklist: 1 steps
8	248	10	10	Material Certification: Trace ID: 129238 / INCONEL 625_233 - BAR,ROUND,NICKEL ALLOY .438" DIA - mc111631.tif / 238C
9	251	10		Inspection Data Checklist: 1 steps

**SE120-002 - PPPL NCSX VVSA**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
10	0	10	30	Material Certification: Trace ID: 41171 / INCONEL625_093_GTAW - WELD WIRE/GTAW, .093 DIA - mc075605.tif / CB7996 / CT7519 / CV8061 / K48
11	0	10	30	Material Certification: Trace ID: 95568 / INCONEL625_093_GTAW - WELD WIRE/GTAW, .093 DIA - mc095629.pdf / CB7996 / CT7519 / CV8061 / K48
12	0	10	30	Material Certification: Trace ID: 95372 / INCONEL625_093_GTAW - WELD WIRE/GTAW, .093 DIA - mc095872.tif / CB7996 / CT7519 / CV8061 / K48
13	0	10	30	Material Certification: Trace ID: 94242 / INCONEL625_093_GTAW - WELD WIRE/GTAW, .093 DIA - mc094945.pdf / CB7996 / CT7519 / CV8061 / K48
14	0	10	30	Material Certification: Trace ID: 41171 / INCONEL625_093_GTAW - WELD WIRE/GTAW, .093 DIA - mc075552.tif / CB7996 / CT7519 / CV8061 / K48
15	0	10	30	Material Certification: Trace ID: 119262 / INCONEL625_093_GTAW - WELD WIRE/GTAW, .093 DIA - mc107551.tif / CB7996 / CT7519 / CV8061 / K48
16	0	10	30	Material Certification: Trace ID: 121405 / INCONEL625_093_GTAW - WELD WIRE/GTAW, .093 DIA - mc108429.tif / CB7996 / CT7519 / CV8061 / K48
17	0	10	30	Material Certification: Trace ID: 117513 / INCONEL625_093_GTAW - WELD WIRE/GTAW, .093 DIA - mc106871.tif / CB7996 / CT7519 / CV8061 / K48
18	0	10	30	Material Certification: Trace ID: 94880 / INCONEL625_093_GTAW - WELD WIRE/GTAW, .093 DIA - mc095280.pdf / CB7996 / CT7519 / CV8061 / K48
19	0	10	40	Material Certification: Trace ID: 121606 / INCONEL625_062_GTAW - WELD WIRE/GTAW, .062 DIA - mc108415.tif / 34932 / AB8051 / AV8128
20	0	10	40	Material Certification: Trace ID: 119209 / INCONEL625_062_GTAW - WELD WIRE/GTAW, .062 DIA - mc107550.tif / 34932 / AB8051 / AV8128
21	0	10	40	Material Certification: Trace ID: 94881 / INCONEL625_062_GTAW - WELD WIRE/GTAW, .062 DIA - mc095279.pdf / 34932 / AB8051 / AV8128
22	0	10	40	Material Certification: Trace ID: 94238 / INCONEL625_062_GTAW - WELD WIRE/GTAW, .062 DIA - mc094944.pdf / 34932 / AB8051 / AV8128

**Customer: 8780 - PRINCETON PLASMA PHYSICS LAB**  
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23	0	10	70	Material Certification: Trace ID: 81138 / ER316L_062_GTAW - WELD WIRE, GTAW .062" DIA - mc089596.tif / 95316
24	0	10	90	Material Certification: Trace ID: 123163 / INCONEL625_035_GMAW - WELD WIRE/GMAW, .035 DIA - mc109152.tif / XB8273
25	1	10		Inspection Data Checklist: 4 steps
26	2	10		Inspection Data Checklist: 1 steps
27	5	195		Map(s): X-RAY MAP - MC111789.TIF
28	5	247		Map(s): X-RAY MAP - mc115320.tif
29	5	247		Certification: X-RAY CERT - Same as Item #28

**SE120-002-NB - PORT EXT. SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
30	119	20		Inspection Data Checklist: 2 steps
31	223	30		Inspection Data Checklist: 2 steps

**SE120-003 10-6 SUB-SET - PANEL 10-6 SUB-SET**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
32	98	30		Inspection Data Checklist: 1 steps
33	98	130		Inspection Data Checklist: 1 steps
34	98	150		Inspection Data Checklist: 1 steps
35	111	30		Inspection Data Checklist: 1 steps
36	111	130		Inspection Data Checklist: 1 steps
37	111	150		Inspection Data Checklist: 1 steps

**SE120-003 10-6-7 SUB-SET - PANEL 10-6-7 SUB-SET**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
38	96	30		Inspection Data Checklist: 1 steps
39	96	130		Inspection Data Checklist: 1 steps
40	96	150		Inspection Data Checklist: 1 steps
41	110	30		Inspection Data Checklist: 1 steps
42	110	130		Inspection Data Checklist: 1 steps
43	110	150		Inspection Data Checklist: 1 steps

**SE120-003 120 - 120 DEG VESSEL**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
44	5	60		Inspection Data Checklist: 1 steps
45	5	160		Inspection Data Checklist: 1 steps
46	5	180		Inspection Data Checklist: 1 steps
47	5	243		Inspection Data Checklist: 6 steps

**SE120-003 30L SUB-ASSY - LOWER 30 DEG SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
48	6	70		Inspection Data Checklist: 2 steps
49	6	170		Inspection Data Checklist: 2 steps

**Customer: 8780 - PRINCETON PLASMA PHYSICS LAB**  
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**Customer Part ID: SE120-002 - VVSA 120 DEGREE VESSEL PERIOD**

50	6	190	Inspection Data Checklist: 2 steps
51	6	400	Map(s): X-RAY MAP - MC110674.TIF
52	94	70	Inspection Data Checklist: 2 steps
53	94	170	Inspection Data Checklist: 2 steps
54	94	190	Inspection Data Checklist: 2 steps
55	94	400	Map(s): X-RAY MAP - MC110924.TIF

**SE120-003 30U SUB-ASSY - UPPER 30 DEG SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
56	95	60		Inspection Data Checklist: 2 steps
57	95	160		Inspection Data Checklist: 2 steps
58	95	180		Inspection Data Checklist: 2 steps
59	109	60		Inspection Data Checklist: 2 steps
60	109	160		Inspection Data Checklist: 2 steps
61	109	180		Inspection Data Checklist: 2 steps

**SE120-003 3-4 SUB-SET - PANEL 3-4 SUB-SET**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
62	11	30		Inspection Data Checklist: 1 steps
63	11	130		Inspection Data Checklist: 1 steps
64	11	150		Inspection Data Checklist: 1 steps
65	106	30		Inspection Data Checklist: 1 steps
66	106	130		Inspection Data Checklist: 1 steps
67	106	150		Inspection Data Checklist: 1 steps

**SE120-003 5-1 SUB-SET - PANEL 5-1 SUB-SET**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
68	8	30		Inspection Data Checklist: 1 steps
69	8	130		Inspection Data Checklist: 1 steps
70	8	150		Inspection Data Checklist: 1 steps
71	103	30		Inspection Data Checklist: 1 steps
72	103	130		Inspection Data Checklist: 1 steps
73	103	150		Inspection Data Checklist: 1 steps

**SE120-003 5-1-2 SUB-SET - PANEL 5-1-2 SUB-SET**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
74	7	30		Inspection Data Checklist: 1 steps
75	7	130		Inspection Data Checklist: 1 steps
76	7	150		Inspection Data Checklist: 1 steps
77	102	30		Inspection Data Checklist: 1 steps
78	102	130		Inspection Data Checklist: 1 steps

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79    102    150    Inspection Data Checklist: 1 steps

**SE120-003 60D SUB-ASSY - 60 DEGREE SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
80	6	250		Inspection Data Checklist: 1 steps
81	6	350		Inspection Data Checklist: 1 steps
82	6	370		Inspection Data Checklist: 1 steps
83	94	250		Inspection Data Checklist: 1 steps
84	94	350		Inspection Data Checklist: 1 steps
85	94	370		Inspection Data Checklist: 1 steps
86	220	10		Map(s): X-RAY MAP - MC110926.TIF
87	220	30		Map(s): X-RAY MAP - MC110932.TIF
88	220	30		Map(s): X-RAY MAP - MC110930.TIF

**SE120-003 8-9 SUB-SET - PANEL 8-9 SUB-SET**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
89	97	30		Inspection Data Checklist: 1 steps
90	97	130		Inspection Data Checklist: 1 steps
91	97	150		Inspection Data Checklist: 1 steps
92	114	30		Inspection Data Checklist: 1 steps
93	114	130		Inspection Data Checklist: 1 steps
94	114	150		Inspection Data Checklist: 1 steps

**SE120-003 - VVSA 120 DEG. VESSEL Qty: 1**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
95	2	20		Furnace charts: THERMOCOUPLE CHART -
96	2	20		Certification: THERMAL CYCLE CERTIFICATE -

**SE120-003-11 - PORT # 7 EXTENSION**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
97	131	10		Inspection Data Checklist: 2 steps
98	131	20		Inspection Data Checklist: 2 steps
99	131	30		Inspection Data Checklist: 6 steps

**SE120-003-12A - PORT EXT. SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
100	120	10		Inspection Data Checklist: 4 steps
101	120	20		Inspection Data Checklist: 4 steps

**SE120-003-13 - PORT # 8 EXTENSION**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
102	132	10		Inspection Data Checklist: 2 steps

**Customer: 8780 - PRINCETON PLASMA PHYSICS LAB**  
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103	132	20	Inspection Data Checklist: 2 steps
104	132	30	Inspection Data Checklist: 6 steps

**SE120-003-15 - PORT # 9 EXTENSION**

<u>Item#</u>	<u>Sub</u>	<u>Op</u>	<u>Pc</u>	<u>Document Description / Material Description / File Name / Heat Lot</u>
105	133	10		Inspection Data Checklist: 2 steps
106	133	20		Inspection Data Checklist: 2 steps
107	133	30		Inspection Data Checklist: 6 steps

**SE120-003-17 - PORT # 10 EXTENSION**

<u>Item#</u>	<u>Sub</u>	<u>Op</u>	<u>Pc</u>	<u>Document Description / Material Description / File Name / Heat Lot</u>
108	134	10		Inspection Data Checklist: 2 steps
109	134	20		Inspection Data Checklist: 2 steps
110	134	30		Inspection Data Checklist: 6 steps

**SE120-003-19 - PORT # 11 EXTENSION**

<u>Item#</u>	<u>Sub</u>	<u>Op</u>	<u>Pc</u>	<u>Document Description / Material Description / File Name / Heat Lot</u>
111	135	10		Inspection Data Checklist: 2 steps
112	135	20		Inspection Data Checklist: 2 steps
113	135	30		Inspection Data Checklist: 6 steps

**SE120-003-21 - PORT # 15 EXTENSION**

<u>Item#</u>	<u>Sub</u>	<u>Op</u>	<u>Pc</u>	<u>Document Description / Material Description / File Name / Heat Lot</u>
114	136	10		Inspection Data Checklist: 2 steps
115	136	20		Inspection Data Checklist: 2 steps
116	136	30		Inspection Data Checklist: 6 steps

**SE120-003-23 - PORT DOME EXTENSION**

<u>Item#</u>	<u>Sub</u>	<u>Op</u>	<u>Pc</u>	<u>Document Description / Material Description / File Name / Heat Lot</u>
117	137	10		Inspection Data Checklist: 2 steps
118	137	20		Inspection Data Checklist: 2 steps
119	137	30		Inspection Data Checklist: 7 steps

**SE120-003-3 - PORT # 2 EXTENSION**

<u>Item#</u>	<u>Sub</u>	<u>Op</u>	<u>Pc</u>	<u>Document Description / Material Description / File Name / Heat Lot</u>
120	127	10		Inspection Data Checklist: 2 steps
121	127	20		Inspection Data Checklist: 2 steps
122	127	30		Inspection Data Checklist: 6 steps

**SE120-003-5 - PORT # 4 EXTENSION**

<u>Item#</u>	<u>Sub</u>	<u>Op</u>	<u>Pc</u>	<u>Document Description / Material Description / File Name / Heat Lot</u>
123	128	10		Inspection Data Checklist: 2 steps
124	128	20		Inspection Data Checklist: 2 steps

**Customer: 8780 - PRINCETON PLASMA PHYSICS LAB**  
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125 128 30 Inspection Data Checklist: 6 steps

**SE120-003-7 - PORT # 5 EXTENSION**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
126	129	10		Inspection Data Checklist: 2 steps
127	129	20		Inspection Data Checklist: 2 steps
128	129	30		Inspection Data Checklist: 6 steps

**SE120-003-9 - PORT # 6 EXTENSION**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
129	130	10		Inspection Data Checklist: 2 steps
130	130	20		Inspection Data Checklist: 2 steps
131	130	30		Inspection Data Checklist: 6 steps

**SE120-003-DOME A - PORT EXT. SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
132	122	10		Inspection Data Checklist: 4 steps
133	122	20		Inspection Data Checklist: 2 steps

**SE120-003-NB**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
134	119	10		Inspection Data Checklist: 2 steps

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

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
135	223	10		Inspection Data Checklist: 4 steps

**SE120-004 - VVSA 120 DEG. VESSEL**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
136	1	20		Inspection Data Checklist: 11 steps
137	1	30		Inspection Data Checklist: 3 steps
138	2	60		Inspection Data Checklist: 6 steps

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

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
139	125	10		Inspection Data Checklist: 4 steps
140	125	20		Inspection Data Checklist: 2 steps

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

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
141	126	10		Inspection Data Checklist: 4 steps
142	126	20		Inspection Data Checklist: 2 steps

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

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**Customer: 8780 - PRINCETON PLASMA PHYSICS LAB**  
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Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
143	123	10		Inspection Data Checklist: 36 steps
144	123	20		Inspection Data Checklist: 18 steps

**SE120-004-4A - PORT EXT. SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
145	121	10		Inspection Data Checklist: 4 steps
146	121	20		Inspection Data Checklist: 2 steps

**SE120-005-38 - LEAK CHECK TUBING**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
147	143	10	10	Material Certification: / 316L_271 - TUBE,RND,SST, SEAMLESS, .125" OD X .03"W - mc109194.tif / 2D994

**SE120-005-39 - TUBE CLIP**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
148	142	10	10	Material Certification: / INCONEL 625_654 - FOIL, NICKEL ALLOY .010" THK - mc109089.tif / 265096802

**SE120-005-40 - PORT 2 BACKING STRIP**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
149	138	10		Inspection Data Checklist: 1 steps
150	138	10	10	Material Certification: / SE120-005-40 - VVSA PORT 2 BACKING STRIP - mc109510.tif / 2650 5 6801

**SE120-005-41 - PORT 5 BACKING STRIP**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
151	145	10		Inspection Data Checklist: 1 steps
152	145	10	10	Material Certification: / SE120-005-41 - VVSA PORT 5 BACKING STRIP - mc109512.tif / 2650 5 6801

**SE120-005-42 - PORT 6 BACKING STRIP**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
153	146	10		Inspection Data Checklist: 1 steps
154	146	10	10	Material Certification: / SE120-005-42 - VVSA PORT 6 BACKING STRIP - mc109509.tif / 2650 5 6801

**SE120-005-43 - PORT 7 BACKING STRIP**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
155	147	10		Inspection Data Checklist: 1 steps
156	147	10	10	Material Certification: / SE120-005-43 - VVSA PORT 7 BACKING STRIP - mc109514.tif / 2650 5 6801

**SE120-005-44 - PORT 8 BACKING STRIP**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
157	148	10		Inspection Data Checklist: 1 steps
158	243	10	10	Material Certification: / INCONEL 625_660 - SHEET,NICKEL ALLOY .125" THK - mc118158.tif / 2650 3 6874

**SE120-005-45 - PORT 9 BACKING STRIP**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
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159	149	10		Inspection Data Checklist: 1 steps
160	149	10	10	Material Certification: / SE120-005-45 - VVSA PORT 9 BACKING STRIP - mc109562.tif / 2650 5 6801

**SE120-005-46 - PORT 10 BACKING STRIP**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
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161	150	10		Inspection Data Checklist: 1 steps
162	150	10	10	Material Certification: / SE120-005-46 - VVSA PORT 10 BACKING STRIP - mc109515.tif / 2650 5 6801

**SE120-005-47 - PORT 11 BACKING STRIP**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
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163	151	10		Inspection Data Checklist: 1 steps
164	151	10	20	Material Certification: / INCONEL 625_112 - PIPE, ALLOY 625, 2.5" SCH 10 - mc108425.tif / 26504674

**SE120-005-48 - PORT 15 BACKING STRIP**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
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165	152	10		Inspection Data Checklist: 1 steps
166	152	10	10	Material Certification: / SE120-005-48 - VVSA PORT 15 BACKING STRIP - mc109516.tif / 2650 5 6801

**SE120-006-6 - PORT 4 BACKING STRIP**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
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167	144	10		Inspection Data Checklist: 1 steps
168	144	10	10	Material Certification: / SE120-006-6 - VVSA PORT 4 BACKING STRIP - mc109561.tif / 2650 5 6801

**SE120-007-3 - PORT DOME BACKING STRIP**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
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169	153	10	10	Material Certification: / SE120-007-3 - VVSA PORT DOME BACKING STRIP - mc109677.tif / 2650 5 6801
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**SE120-013-1BLANK - VVSA FLANGE BLANK**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
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170	154	10	10	Material Certification: / INCONEL 625_8 - PLATE,NICKEL ALLOY 1.625" THK - mc110171.tif / 5L211-1A
171	156	10	10	Material Certification: / INCONEL 625_8 - PLATE,NICKEL ALLOY 1.625" THK - Same as Item #170 / 5L211-1A

**SE120-014-FJS - PORT EXT. SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
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172	193	60		Inspection Data Checklist: 5 steps
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**SE121-014 PORT - SPACER PORT SUB-ASSY**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
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173	193	15		Inspection Data Checklist: 2 steps
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**SE121-014 S10-S6 SUB-SET - PANEL S10-S6 SUB-SET**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
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174	206	30		Inspection Data Checklist: 1 steps
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175	206	130	Inspection Data Checklist: 1 steps
176	206	150	Inspection Data Checklist: 1 steps

**SE121-014 S10-S6-S7 SUB-SET - PANEL S10-S6-S7 SUB-SET**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
177	205	30		Inspection Data Checklist: 1 steps
178	205	130		Inspection Data Checklist: 1 steps
179	205	150		Inspection Data Checklist: 1 steps

**SE121-014 S8-S9 SUB-SET - PANEL S8-S9 SUB-SET**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
180	209	30		Inspection Data Checklist: 1 steps
181	209	130		Inspection Data Checklist: 1 steps
182	209	150		Inspection Data Checklist: 1 steps

**SE121-014 - VESSEL SPACER**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
183	193	12		Inspection Data Checklist: 4 steps
184	193	13		Inspection Data Checklist: 1 steps
185	193	14		Inspection Data Checklist: 4 steps
186	193	25		Certification: X-RAY CERT - mc114976.tif
187	193	25		Map(s): X-RAY MAP - Same as Item #186
188	193	25		Map(s): X-RAY MAP - mc114971.tif
189	193	25		Certification: X-RAY CERT - Same as Item #188
190	199	10		Inspection Data Checklist: 3 steps
191	199	30		Inspection Data Checklist: 1 steps

**SE121-014-1 - SPACER WELDMENT**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
192	194	60		Inspection Data Checklist: 2 steps
193	194	160		Inspection Data Checklist: 2 steps
194	194	180		Inspection Data Checklist: 2 steps

**SE121-014-3BLANK - VVSA SPACER BLANK**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
195	195	10	10	Material Certification: / INCONEL 625_7 - PLATE,NICKEL ALLOY 1.5" THK - mc110167.tif / 2650 4 M6759
196	203	10	10	Material Certification: / INCONEL 625_7 - PLATE,NICKEL ALLOY 1.5" THK - mc110167.TIF / 2650 4 M6759

**SE121-091 - COVER**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
197	217	25		Inspection Data Checklist: 3 steps
198	217	30		Inspection Data Checklist: 1 steps

**Customer: 8780 - PRINCETON PLASMA PHYSICS LAB**  
**Customer P.O.: S005243-F**  
**Customer Part ID: SE120-002 - VVSA 120 DEGREE VESSEL PERIOD**

199	218	25		Inspection Data Checklist: 3 steps
200	218	30		Inspection Data Checklist: 1 steps

**SE121-091-1BLANK - VVSA END COVER BLANK**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
201	217	10	10	Material Certification: / SE121-091-1BLANK - VVSA END COVER BLANK - MC109666.TIF / 818102
202	218	10	10	Material Certification: / SE121-091-1BLANK - VVSA END COVER BLANK - Same as Item #201 / 818102

**SE121-095**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
203	224	10	10	Material Certification: TRACE ID: 135016 / SE121-095-1 - VVSA FLANGE SEAL - ALLOY 625 - MC114399.TIF / 2650 5 6805
204	224	10	10	Material Certification: / SE121-095-1 - VVSA FLANGE SEAL - ALLOY 625 - MC114888.TIF / 2650 5 6805
205	224	40		Inspection Data Checklist: 2 steps
206	244	10	10	Material Certification: / SE121-095-1 - VVSA FLANGE SEAL - ALLOY 625 - MC117251.TIF / 2650 5 6834
207	244	10	10	Material Certification: TRACE ID: 135016 / SE121-095-1 - VVSA FLANGE SEAL - ALLOY 625 - Same as Item #206 / 2650 5 6834
208	244	40		Inspection Data Checklist: 2 steps

**SE121-099**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
209	225	10	10	Material Certification: / SE121-099-1 - VVSA END COVER SEAL - 316L - MC114628.TIF / 819882-117581
210	225	40		Inspection Data Checklist: 2 steps
211	229	10	10	Material Certification: / SE121-099-1 - VVSA END COVER SEAL - 316L - Same as Item #209 / 819882-117581
212	229	40		Inspection Data Checklist: 2 steps

**SE121-099-1 - VV END COVER SEAL**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
213	224	10		Inspection Data Checklist: 1 steps
214	225	10		Inspection Data Checklist: 1 steps
215	229	10		Inspection Data Checklist: 1 steps
216	244	10		Inspection Data Checklist: 1 steps

**SE122-007-3 - PORT DOME BACKING STRIP**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
217	153	10		Inspection Data Checklist: 1 steps

**SE122-072**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
218	2	80		Inspection Data Checklist: 1 steps

**SE124-047 - CLEVIS BOSS**

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
219	232	10		Inspection Data Checklist: 16 steps
220	232	20		Inspection Data Checklist: 8 steps

**CERTIFICATE OF CONFORMANCE**

Page: 1  
Date: 04/30/06  
User ID: UPCHURC#

**TO: PRINCETON PLASMA PHYSICS LAB**

**DATE: 05/04/2006**

**ATTENTION: Receiving Department**

**Seller certifies that:**

Part Number: **SE120-002**

Purchase Order: **S005243-F**

Part Name: **VVSA 120 DEGREE VESSEL PERIOD**

Workorder: **65678/1.0**

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:**

MANUFACTURED PER B.P. SE120-002 REV. 1 AND P.O. REQUIREMENTS.  
FABRICATION, INSPECTION AND TESTING PERFORMED IN ACCORDANCE WITH  
NCSX-CSPEC-121-02 AND STATEMENT OF WORK NCSX-SOW-121-03.  
THERMAL CYCLE PER PS486.

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



**MDC VACUUM PRODUCTS, LLC**

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**

**ATTENTION: K. UPCHURCH**

**DATE: MAY 2, 2006**

**SUBJECT: CERTIFICATION OF PO# P06-00385  
MDC ORDER CONFIRMATION NUMBER: M408519**

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

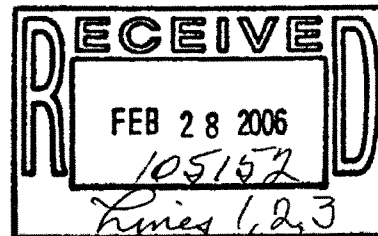
**MIKE SCHULTZ**

Shipping/Receiving Supervisor

MDC Vacuum Product, LLC

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

phone: 510 265 3500



*...Dedicated to Quality and Service*

INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: REWORK - Item: 3

Workorder: 65678/1-0 Sub:219 Op:30

Part: REWORK - REWORK / REPAIR PER N/C - N/C #

SHEET	ZONE	DRAWING ID: SE120-004 Rev: 2	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
				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	A
(30)			VWI ROOT PASS WELD 2-7 REWORK		CWI				08-03-05	08-03-05	
*					MFG		VISUAL	WELD ACCEPTABLE P CUSTOMER DRAWIN PECIFICATION REQUI EMENTS.	933-D.L	933-D.L	A
(40)			VWI ROOT PASS WELD 2-3 REWORK		CWI				08-03-05	08-03-05	
*					MFG		VISUAL	WELD ACCEPTABLE P CUSTOMER DRAWIN PECIFICATION REQUI EMENTS.	709-K.A	933-D.L	A
(130)			VWI EXTERIOR COVER PASS WELD 2-7		CWI				08-04-05	08-05-05	
*					MFG		VISUAL	WELD ACCEPTABLE P CUSTOMER DRAWIN PECIFICATION REQUI EMENTS.	709-K.A	933-D.L	A
(140)			VWI EXTERIOR COVER PASS WELD 2-3		CWI				08-04-05	08-05-05	
*					MFG		VISUAL	WELD ACCEPTABLE P CUSTOMER DRAWIN PECIFICATION REQUI EMENTS.	709-K.A	933-D.L	A
(150)			VWI INTERIOR COVER PASS WELD 2-7		CWI				08-05-05	08-05-05	
*					MFG		VISUAL	WELD ACCEPTABLE P CUSTOMER DRAWIN PECIFICATION REQUI EMENTS.	709-K.A	933-D.L	A
(160)			VWI INTERIOR COVER PASS WELD 2-3		CWI				08-05-05	08-05-05	



4959  
10520 Chester Road  
Woodlawn, Ohio 45215

CLIENT: **Moldor Tool & Machine**  
 INTERPRETER: **John Ballard II**  
 RADIOGRAPHER: **John Ballard**  
 JOB NO: **13860001**  
 P.O. NO: **NA**  
 DATE: **11/1/06**

ISO/DIN: **IP-192**  
 BOX/LEN: **118"x.08"**  
 CUR/SMA: **39**  
 FOCAL SPOT SIZE: **#12"**  
 SFD: **15"**  
 SOD: **14.625**  
 TIME: **1:30**  
 FILM PROCESSING: **Auto**  
 FILM TYPE: **Kodak AP**  
 P.S. SCREENS: **.010"**

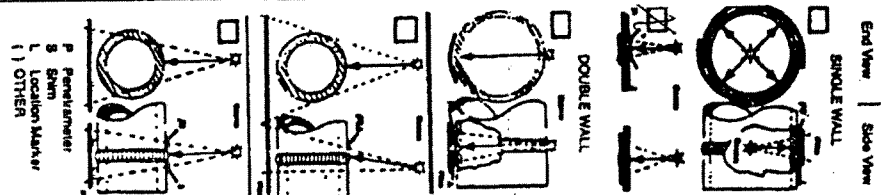
WELD PROCESS: **GTAW**  
 MATERIAL SPEC: **6.25 INCONEL**  
 MATERIAL DIAMETER: **NA**  
 MATERIAL THICKNESS: **1.375"**  
 PENETRATOR: **ASTM 18**  
 SHIM: **NA**  
 ACCEPTANCE STANDARD: **ASME VIII, Div. 2-51**

DESCRIPTION: **65678/1.0/234/20/818**  
**SE 120-002**  
**Denstometer - 12105**  
**Cal due 2/2/06**

REMARKS

Page 1 of 2

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-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																												
40	A-13	NA	18	1010"																												

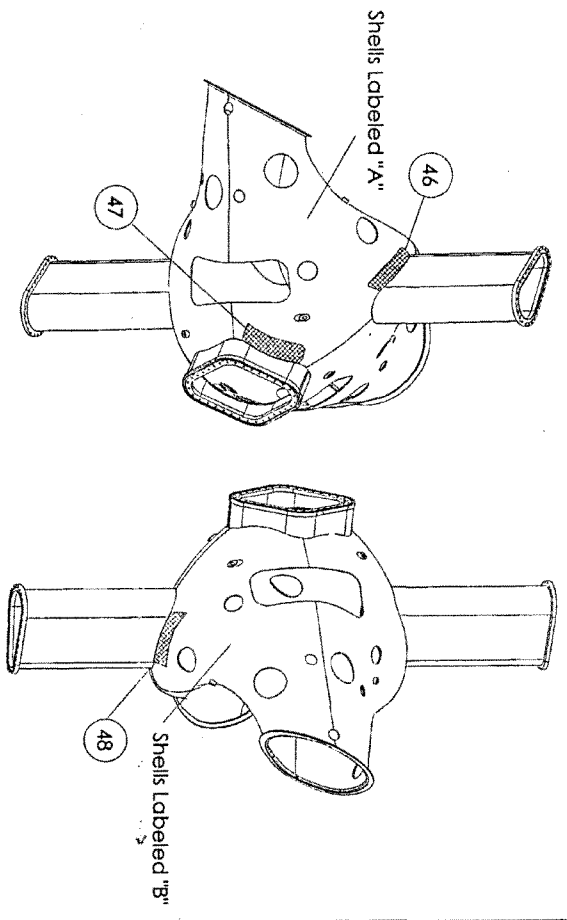
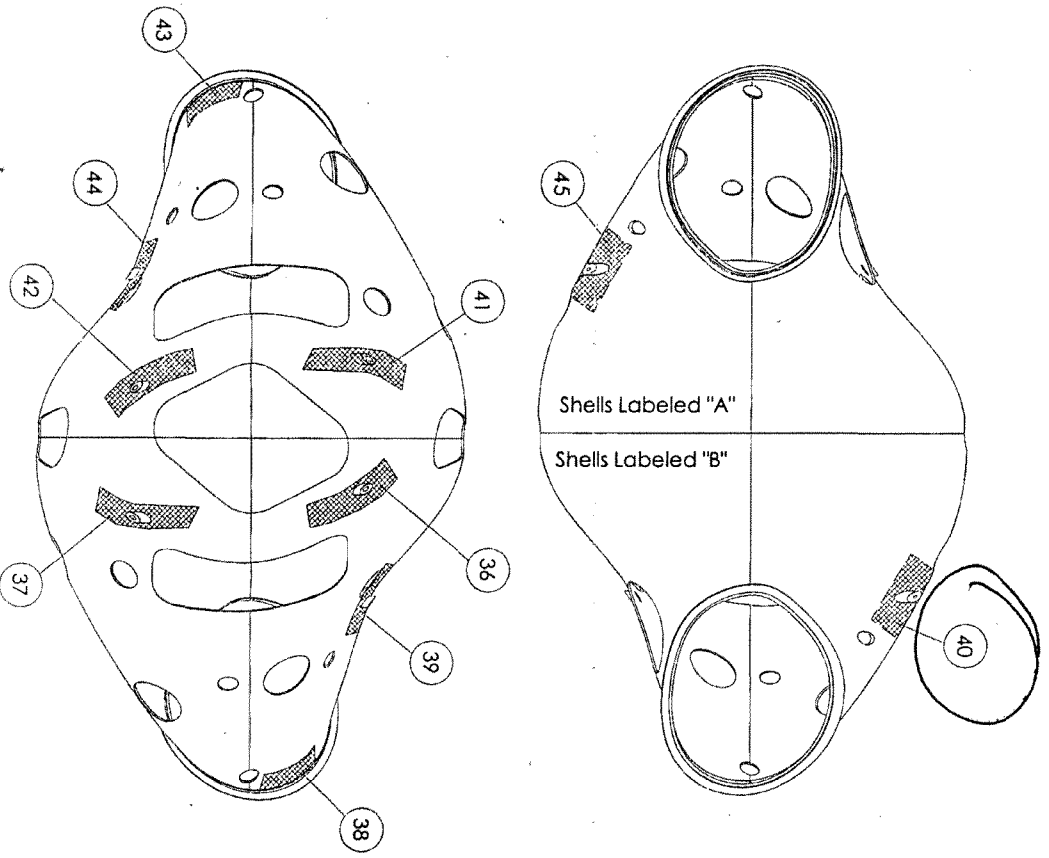


*John Ballard II*  
 Cooperheat MAS Signature

*[Signature]*  
 Customer Representative Signature

*11/1/06*  
 Date

65678/1.0/234/00/818  
 SE 120-002  
 1/11/06  
 Page 2 of 2  
 repair



Item	Qty	Zone	Film Name	Location	Comments
36	3	C-6			
37	3	A-6			
38	3	C-5			
39	3	C-6			
40	3	F-6			
41	3	C-7			
42	3	A-7			
43	3	B-8			
44	3	A-7			
45	3	D-8			
46	3	F-4			
47	3	D-4			
48	3	D-1			

0.0000

CDCCPc  
 120e Segment  
 X-Ray Film Layout  
 Scale: 1:1  
 Date: 1/11/06  
 Author: [Name]



INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: REWORK - Item: 6

Workorder: 65678/1-0 Sub:242 Op:30

Part: REWORK - REWORK / REPAIR PER N/C - N/C #

Drawing ID: SE122-072 Rev: 1		INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY			
SHEET	ZONE	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
1*	G6	PROFILOMETER	QA		J-825	25 MICRO	854-R.U		
(10)		32 MICRO-INCH RA SURFACE FINISH					04-30-06		A



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: REWORK - Item: 7

Workorder: 65678/1-0 Sub:247 Op:20

Part: REWORK - REWORK / REPAIR PER N/C - N/C #

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		CWI VISUAL WELD INSPECT WELD SU UNDER 8X MAGNIFICATION. REPAIR WELDS REF. NCR 19392		CWI		VISUAL	3 PLUG WELDS ACCEP TABLE PER SPECIFICAT ION REQUIREMENTS.	933-D.L			A
(10)								04-24-06			

CERTIFICATE OF TEST

Aerodyne Alloys, LLC  
Duplicate Copy of Original Test Report issued to NI your order

CUST ADL DDLT MCH CHK BY SS  
HEAT 238C DATE 12507  
SIZE 325" QUAN 4  
PO# 052811V 11161 105  
SIGNATURE [Signature]

Purchase Order Size Alloy  
ACT-4865 4375" Rd NICKELVAC 625

Traveler(s) A Heat # 238C Ingot#  
08598

ALLVAC  
P.O. Box 5030 Ashcraft Ave  
Monroe, NC 28111-5030  
Phone (704) 289-4511

Customer Name  
AERODYNE ALLOYS LLC

PCS 312 Weight 1409

Jina Coletti

Date 08222005 Quality Auditor Yina Coletti

CONDITION SHIPPED

HEAT TREAT: 1600 F., 30 Mins., MQ

SURFACE: Centerless Ground

SPECIFICATIONS

AMS 2806	B	AMS 5666	E
ASQR-01	4	ASTM B446	2003 Grade 1
F-16	09/15/03	F-22	10/31/04
F-23	09/30/04	2N-QA 6078	AB
FWA 300	BH	FWA 310	BA
S-1600	01/03/2005	S-400	04/29/2004

RECEIVED  
SEP 14 2005  
100533 JH  
Line 1



Traveler(s) Heat # Inset# ALLVAC P.O. Box 5005 Aircraft Ave Morris, NC 28111-6038 Phone (704) 266-4511 Page 2 of 4

88298 A 238C

CHEMISTRY		CR EQ = Chromium Equiv				Cb = Nb					
C	S	Mn	Si	Cr	Co	Ti	Al	B	Zr		
.057	<.0003	.05	.19	21.53	.06	.23	.19	.002	<.01		
Fe	Cu	Ni	P	Cb	Ta	W	V	Cb+Ta	Ti+Al	Ni+Co	Y
4.34	.04	61.21	.009	3.44	<.01	.03	.03	3.45	.42	61.27	-

CHEMISTRY (TRACE)

CHEMISTRY REMARKS

Chemistry tested at ALLVAC unless otherwise noted.

MS  
LENT AVG  
6FI .0033

As Shipped Tensile Test

Operation	Inset	Heat/Treat Code	Test Mt	Temp F	UTS ksi	.2% Yield ksi	.02% Yield ksi	%EL	Gage Length		Tensile Machine	Tested At
									4D	5D		
1680BX	A	UC	ROOM	132.4	74.1	54.2	57.8	1.0128	0.2525	US INSPECTION SERVICES		

Test Dir: L = Longitudinal, T = Transverse, ST = Short Transverse, LT = Long Transverse,  
 TC = Transverse Center At Size, TM = Transverse Mid-Radius At Size,  
 PC = Pancake, BB = Dumbbell, PB = Paddle, TT = Top Transverse At Size,  
 BT = Bottom Transverse At Size, LC = Long Center, TX = Top Transverse Mid-Radius At Size,  
 LM = Longitudinal Mid Radius, LF = Longitudinal Surface, TS = Transverse Surface

Operation: SUPER - Crosshead Sep Rate of 10 inches/minute

SEP 15 2005



Traveler(s) 08598 A Heat # 238C Ingot# ALLVAC P O Box 5636 Aircraft Ave Mennoe, NC 28111-5636 Phone (704) 288-4511 Page 3 of 4

AS SHIPPED HARDNESS

Heat Treat Code 1600BX Ingot 25 Hardness Val 25 Hardness Type MRC US INSPECTION SERVICES Tested At

TENSILE/STRESS RUPTURE HEAT TREATMENT

HT Code 1600X Furnace Cool Rate Per Hr Cool Location F Hours Mins (F) Code

Table with 2 columns: Location, Code. Row 1: PLANT, 1600 30 WC

METALLOGRAPHY

GRAIN SIZE (As shipped cond.): Avg. ASTM 9 Tested at US Inspection Services

REMARKS

Material has been produced, sampled, inspected, and tested in accordance with the customer purchase order and referenced specifications and conforms to the requirements unless otherwise noted in this certificate of test.

Any deviations to specification or customer purchase order requirements relative to testing, test values, hot working fixed practices, have been resolved in writing with customer prior to shipment.

The recording of false, fictitious, or fraudulent statements or entries on this document may violate Federal statutes, including but not limited to Title 18, Chapter 47 of the United States Code, and may be punishable as a felony.

If customer purchase order does not specifically reference a revision to a specification, Allvac will work to the latest revision on file and in effect at time of order placement.

Test methods are per the latest ASTM Standards, currently recognized industry practices; or as agreed upon between Allvac and customer.

Any chemical elements analyzed and found to have values below the actual limits of detection may be reported as < less than or reported at the detection level.



SEP 15 2005

Traveler(s) Heat # Ingot# Page 4 of 4  
00598 A 238C ALLIVAC P.O. Box 5836 Ashcroft Ave Menow, NC 28111-5836 Phone (704) 268-4511

When values are reported to the significant places called for in the specifications, rounding will be done in accordance with ASTM E-29.

This is to certify that during manufacturing, handling, testing and inspection, this material did not come in direct contact with mercury or any device employing a single boundary of containment.

This Certificate of Test shall not be reproduced except in full, without the written approval of Allivac Quality.

No weld repair has been performed on this material.

Material Safety Data Sheets (MSDS) - View or print from our site: [www.allivac.com](http://www.allivac.com). Printed copies available on request from the Allivac Sales Department.

SPECIAL REMARKS

INGOT MELT SOURCE: Allivac

Melt Method - AOD/ESR

Testing performed to MCL Manual Section F-23.

GEAR S-400 (GT193) supplier codes: Allivac Monroe - 87012, Allivac Lockport - T1226,  
US Inspection Services - T7605, Westmoreland T7869



SEP 15 2005



**Major**  
Tool & Machine, Inc.

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: REWORK - Item: 9

Workorder: 65678/1-0 Sub:251 Op:10

Part: REWORK - REWORK / REPAIR PER N/C - N/C #

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY			
			GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		RECORD PORT NB HOLE DIAMETERS AFTER REWORK (REF NCR 19115)		QA						
(10)										

**ARCOS ALLOYS**  
 A Division of Hoskins Mfg.  
 Mt. Carmel, PA 17851



DATE 01/10/00

## CERTIFICATION OF TESTS

SOLD TO: MAJOR TOOL & MACHINE  
 1458 EAST 19TH STREET  
 INDIANAPOLIS, IN 46216

SHIP TO: SAME

ARCOS S.O.		CUSTOMER ORDER NO.		CONSIGNEE ORDER NO.		DATE SHIPPED			
69824		P0000110		N/A		1/10/00			
ITEM	SIZE	GRADE		LOT NO./ALLOY NO.		QUANTITY			
1	3/32 X 36"	ARCOS 625		CT7519		20#			
SPECIFICATION: AWS A5.14/A5.14M-97. CLASS ERNiCrMo-3 ASME SFA 5.14 ASME SECTION II, PART C, 1998 EDITION, AND ALL PARAS AND ADDENDA THRU 1999.									
CHEMICAL ANALYSIS: WIRE									
C	Mn	Si	S	P	Cr	Ni	Mo	Cb	Cb + Ta
0.0	0.01	0.01	0.002	0.00	22.4	63.9	8.8		3.68
Ta	Ti	Al	Co	Cu	Fe	V	Total Others		
	0.35	0.28	0.04	0.05	0.4		<.50		

**ADDITIONAL TEST RESULTS**

Ferrite - NB2433.1-1: \_\_\_\_\_

Magna Gage: \_\_\_\_\_

X-Ray: \_\_\_\_\_


Bends: \_\_\_\_\_

Hardness: \_\_\_\_\_

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

**OTHER INFORMATION:**

LOT CLASSIFICATION - S1  
 INTENSITY OF TESTING - Schedule F


 JAN 14 2000  
 39771  
 1-18-00 BF

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 Alloys or its subcontractors are in compliance with the applicable material/customer specification.

**ARCOS**

  
 Eileen Zerby Q.A. CLERK  
 QUALITY ASSURANCE DEPARTMENT



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

mc095629.pdf



DATE 01/13/04

### 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
79698	P04-00127	N/A	1/13/04
ITEM	SIZE	GRADE	LOT NO./ALLOY NO.
1	3/32 X 36"	ARCOS 625	CB7996
QUANTITY			
20#			

**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 2003.

CHEMICAL ANALYSIS: WIRE									
C	Mn	Si	S	P	Cr	Ni	Mo	Cb	Cb + Ta
0.04	0.03	0.08	0.004	0.01	21.9	64.9	8.7		3.64
Ta	Ti	Al	Co	Cu	Fe	V	Total Others		
	0.21	0.16	0.02	0.12	0.2		<.50		

**ADDITIONAL TEST RESULTS**

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

**TENSILE** As Welded Heat Treated

Yield \_\_\_\_\_  
 Tensile \_\_\_\_\_  
 Elongation \_\_\_\_\_  
 Red. of Area \_\_\_\_\_

**OTHER INFORMATION:**

LOT CLASSIFICATION - S1  
 INTENSITY OF TESTING - Schedule F

2004

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**

1/29/04

Q.A. MANAGER  
 QUALITY ASSURANCE DEPARTMENT

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



DATE 01/08/04

**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			
79533		P03-05170		N/A		1/8/04			
ITEM	SIZE	GRADE		LOT NO./ALLOY NO.		QUANTITY			
1	3/32 X 36"	ARCOS 625		CB7996		20#			
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 2003.									
CHEMICAL ANALYSIS: WIRE									
C	Mn	Si	S	P	Cr	Ni	Mo	Cb	Cb + Ta
0.04	0.03	0.08	0.004	0.01	21.9	64.9	8.7		3.64
Ta	Ti	Al	Co	Cu	Fe	V	Total Others		
	0.21	0.16	0.02	0.12	0.2		<.50		

**ADDITIONAL TEST RESULTS**

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

**TENSILE** As Welded Heat Treated

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**

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



1-23-04

JAN 14 2004

82255  
 line 2

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.		QUANTITY	
2	3/32 X 36"	ALLOY 625		CV8061		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**

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

<b>TENSILE</b>	As Welded	Heat Treated
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



12/5/03

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

81506  
 Line 2 R.I.

**ARCOS ALLOYS**  
 A Division of Hoskins Mfg.  
 Mt. Carmel, PA 17851



DATE 01/10/00

## CERTIFICATION OF TESTS

SOLD TO: MAJOR TOOL & MACHINE  
 1458 EAST 19TH STREET  
 INDIANAPOLIS, IN 46216

SHIP TO: SAME

ARCOS S.O.		CUSTOMER ORDER NO.		CONSIGNEE ORDER NO.		DATE SHIPPED			
69824		P000110		N/A		1/10/00			
ITEM	SIZE	GRADE		LOT NO./ALLOY NO.		QUANTITY			
1	3/32 X 36"	ARCOS 625		CT7519		20#			
<b>SPECIFICATION:</b> AWS A5.14/A5.14M-97. CLASS ERNiCrMo-3 ASME SFA 5.14 ASME SECTION II, PART C, 1998 EDITION, AND ALL PARAS AND ADDENDA THRU 1999.									
<b>CHEMICAL ANALYSIS:</b> WIRE									
C	Mn	Si	S	P	Cr	Ni	Mo	Cb	Cb + Ta
0.0	0.01	0.01	0.002	0.00	22.4	63.9	8.8		3.68
Ta	Ti	Al	Co	Cu	Fe	V	Total Others		
	0.35	0.28	0.04	0.05	0.4		<.50		

<b>ADDITIONAL TEST RESULTS</b>  Ferrite - NB2433.1-1: _____ Magna Gage: _____ X-Ray: _____ Bends: _____ Hardness: _____	<b>TENSILE</b>	As Welded		Heat Treated
	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 Alloys or its subcontractors are in compliance with the applicable material/customer specification.

**ARCOS**

  
 1-24-00

  
 Eileen Zerby Q.A. CLERK  
 QUALITY ASSURANCE DEPARTMENT

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

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 D NBR 1427  
 ORD/LN NBR 026988/02  
 CUSTOMER PART NBR 326504200240000

PROD DESC WELDING / METALLIZING WIRE TYPE INC625  
 SIZE 093X36" QTY LBS 772

SPECIFICATION  
 AWS A5.14-97/ENICRMO-3

CHEMICAL ANALYSIS

HEAT NBR	C	MN	P	S	SI	NI	CR	MO	CU
K48859	10 01910	0301	< 0051	0006	< 0051	00120	2108	3610	0201

Y	TA	TI	NB	AL	N	CO	FE	W	V	B
10 02010	019103	4310	2201	10 130101	911					

MECHANICAL PROPERTIES

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


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

COUNTRY OF ORIGIN	REPRESENTATIVE	DATE SIGNED
GERMANY	<i>[Signature]</i>	4/06/05

IF INITIALED AND DATED HERE THIS IS AN AMENDED CERTIFICATION

4/18/05  
 95358 Line 2 WA 

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	0.019	0.030	<.005	.0006	<0.05	15.00	20.82	08.36	0.020

Y	TA	TI	NB	AL	N	CO	FE	W	V	B
0.020	0.019	0.03	0.43	0.220		10.130	01.91			

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. REPRESENTATIVE  
*Dayle Arang*

5/21/05  


DATE SIGNED  
 3/21/05

IF INITIALED AND DATED HERE

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/ERNICRMO-3

CHEMICAL ANALYSIS

HEAT NBR.	C	MN	P	S	SI	NI	CR	MO	CU
K48859	0.019	0.030	<.005	.0006	<.05	165.00	20.82	08.36	0.020

Y	TA	TI	NB	AL	N	CO	FE	W	V	B
	0.020	0.019	0.43	0.220		0.130	01.91			

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

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. REPRESENTATIVE

*Dayle Chang*



*4/4/05*

DATE SIGNED  
 3/21/05

*04.01.2005*  
*94843*  
*Line 1 50 tubes*

IF INITIALED AND DATED HERE THIS IS AN AMENDED CERTIFICATION

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

MC095280



DATE 12/19/03

### 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	
79533		P03-05170		N/A		12/19/03	
ITEM	SIZE	GRADE		LOT NO./ALLOY NO.		QUANTITY	
2	3/32 X 36"	ALLOY	625	CV8061		10#	

**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 2003.

**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**

Ferrite - NB2433.1-1:	_____	<b>TENSILE</b> As Welded	_____	Heat Treated	_____
Magna Gage:	_____	Yield	_____		_____
X-Ray:	_____	Tensile	_____		_____
Bends:	_____	Elongation	_____		_____
Hardness:	_____	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**

\_\_\_\_\_  
 Q.A. MANAGER  
 QUALITY ASSURANCE DEPARTMENT

DEC 23 2003

81946  
 line 2 B.T.

12/23/03



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

CERTIFICATE OF COMPLIANCE / TEST REPORT

4/04/05

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

CUSTOMER P. O. NBR: 1429  
 ORD/LN NBR: 025988/01  
 CUSTOMER PART NBR: 326506200170000

27117

PROD. DESC: WELDING / METALLIZING WIRE  
 SIZE: .062X36"

TYPE: INC625  
 QTY LBS: 652

SPECIFICATION  
 AWSA5.14-97/ERNICRMO-3

CHEMICAL ANALYSIS

HEAT NBR.	C	MN	P	S	SI	NI	CR	MO	CU
34932	10.016	0.030	0.004	0.0035	0.040	63.89	22.35	09.00	0.020

NB 3.45 OTHER ELEMENTS\* 0.1265

Y	TA	TI	NB	AL	N	CO	FE	W	V	B
103.45	0.230		10.080			10.760				

MECHANICAL PROPERTIES

TENSILE	YIELD	ELONGATION	HARDNESS	BREAK	ROA
LBS/SQ. INCH	LBS/SQ INCH	%			%
HARD					

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. O.

411865  
 95355  
 W A Lin 6



COUNTRY OF ORIGIN  
 USA

IG. C. REPRESENTATIVE

*Dayle Craig*

DATE SIGNED  
 4/04/05

IF INITIALED AND DATED HERE

THIS IS AN AMENDED CERTIFICATION



CERTIFICATION ACCORDING TO ASME SECT II PART C

COP ORDER #: 076432

Bohler Thyssen Welding USA Inc  
10401 Greenbough Drive

FAX CERTS TO #

Stafford, TX 77477

PRODUCTION DESCRIPTION : ER316LT

DIAMETER : 1/16X36

AWS/ASME SPECIFICATION : A/SFA5.9

WEIGHT : 300 LBS

AWS/ASME CLASSIFICATION: ER316L

HEAT/LOT : 95316

\*ACTUAL CHEMICAL ANALYSIS \*

C 0.018	Si 0.36	Mn 1.61	P 0.008
S 0.009	Cr 18.35	Mo 2.52	Ni 12.08
Cu 0.10			

\*\* MECHANICAL PROPERTIES

YIELD STRENGTH :  
0.2 %  
PSI (N/mm 2)

ELONGATION : 35  
%

TENSILE STRENGTH : 81,000  
PSI (N/mm 2)

HARDNESS :

IMPACT-VALUE : 35  
(ISO-V) TEST TEMPERATURE : 68 F (20 C)  
FT-LBS (J)

REMARKS

FERRITE CONTENT :

ACCORDING TO :

AUG 02 2002

\* SFA 5.01 SCHEDULE H  
\*\* SFA 5.01 SCHEDULE G

*Handwritten signature*

Q & A Department

Jul 30, 2002

Bohler Thyssen Welding USA, Inc.  
PO Box 721678, Houston, Texas 77272-1678  
10401 Greenbough Drive Stafford Texas 77477

Tel (281) 499-1212 • Internet: www.btwusa.com  
Fax (281) 499-4347 • e-mail: [custsvc@btwusa.com](mailto:custsvc@btwusa.com)  
(800) 527-0791

TOTAL P.04



8-13-02

70715 *aw*

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  
 97303 wx  
 line 1*

*MTRM  
 040 RLU*

GIB GRATTI, QUALITY ASSURANCE MANAGER  
 QUALITY ASSURANCE DEPARTMENT



**Major**  
Tool & Machine, Inc.

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-002 - Item: 25

Workorder: 65678/1-0 Sub:1 Op:10

Part: SE120-002 - -

SHEET	ZONE	Drawing ID: SE120-002 Rev: 1 CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*	(10)	VWI VESSEL FLANGE A SEAL WELD RO		MFG CWI		VISUAL	ACCEPT	683-K.M	581-D.E		A
*	(20)	VWI VESSEL FLANGE B SEAL WELD RO		MFG CWI		VISUAL	ACCEPTED	299-M.G	581-D.E		A
*	(30)	VWI VESSEL FLANGE A SEAL WELD CO		MFG CWI		VISUAL	ACCEPT	299-M.G	581-D.E		A
*	(40)	VWI VESSEL FLANGE B SEAL WELD CO		MFG CWI		VISUAL	ACCEPT	299-M.G	581-D.E		A



Major  
Tool & Machine, Inc.

INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-002 - Item: 26

Workorder: 65678/1-0 Sub:2 Op:10

Part: SE120-002 - - VACUUM TESTING / PORT REMOVAL / VESSEL FLANGE MACHINING / FINAL INSPECTION ACTIVITIES SE120-003-1 120 DEGREE

SHEET	ZONE	DRAWING ID: SE120-002 Rev: 1	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY	
				GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*			BASE PRESSURE LESS THAN 1 x 10(-3) (PRIOR TO THERMAL CYCLE)		MFG	VISUAL	LESS THAN 1 X 10(-3)	854-R.U		
(10)					QA			04-30-06		A

4959  
10520 Chester Road  
Woodlawn, Ohio 45215



**CLIENT:** MAJOR TOOL & MACHINE  
**ISOTOPE:** IR-192  
**WELD PROCESS:** FEAN  
**DATE:** 9-8-05  
**JOB NO.:** 13850291-2  
**RADIOGRAPHER:** James Berg II  
**FILM TYPE:** Kodak M Double  
**ISO:** 33.7  
**FOCAL SPOT SIZE:** .151"  
**WELD PROCESS:** 1B x .04"  
**WELD PROCESS:** 625 IN CORR  
**TIME:** 14.625"  
**PENETRATOR:** ASTM IB  
**ACCEPTANCE STANDARD:** ASME SEC VIII, Div 1, U-51  
**REMARKS:** SEE MAP FOR LOCATIONS.

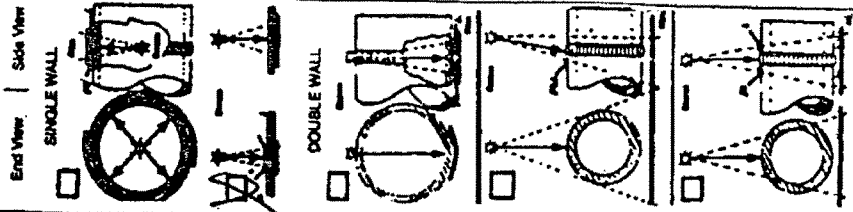
FITTING	SEAM OR FITTING	FILM INTERVAL NUMBER	WELDER IDENTIFICATION	PENETRATOR		SLAG	POROSITY	POROSITY WITH TAIL	CRACK	LACK OF PEN	LACK FUSION	INTERNAL CONVEXITY	INTERNAL CONCAVITY	TUNGSTEN	MELT-THROUGH	BURN-THROUGH	CRATER-FIT	OXIDATION	INTERNAL UNDERCUT	EXTERNAL UNDERCUT	ALIGNED INDICATIONS	WELD CONTOUR	MIS-MATCH	FILM ARTIFACT	VISUAL CONCERNS	FILM DENSITY	SEE REMARKS	ACCEPT	REFLECT			
				SIZE	QUALITY LEVEL																											
WB	0-14			1B	.010"		✓																									
10							✓																									
11							✓																									
23							✓																									
24							✓																									
25							✓																									
27							✓																									

Page 1 of 3

65506 II  
 Cooper/MGS Signature

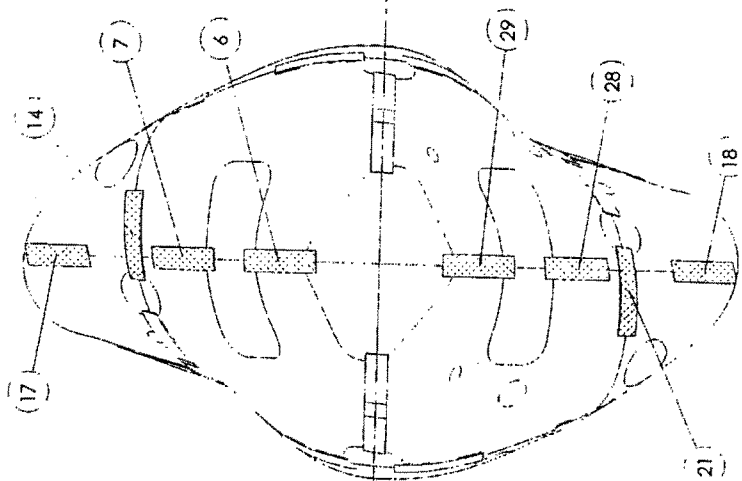
Customer Representative Signature

Date  
 9-8-05



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





All shells above  
are labeled "A"

All shells below  
are labeled "B"

9/8/05  
SE 100-002  
65678/1.0/5/195/818  
Page 3 of 3

Item	Shl	Zone	Film Name	Center Point	Locallion	Comments
2	1	E-4	1A-2A-6A-7A	(26.99,18.90,14.49)		
3	1	E-3	1A-5A-6A-10A	(42.34,29.64,-10.46)		
4	1	E-7	4A-5A-9A-10A	(54.03,37.63,-25.58)		
5	1	E-2	2A-3A-7A-8A	(42.35,29.66,21.15)		
6	2	D-7	3A-4A-2	(87.67,17.72,0.00)		
7	2	E-7	3A-4A-1	(72.08,34.99,0.00)		
8	1	D-4	1A-1B-2A-3B	(40.46,0.00,20.75)		
9	1	D-2	2A-3A	(56.08,10.15,34.41)		
10	1	D-1	3A-4B-1	(75.85,0.00,29.70)		
11	1	D-1	3A-4B-2	(85.55,0.00,22.13)		
12	1	D-4	2A-5B	(40.32,0.00,35.85)		
13	1	D-7	4A-5A	(62.27,11.62,-35.85)		
14	2	E-7	3A-4A-8A-9A	(62.52,43.77,-3.72)		
15	1	E-2	3A-8A	(52.97,37.09,14.93)		
16	1	E-2	7A-8A	(35.91,38.76,18.38)		
17	2	E-7	8A-9A	(47.91,57.01,0.00)		
18	2	B-7	8B-9B	(42.91,-38.76,-18.38)		
19	1	C-7	7B-8B	(35.91,-38.76,-18.38)		
20	1	C-7	3B-8B	(52.97,-37.09,-14.93)		
21	2	B-7	3B-4B-8B-9B	(62.52,-43.77,3.72)		
22	1	C-2	4B-5B	(62.27,-11.62,35.85)		
23	1	D-5	5A-2B	(40.32,0.00,-35.85)		
24	1	D-8	4A-3B-2	(85.55,0.00,22.13)		
25	1	D-7	4A-3B-1	(75.85,0.00,-29.70)		
26	1	D-7	2B-3B	(56.08,-10.15,-34.41)		
27	1	D-5	1A-1B-5A-2B	(40.46,0.00,-20.75)		
28	2	B-7	3B-4B-1	(72.08,-34.99,0.00)		
29	2	C-7	3B-4B-2	(87.67,-17.72,0.00)		
30	1	C-7	2B-3B-7B-8B	(42.35,-29.66,-21.15)		
31	1	C-2	4B-5B-9B-10B	(54.03,-37.63,25.58)		
32	1	C-4	1B-5B-6B-10B	(42.34,-29.64,10.46)		
33	1	C-5	1B-2B-6B-7B	(26.99,-18.90,-14.49)		
34	1	E-2	7A-8A	(28.10,49.91,14.70)		
35	1	B-7	7B-8B	(28.10,-49.91,-14.70)		

CDChc  
120° Segment  
X-Ray Film Layout  
RE  
1E120-001-13MM 1A  
SWIFT 071



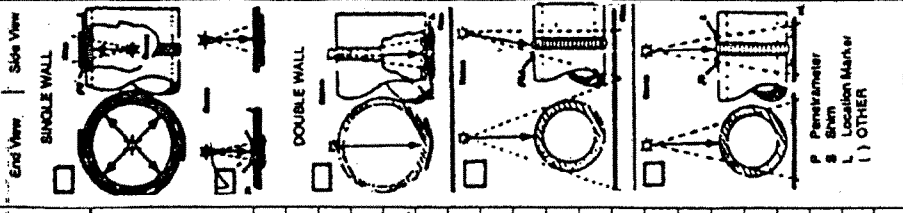
4959  
10520 Chester Road  
Woodlawn, Ohio 45215



CLIENT		Major Tool + Machine		RADIOGRAPHER		Robert Weaver		JOB NO.		13860001		P.O. NO.		NA		DATE		1/11/06	
ISOTOPE/RAY		IR192		FOCAL SPOT SIZE		1/42"		SOD		14.625"		TIME		2:30		FILM TYPE		Kodak AA Double	
WELD PROCESS		GTAW		MATERIAL SPEC.		625 Inconel		MATERIAL THICKNESS		.375"		PENETRANT		ASTM 1B		SHIM		NA	
DESCRIPTION		65678/10/5/247/818		INTERPRETER LEVEL		Robert Weaver/II		FILM PROCESSING		13860001		ACCEPTANCE STANDARD		ASME VIII, Div. 1, UW-51		FILM TECHNIQUE		Double	
SEAM OR FITTING		FILM INTERVAL		WELDER IDENTIFICATION		PENETRANT		CRACKER		REMARKS		REMARKS		REMARKS		REMARKS		REMARKS	
36 A-B		↓		NA		IB		0.10"		Penetrant		Penetrant		Penetrant		Penetrant		Penetrant	
37		↓		↓		↓		↓		↓		↓		↓		↓		↓	
38 0-14		↓		↓		↓		↓		↓		↓		↓		↓		↓	
39 A-B		↓		↓		↓		↓		↓		↓		↓		↓		↓	
40		↓		↓		↓		↓		↓		↓		↓		↓		↓	
41		↓		↓		↓		↓		↓		↓		↓		↓		↓	
42		↓		↓		↓		↓		↓		↓		↓		↓		↓	
43 0-14		↓		↓		↓		↓		↓		↓		↓		↓		↓	
44 A-B		↓		↓		↓		↓		↓		↓		↓		↓		↓	
45 ↓		↓		↓		↓		↓		↓		↓		↓		↓		↓	
46 0-14		↓		↓		↓		↓		↓		↓		↓		↓		↓	
47 ↓		↓		↓		↓		↓		↓		↓		↓		↓		↓	
48 ↓		↓		↓		↓		↓		↓		↓		↓		↓		↓	
<del>408 A-B</del>		<del>↓</del>		<del>↓</del>		<del>↓</del>		<del>↓</del>		<del>↓</del>		<del>↓</del>		<del>↓</del>		<del>↓</del>		<del>↓</del>	
RetNB		↓		↓		↓		↓		↓		↓		↓		↓		↓	
2 0-14		↓		↓		↓		↓		↓		↓		↓		↓		↓	
4 ↓		↓		↓		↓		↓		↓		↓		↓		↓		↓	

REMARKS  
Densitometer - 10105  
Cal due - 2/2/06

Page 1 of 23



Penetrant  
S Shim  
L Location Marker  
OTHER

Robert Weaver 655514/II

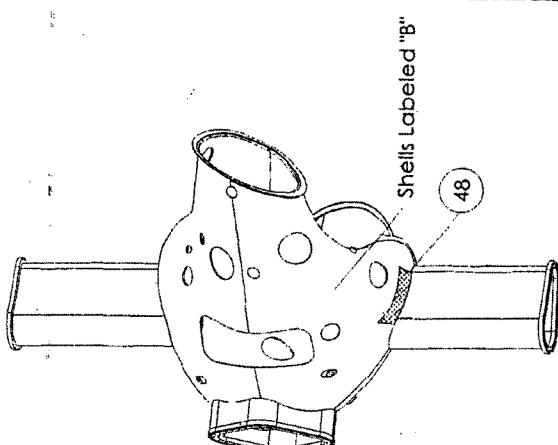
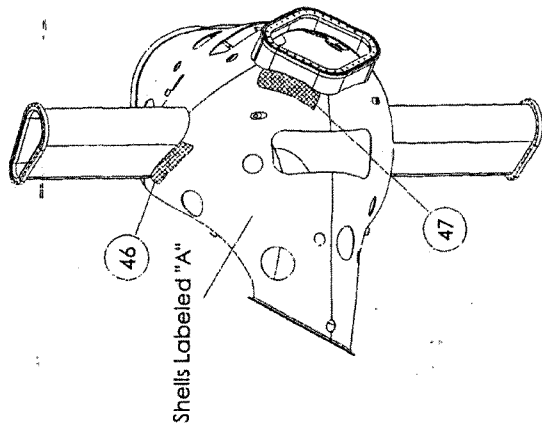
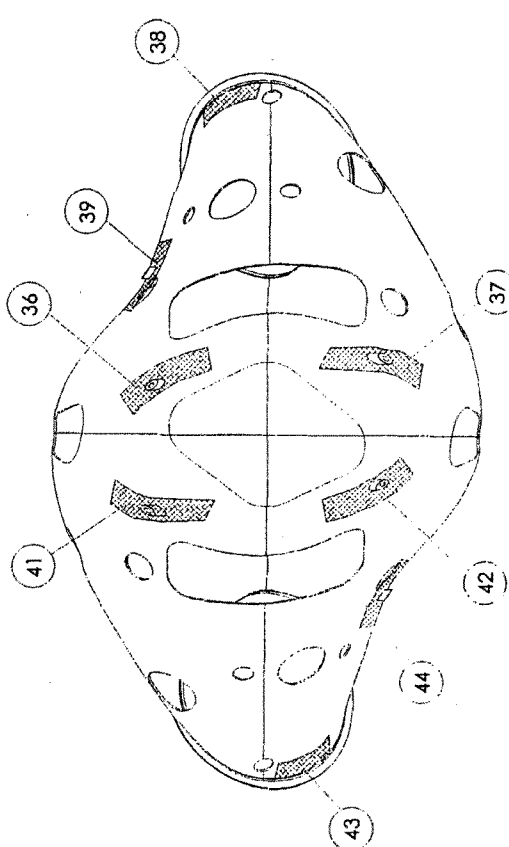
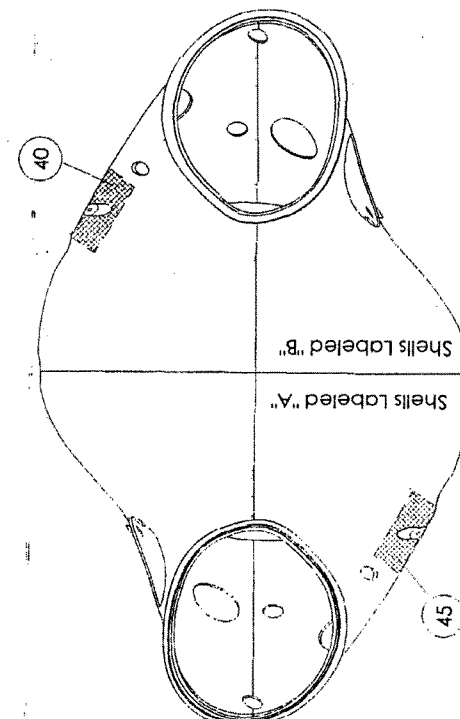
1/11/06

Customer Representative Signature

Cooperheat-MQS Signature

Date

65678/1.0/5/247/818  
 SE120-002  
 1/11/06  
 Page 2 of 23



Item	Shl	Zone	Film Name	Location	Comments
36	3	C-6			
37	3	A-6			
38	3	C-5			
39	3	C-6			
40	3	F-6			
41	3	C-7			
42	3	A-7			
43	3	B-8			
44	3	A-7			
45	3	D-8			
46	3	F-4			
47	3	D-4			
48	3	D-1			

FILE: CDC/PH-12-000001-1217

120° Segment  
 X-Ray Film Layout

DATE: 1/11/06  
 TIME: 10:00:11 AM  
 BY: [Signature]  
 SCALE: 1:1





INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-002-NB - Item: 30

Workorder: 65678/1-0 Sub:119 Op:20

Part: SE120-002-NB - - PORT NB INSTALLATION

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
2*	F2	Φ .1   A   B   C		QA		FARO ARM	-0.067 / +0.057 OUT SIDE FLANGE ( 0.127 ) TOP +0.001 / +0.0 61 ( N.C. 18415) [N /C:18415]	854-R.U			A
(30)		PORT NB POSITION	LASER			1444		04-30-06			
2*	G2	☐ :375   A   B   C		QA		FARO ARM	NB SKIN -0.060 / +0 .105 VESSEL SKIN - 0.097 / +0.247(NC 1 8415) [N/C:18415]	854-R.U			A
(40)		PORT EXT. SIDEWALL AND ADJACENT VESSEL WALL	LASER			1444		04-30-06			



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-002-NB - Item: 32

Workorder: 65678/1-0 Sub:223 Op:30

Part: SE120-002-NB - REWORK / REPAIR PER N/C - N/C #

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
2*	F2	φ .1   A   B   C PORT NB POSITION	LASER	QA		1444	+0.070 / +0.111 (0.0 41 DIFFERENCE)	295-C.W 11-03-05			A
2*	G2	□ .375   A   B   C PORT EXT. SIDEWALL AND ADJACENT VESSEL WALL	LASER	QA		1444	+0.179 / -0.115 (0. 295 PROFILE)	295-C.W 11-03-05			A



**Major**  
Tool & Machine, Inc.

**INSPECTION DATA CHECKLIST**

Page: 9  
Date: 04/29/06  
User ID: UPCHURC#

Quality Assurance Documentation for Part ID: SE120-003 10-6 SUB-SET - Item: 33

Workorder: 65678/1-0 Sub:98 Op:30

Part: SE120-003 10-6 SUB-SET - - 10-6 PANEL SUB-SET

Drawing ID: SE120-004 Rev: 1		INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY		
SHEET ZONE	CHARACTERISTIC	GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (10)	VWI ROOT PASS WELD 10-6		MFG CWI	VISUAL	OK	093-M.S 07-08-05	581-D.E 07-08-05	A



**Major**  
Tool & Machine, Inc.

**INSPECTION DATA CHECKLIST**

Page: 10  
Date: 04/29/06  
User ID: UPCHURC#

Quality Assurance Documentation for Part ID: SE120-003 10-6 SUB-SET - Item: 34

Workorder: 65678/1-0 Sub:98 Op:130

Part: SE120-003 10-6 SUB-SET - - 10-6 PANEL SUB-SET

Drawing ID: SE120-004 Rev: 2

SHEET ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
		GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (20)	VWI INTERIOR COVER PASS WELD 10-6		MFG CWI		VISUAL	OK	358-D.M	581-D.E	A
							07-08-05	07-11-05	



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003 10-6 SUB-SET - Item: 35

Workorder: 65678/1-0 Sub:98 Op:150

Part: SE120-003 10-6 SUB-SET - - 10-6 PANEL SUB-SET

SHEET ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY		
		GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (20)	VWI EXTERIOR COVER PASS WELD 10-		MFG CWI	VISUAL	ACCEPT	683-K.M	581-D.E	A
						07-09-05	07-09-05	





**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003 10-6 SUB-SET - Item: 36

Workorder: 65678/1-0 Sub:111 Op:30

Part: SE120-003 10-6 SUB-SET - - 10-6 PANEL SUB-SET

Drawing ID: SE120-004 Rev: 2		INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY		
SHEET ZONE	CHARACTERISTIC	GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (10)	VWI ROOT PASS WELD 10-6		MFG CWI		OK	197-T.FI	581-D.E	A
						08-02-05	08-02-05	



INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-003 10-6 SUB-SET - Item: 37

Workorder: 65678/1-0 Sub:111 Op:130

Part: SE120-003 10-6 SUB-SET - - 10-6 PANEL SUB-SET

Drawing ID: SE120-004 Rev: 2		INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY			
SHEET ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (20)	VWI INTERIOR COVER PASS WELD 10-6		MFG CWI		VISUAL	OK	358-D.M	933-D.L	A
							08-03-05	08-03-05	



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INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-003 10-6 SUB-SET - Item: 38

Workorder: 65678/1-0 Sub:111 Op:150

Part: SE120-003 10-6 SUB-SET - - 10-6 PANEL SUB-SET

Drawing ID: SE120-004 Rev: 2		INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY				
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*	(20)	VWI EXTERIOR COVER PASS WELD 10-		MFG CWI		VISUAL	OK	358-D.M	933-D.L	
								08-03-05	08-03-05	A



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003 10-6-7 SUB-SET - Item: 39

Workorder: 65678/1-0 Sub:96 Op:30

Part: SE120-003 10-6-7 SUB-SET - - 10-6-7 PANEL SUB-SET

Drawing ID: SE120-004 Rev: 1		INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*	(10)	VWI ROOT PASS WELD 6-7		MFG CWI	VISUAL	OK	093-M.S	581-D.E	A
							07-08-05	07-08-05	



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003 10-6-7 SUB-SET - Item: 40

Workorder: 65678/1-0 Sub:96 Op:130

Part: SE120-003 10-6-7 SUB-SET - - 10-6-7 PANEL SUB-SET

Drawing ID: SE120-004 Rev: 1		INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY		
SHEET ZONE	CHARACTERISTIC	GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (20)	VWI INTERIOR COVER PASS WELD 6-7		MFG CWI		OK	358-D.M	581-D.E	A
						07-08-05	07-08-05	



**Major**  
Tool & Machine, Inc.

**INSPECTION DATA CHECKLIST**

Page: 17  
Date: 04/29/06  
User ID: UPCHURC#

Quality Assurance Documentation for Part ID: SE120-003 10-6-7 SUB-SET - Item: 41

Workorder: 65678/1-0 Sub:96 Op:150

Part: SE120-003 10-6-7 SUB-SET - - 10-6-7 PANEL SUB-SET

Drawing ID: SE120-004 Rev: 1		INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY		
SHEET ZONE	CHARACTERISTIC	GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (20)	VWI EXTERIOR COVER PASS WELD 6-7		MFG CWI	VISUAL	ACCEPT	683-K.M	581-D.E	A
						07-09-05	07-09-05	



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003 10-6-7 SUB-SET - Item: 42

Workorder: 65678/1-0 Sub:110 Op:30

Part: SE120-003 10-6-7 SUB-SET - - 10-6-7 PANEL SUB-SET

Drawing ID: SE120-004 Rev: 2

SHEET ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY	
		GAGE/EQUIP	BY SAMPLE	DATA/REMARKS	INSP	VERFD	AUDIT
* (10)	VWI ROOT PASS WELD 6-7		MFG CWI	OK	197-T.FI	581-D.E	A
					08-02-05	08-02-05	



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003 10-6-7 SUB-SET - Item: 43

Workorder: 65678/1-0 Sub:110 Op:130

Part: SE120-003 10-6-7 SUB-SET - - 10-6-7 PANEL SUB-SET

Drawing ID: SE120-004 Rev: 2

SHEET ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
		GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (20)	VWI INTERIOR COVER PASS WELD 6-7		MFG CWI		VISUAL	OK	358-D.M	933-D.L	A
							08-03-05	08-03-05	





INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-003 10-6-7 SUB-SET - Item: 44

Workorder: 65678/1-0 Sub:110 Op:150

Part: SE120-003 10-6-7 SUB-SET - - 10-6-7 PANEL SUB-SET

Drawing ID: SE120-004 Rev: 2		INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY		
SHEET ZONE	CHARACTERISTIC	GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (20)	VWI EXTERIOR COVER PASS WELD 6-7		MFG CWI	VISUAL	OK	358-D.M 08-03-05	933-D.L 08-03-05	A



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INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-003 120 - Item: 45

Workorder: 65678/1-0 Sub:5 Op:60

Part: SE120-003 120 - - 120 DEGREE PRIMARY VESSEL WELDMENT SE120-003-1

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 DRAWINGS AND SPE FICATIONS	709-K.A	933-D.L	A
(10)		VWI ROOT PASS WELD 0		CWI			09-02-05	09-02-05	



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003 120 - Item: 46

Workorder: 65678/1-0 Sub:5 Op:160

Part: SE120-003 120 - - 120 DEGREE PRIMARY VESSEL WELDMENT SE120-003-1

Drawing ID: SE120-004 Rev: 2		INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY			
SHEET	ZONE	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*			MFG		VISUAL		093-M.S	933-D.L	
(20)			CWI			ACCEPT	09-07-05	09-07-05	A
		VWI EXTERIOR COVER PASS WELD 0							



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INSPECTION DATA CHECKLIST

Page: 23  
Date: 04/29/06  
User ID: UPCHURC#

Quality Assurance Documentation for Part ID: SE120-003 120 - Item: 47

Workorder: 65678/1-0 Sub:5 Op:180

Part: SE120-003 120 - - 120 DEGREE PRIMARY VESSEL WELDMENT SE120-003-1

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 DRAWINGS AND SPE FICATIONS	709-K.A	933-D.L	A
(20)		VWI INTERIOR COVER PASS WELD 0		CWI				09-08-05	09-08-05	



**Major**  
Tool & Machine, Inc.

**INSPECTION DATA CHECKLIST**

Page: 24  
Date: 04/29/06  
User ID: UPCHURC#

Quality Assurance Documentation for Part ID: SE120-003 120 - Item: 48

Workorder: 65678/1-0 Sub:5 Op:243

Part: SE120-003 120 - - 120 DEGREE PRIMARY VESSEL WELDMENT SE120-003-1

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*				MFG		VISUAL		709-K.A	933-D.L	A
(10)		VWI ROOT PASS WELD VFA		CWI				01-09-06	01-09-06	
*				MFG		VISUAL		093-M.S	933-D.L	A
(20)		VWI ROOT PASS WELD VFB		CWI				01-09-06	01-09-06	
*				MFG		VISUAL		728-R.D	933-D.L	A
(110)		VWI EXTERIOR COVER PASS WELD VF		CWI				01-10-06	01-13-06	
*				MFG		VISUAL		728-R.D	933-D.L	A
(120)		VWI EXTERIOR COVER PASS WELD VF		CWI				01-10-06	01-13-06	
*				MFG		VISUAL		837-J.DE	933-D.L	A
(130)		VWI INTERIOR COVER PASS WELD VFA		CWI				01-10-06	01-13-06	
*				MFG		VISUAL		837-J.DE	933-D.L	A
(140)		VWI INTERIOR COVER PASS WELD VFB		CWI				01-10-06	01-13-06	



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003 30L SUB-ASSY - Item: 49

Workorder: 65678/1-0 Sub:6 Op:70

Part: SE120-003 30L SUB-ASSY - - SIDE A 60 DEGREE VESSEL SEGMENT

Drawing ID: SE120-004 Rev: 1		INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*	(10)	VWI ROOT PASS WELD 2-3		MFG CWI	VISUAL	ACCEPT	683-K.M	581-D.E	A
*	(20)	VWI ROOT PASS WELD 4-5		MFG CWI	VISUAL	ACCEPT	709-K.A	581-D.E	A



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003 30L SUB-ASSY - Item: 50

Workorder: 65678/1-0 Sub:6 Op:170

Part: SE120-003 30L SUB-ASSY - - SIDE A 60 DEGREE VESSEL SEGMENT

SHEET ZONE	DRAWING ID: SE120-004 Rev: 1	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY	
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD
* (20)		VWI INTERIOR COVER PASS WELD 4-5		MFG CWI		VISUAL	709-K.A 07-12-05	933-D.L 07-12-05	A
* (20)		VWI INTERIOR COVER PASS WELD 2-3		MFG CWI		VISUAL	709-K.A 07-12-05	933-D.L 07-12-05	A



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003 30L SUB-ASSY - Item: 51

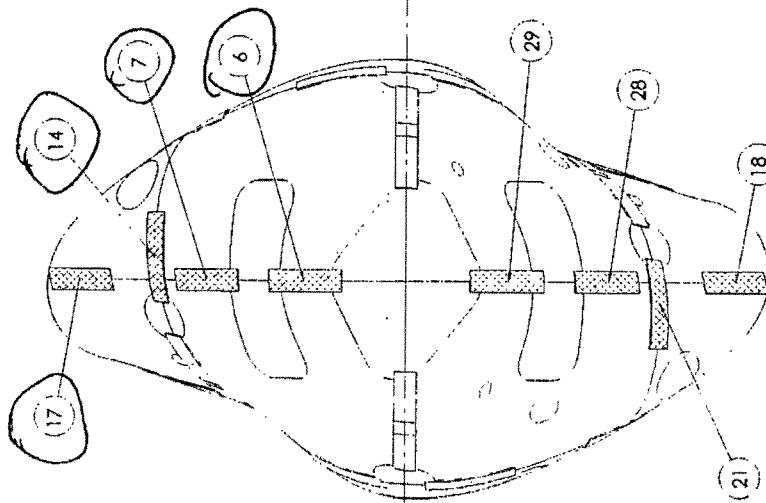
Workorder: 65678/1-0 Sub:6 Op:190

Part: SE120-003 30L SUB-ASSY - - SIDE A 60 DEGREE VESSEL SEGMENT

SHEET ZONE		CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY	
*	(20)		GAGE/EQUIP	BY	SAMPLE	DATA/REMARKS	INSP	VERFD	AUDIT
				MFG	VISUAL	WELD ACCEPTABLE P CUSTOMER DRAWIN SPECIFICATION REQU IREMENTS.	933-D.L	933-D.L	A
		VWI EXTERIOR COVER PASS WELD 4-5		CWI	VISUAL	WELD ACCEPTABLE P CUSTOMER DRAWIN SPECIFICATION REQU IREMENTS.	07-12-05	07-12-05	A
		VWI EXTERIOR COVER PASS WELD 2-3		MFG	VISUAL	WELD ACCEPTABLE P CUSTOMER DRAWIN SPECIFICATION REQU IREMENTS.	933-D.L	933-D.L	A
				CWI			07-12-05	07-12-05	







All shells above  
↑ are labeled "A"

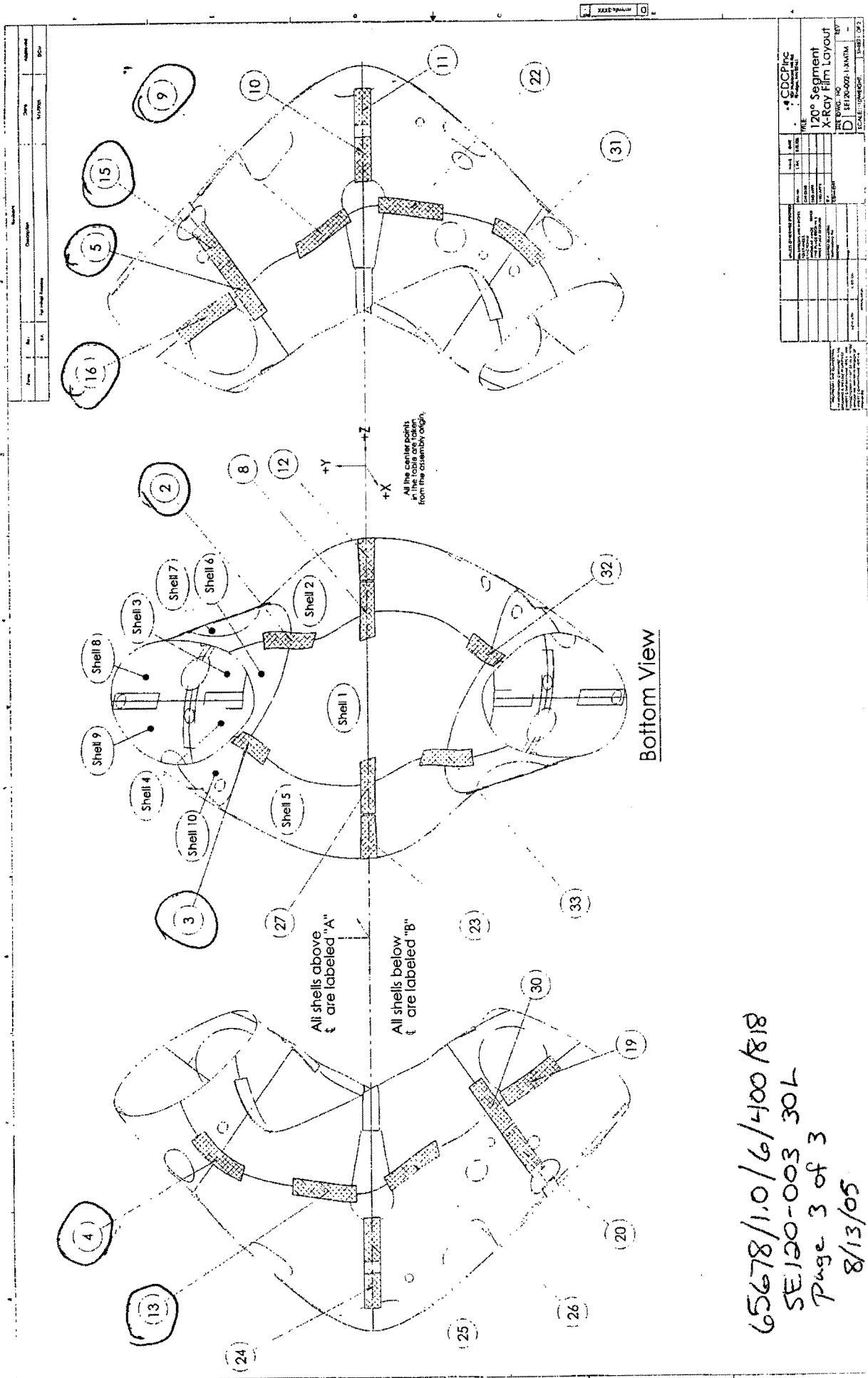
All shells below  
↓ are labeled "B"

Item	Sht	Zone	Film Name	Center Point	Location	Comments
2	1	E-4	1A-2A-6A-7A	(26.99,-18.90,-14.49)		
3	1	E-3	1A-5A-6A-10A	(42.34,-29.64,-10.46)		
4	1	E-7	4A-5A-9A-10A	(54.03,-37.83,-25.58)		
5	1	E-2	2A-3A-7A-8A	(42.35,-29.66,-21.15)		
6	2	D-7	3A-4A-2	(87.67,-17.72,-0.00)		
7	2	E-7	3A-4A-1	(72.08,-34.99,-0.00)		
8	1	D-4	1A-1B-2A-5B	(40.46,-0.00,-20.75)		
9	1	D-2	2A-3A	(56.08,-10.15,-34.41)		
10	1	D-1	3A-4B-1	(75.85,-0.00,-29.70)		
11	1	D-1	3A-4B-2	(85.55,-0.00,-22.13)		
12	1	D-4	2A-5B	(40.32,-0.00,-35.85)		
13	1	D-7	4A-5A	(62.27,-11.62,-35.85)		
14	2	E-7	3A-4A-8A-9A	(62.52,-43.77,-3.72)		
15	1	E-2	3A-8A	(52.97,-37.09,-14.93)		
16	1	E-2	7A-8A	(35.91,-38.76,-18.36)		
17	2	E-7	8A-9A	(47.91,-57.01,-0.00)		
18	2	B-7	8B-9B	(47.91,-57.01,-0.00)		
19	1	C-7	7B-8B	(35.91,-38.76,-18.36)		
20	1	C-7	3B-8B	(52.97,-37.09,-14.93)		
21	2	B-7	3B-4B-8B-9B	(62.52,-43.77,-3.72)		
22	1	C-2	4B-5B	(62.27,-11.62,-35.85)		
23	1	D-5	5A-2B	(40.32,-0.00,-35.85)		
24	1	D-8	4A-3B-2	(85.55,-0.00,-22.13)		
25	1	D-7	4A-3B-1	(75.85,-0.00,-29.70)		
26	1	D-7	2B-3B	(56.08,-10.15,-34.41)		
27	1	D-5	1A-1B-5A-2B	(40.46,-0.00,-20.75)		
28	2	B-7	3B-4B-1	(72.08,-34.99,-0.00)		
29	2	C-7	3B-4B-2	(87.67,-17.72,-0.00)		
30	1	C-7	2B-3B-7B-8B	(42.35,-29.66,-21.15)		
31	1	C-2	4B-5B-9B-10B	(54.03,-37.83,-25.58)		
32	1	C-4	1B-5B-6B-10B	(42.34,-29.64,-10.46)		
33	1	C-5	1B-2B-6B-7B	(26.99,-18.90,-14.49)		

↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑

65678/10/6/400/818  
 SE120-003 30L  
 Page 2 of 3  
 8/13/05

120° Segment  
 X-Ray Film Layout  
 D  
 SCALE: 1:100000  
 SHEET 02/07



Bottom View

All shells above  
the horizontal centerline  
are labeled "A"

All shells below  
the horizontal centerline  
are labeled "B"

CDCEP Inc	
FILE NO	120° Segment X-Ray Film Layout
FILE NAME	120° Segment X-Ray Film Layout
SCALE	1:1
DATE	8/13/05
BY	
CHKD BY	
APP'D BY	
DATE	
SCALE	1:1
DATE	
BY	
CHKD BY	
APP'D BY	
DATE	

65678/1.0/6/400/818  
 SE120-003 30L  
 Page 3 of 3  
 8/13/05



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003 30L SUB-ASSY - Item: 53

Workorder: 65678/1-0 Sub:94 Op:70

Part: SE120-003 30L SUB-ASSY - - SIDE B 60 DEGREE VESSEL SEGMENT

SHEET ZONE	DRAWING ID: SE120-004 Rev: 1	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (10)		VWI ROOT PASS WELD 2-3		MFG CWI		VISUAL	OK	683-K.M 07-29-05	933-D.L 07-29-05	A
* (20)		VWI ROOT PASS WELD 4-5		MFG CWI		VISUAL	OK	358-D.M 07-29-05	933-D.L 07-29-05	A



Major  
Tool & Machine, Inc.

### INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-003 30L SUB-ASSY - Item: 54

Workorder: 65678/1-0 Sub:94 Op:170

Part: SE120-003 30L SUB-ASSY - - SIDE B 60 DEGREE VESSEL SEGMENT

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS				RESULTS		INSPECTED BY			
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT		
*	(20)	VWI INTERIOR COVER PASS WELD 2-3		MFG CWI		VISUAL	ACCEPT	683-K.M	933-D.L			A
*	(20)	VWI INTERIOR COVER PASS WELD 4-5		MFG CWI		VISUAL	ACCEPT	358-D.M	933-D.L			A



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### INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-003 30L SUB-ASSY - Item: 55

Workorder: 65678/1-0 Sub:94 Op:190

Part: SE120-003 30L SUB-ASSY - - SIDE B 60 DEGREE VESSEL SEGMENT

SHEET ZONE	DRAWING ID: SE120-004 Rev: 2	CHARACTERISTIC	INSPECTION INSTRUCTIONS				RESULTS		INSPECTED BY	
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (20)		VWI EXTERIOR COVER PASS WELD 2-3		MFG CWI		VISUAL	ACCEPT	683-K.M	933-D.L	A
* (20)		VWI EXTERIOR COVER PASS WELD 4-5		MFG CWI		VISUAL	ACCEPT	358-D.M	933-D.L	A

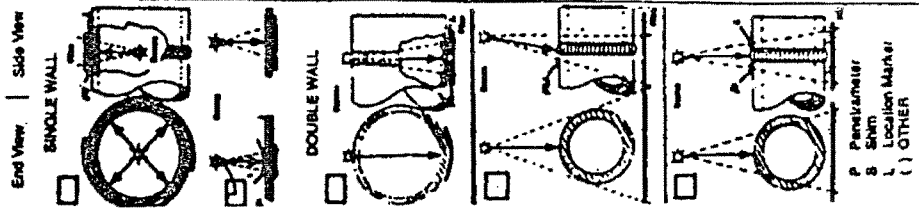
4959

10520 Cheater Road  
Woodlawn, Ohio 45215



CLIENT	Major Tool + Machine	RADIOGRAPHER	Robert Weaver	JOB NO.	13850291-3	P.O. NO.		DATE	8/14/05
ISOTOPE	IR192	FILM PROCESSING	Auto	FILM TYPE	Kodak MX165	FILM TECHNIQUE	Double	PER SCREENS	.010"
WELD PROCESS	GTAW	TIME	4:00	SHIM	N/A	ACCEPTANCE STANDARD	ASME VIII Div 1		
DESCRIPTION	65678/10/94/400/818 SE120-003 30L Half B	FOCAL SPOT SIZE	.151"	PENETRATOR	ASTM IB				
	Page 1 of 3	ISFD	15"	MATERIAL THICKNESS	.375"				
		MATERIAL DIAMETER	N/A						
		MATERIAL SPEC.	6025 Inconel						

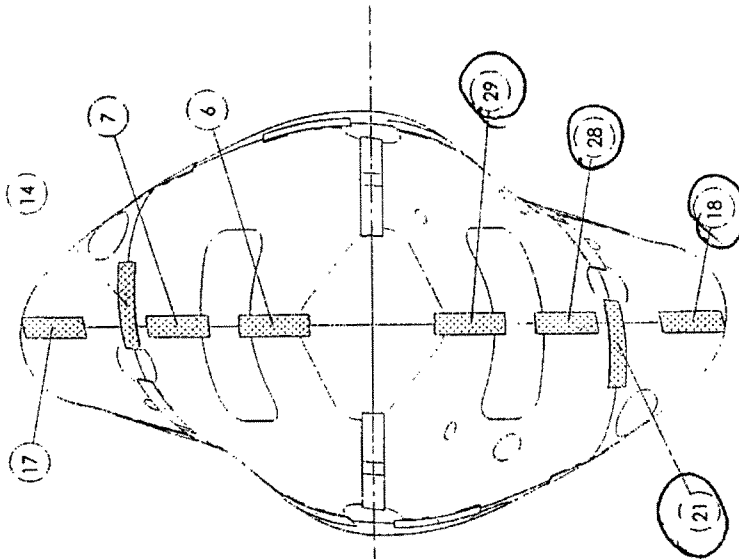
FITTING, SEAM OR FITTING	FILM INTERVAL NUMBER	WELDER IDENTIFICATION	PENETRATOR		SLAO	POROSITY	POROSITY WITH TAL	CRACK	LACK OF PEN	LACK OF FUSION	INTERNAL CONVEXITY	INTERNAL CONCAVITY	TUNGSTEN	MELT-THROUGH	BURN-THROUGH	CRATER-FIT	OXIDATION	INTERNAL UNDERCUT	EXTERNAL UNDERCUT	ALIGNED INDICATIONS	WELD CONTOUR	MIS-MATCH	FILM ARTIFACT	VISUAL CONCERNS	FILM DENSITY	SEE REMARKS	ACCEPT	REJECT
			SIZE	QUALITY LEVEL																								
18	0-14	K.M. 18		.010"	✓																					✓		
19					✓																					✓		
20					✓																					✓		
21					✓																					✓		
22					✓																					✓		
26					✓																					✓		
28					✓																					✓		
29					✓																					✓		
30					✓																					✓		
31					✓																					✓		
32					✓																					✓		
33					✓																					✓		



*Robert Weaver*  
Customer Representative Signature

Robert Weaver 655514/H  
Cooperheat/COS Signature

8/14/05  
Date



All shells above  
are labeled "A"

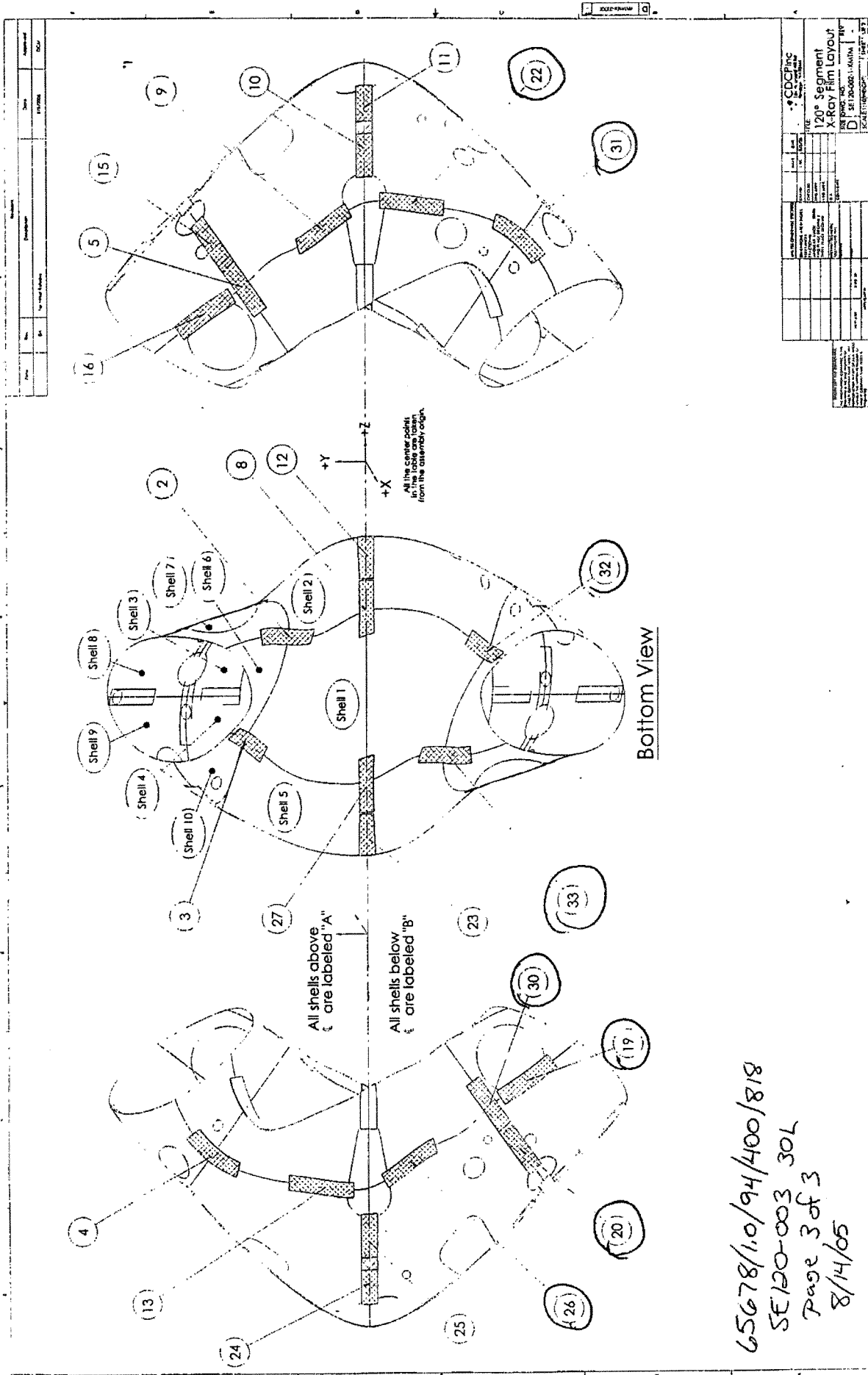
All shells below  
are labeled "B"

65678/10/94/400/818  
SE120-003 30L  
Page 2 of 3  
8/14/05

Item	Sht	Zone	Film Name	Center Point	Location	Comments
2	1	E-4	1A-2A-6A-7A	(26.99,-18.90,14.49)		
3	1	E-3	1A-5A-6A-10A	(42.34,29.64,-10.46)		
4	1	E-7	4A-5A-9A-10A	(54.03,37.83,-25.58)		
5	1	E-2	2A-3A-7A-8A	(42.35,29.66,21.15)		
6	2	D-7	3A-4A-2	(87.67,17.72,0.00)		
7	2	E-7	3A-4A-1	(72.08,34.99,0.00)		
8	1	D-4	1A-18-2A-3B	(40.46,0.00,20.75)		
9	1	D-2	2A-3A	(56.08,10.15,34.41)		
10	1	D-1	3A-4B-1	(75.85,0.00,29.70)		
11	1	D-1	3A-4B-2	(85.55,0.00,22.13)		
12	1	D-4	2A-5B	(40.32,0.00,35.85)		
13	1	D-7	4A-5A	(62.27,11.42,-35.85)		
14	2	E-7	3A-4A-8A-9A	(62.32,43.77,-3.72)		
15	1	E-2	3A-8A	(52.97,37.09,14.93)		
16	1	E-2	7A-8A	(35.91,-38.76,-18.38)		
17	2	E-7	8A-9A	(47.91,-57.01,0.00)		
18	2	B-7	8B-9B	(47.91,-57.01,0.00)		
19	1	C-7	7B-8B	(35.91,-38.76,-18.38)		
20	1	C-7	3B-8B	(52.97,-37.09,-14.93)		
21	2	B-7	3B-4B-8B-9B	(62.32,-43.77,3.72)		
22	1	C-2	4B-5B	(62.27,-11.42,35.85)		
23	1	D-5	5A-2B	(40.32,0.00,-35.85)		
24	1	D-8	4A-3B-2	(85.55,0.00,-22.13)		
25	1	D-7	4A-3B-1	(75.85,0.00,-29.70)		
26	1	D-7	2B-3B	(56.08,-10.15,-34.41)		
27	1	D-5	1A-1B-5A-2B	(40.46,0.00,-20.75)		
28	2	B-7	3B-4B-1	(72.08,-34.99,0.00)		
29	2	C-7	3B-4B-2	(87.67,-17.72,0.00)		
30	1	C-7	2B-3B-7B-8B	(42.35,-29.66,-21.15)		
31	1	C-2	4B-5B-9B-10B	(54.03,-37.83,25.58)		
32	1	C-4	1B-5B-6B-10B	(42.34,-29.64,10.46)		
33	1	C-5	1B-2B-6B-7B	(26.99,-18.90,-14.49)		

1200 Segment  
X-Ray Film Layout  
D SET PROC-1-MMM DA  
SCALE: 1:10000  
SHEET 001





65678/1.0/94/400/818  
 SE120-003 30L  
 Page 3 of 3  
 8/14/05

CADC/INC		120° Segment X-Ray Film Layout	
REV	DATE	BY	CHK
1			
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Major  
Tool & Machine, Inc.

### INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-003 30U SUB-ASSY - Item: 58

Workorder: 65678/1-0 Sub:95 Op:60

Part: SE120-003 30U SUB-ASSY - - UPPER HALF OF 60 DEGREE

SHEET ZONE	DRAWING ID: SE120-004 Rev: 1	CHARACTERISTIC	INSPECTION INSTRUCTIONS				RESULTS		INSPECTED BY			
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT		
* (10)		VWI ROOT PASS WELD 7-8		MFG CWI		VISUAL	OK	358-D.M	933-D.L	07-12-05	07-12-05	A
* (20)		VWI ROOT PASS WELD 9-10		MFG CWI		VISUAL	OK	358-D.M	933-D.L	07-12-05	07-12-05	A



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003 30U SUB-ASSY - Item: 59

Workorder: 65678/1-0 Sub:95 Op:160

Part: SE120-003 30U SUB-ASSY - - UPPER HALF OF 60 DEGREE

Drawing ID: SE120-004 Rev: 1		INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*	(20)	VWI INTERIOR COVER PASS WELD 7-8		MFG CWI		VISUAL	OK	358-D.M 07-13-05	933-D.L 07-13-05	A
*	(20)	VWI INTERIOR COVER PASS WELD 9-10		MFG CWI		VISUAL	OK	358-D.M 07-13-05	933-D.L 07-13-05	A



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**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003 30U SUB-ASSY - Item: 60

Workorder: 65678/1-0 Sub:95 Op:180

Part: SE120-003 30U SUB-ASSY - - UPPER HALF OF 60 DEGREE

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS				RESULTS		INSPECTED BY	
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*	(20)	VWI EXTERIOR COVER PASS WELD 7-8		MFG CWI		VISUAL	OK	358-D.M	933-D.L	A
*	(20)	VWI EXTERIOR COVER PASS WELD 9-1		MFG CWI		VISUAL	OK	358-D.M	933-D.L	A



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### INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-003 30U SUB-ASSY - Item: 61

Workorder: 65678/1-0 Sub:109 Op:60

Part: SE120-003 30U SUB-ASSY - - UPPER HALF OF 60 DEGREE

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS				RESULTS		INSPECTED BY		
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*				MFG		VISUAL			683-K.M	933-D.L	A
(10)		VWI ROOT PASS WELD 7-8		CWI				ACCEPT	08-05-05	08-05-05	
*				MFG		VISUAL			358-D.M	933-D.L	A
(20)		VWI ROOT PASS WELD 9-10		CWI				ACCEPT	08-05-05	08-05-05	



**Major**  
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**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003 30U SUB-ASSY - Item: 62

Workorder: 65678/1-0 Sub:109 Op:160

Part: SE120-003 30U SUB-ASSY - - UPPER HALF OF 60 DEGREE

SHEET ZONE	DRAWING ID: SE120-004 Rev: 2	INSPECTION INSTRUCTIONS				RESULTS		INSPECTED BY	
		CHARACTERISTIC	GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (20)	VWI INTERIOR COVER PASS WELD 7-8		MFG CWI		VISUAL	ACCEPT	683-K.M 08-05-05	933-D.L 08-05-05	A
* (20)	VWI INTERIOR COVER PASS WELD 9-10		MFG CWI		VISUAL	ACCEPT	358-D.M 08-05-05	933-D.L 08-05-05	A



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INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-003 30U SUB-ASSY - Item: 63

Workorder: 65678/1-0 Sub:109 Op:180

Part: SE120-003 30U SUB-ASSY - - UPPER HALF OF 60 DEGREE

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS				RESULTS		INSPECTED BY			
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT		
*	(20)	VWI EXTERIOR COVER PASS WELD 7-8		MFG CWI		VISUAL	ACCEPT	683-K.M	933-D.L	08-08-05	08-08-05	A
*	(20)	VWI EXTERIOR COVER PASS WELD 9-1		MFG CWI		VISUAL	ACCEPT	358-D.M	933-D.L	08-08-05	08-08-05	A



INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-003 3-4 SUB-SET - Item: 64

Workorder: 65678/1-0 Sub:11 Op:30

Part: SE120-003 3-4 SUB-SET - - 3-4 PANEL SUB-SET

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	WELD ACCEPTABLE P CUSTOMER DRAWIN PECIFICATION REQUI EMENTS.	933-D.L	933-D.L	A
(10)	VWI ROOT PASS WELD 3-4		CWI				07-01-05	07-01-05	





Major  
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INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-003 3-4 SUB-SET - Item: 65

Workorder: 65678/1-0 Sub:11 Op:130

Part: SE120-003 3-4 SUB-SET - - 3-4 PANEL SUB-SET

Drawing ID: SE120-004 Rev: 1

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
			GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT		
*				MFG			OK (ACCEPTABLE)	358-D.M	581-D.E	581-D.E	A
(20)		VWI INTERIOR COVER PASS WELD 3-4		CWI				07-06-05	07-06-05	07-06-05	07-06-05



INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-003 3-4 SUB-SET - Item: 66

Workorder: 65678/1-0 Sub:11 Op:150

Part: SE120-003 3-4 SUB-SET - - 3-4 PANEL SUB-SET

Drawing ID: SE120-004 Rev: 1		INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY		
SHEET	ZONE	GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*			MFG		OK	358-D.M	581-D.E	
(20)			CWI			07-07-05	07-08-05	A
		VWJ EXTERIOR COVER PASS WELD 3-4						



*Major*

Tool & Machine, Inc.

### INSPECTION DATA CHECKLIST

Page: 40

Date: 04/29/06

User ID: UPCHURC#

Quality Assurance Documentation for Part ID: SE120-003 3-4 SUB-SET - Item: 67

Workorder: 65678/1-0 Sub:106 Op:30

Part: SE120-003 3-4 SUB-SET - - 3-4 PANEL SUB-SET

Drawing ID: SE120-004 Rev: 1

SHEET ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY	
		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	A
(10)	VWI ROOT PASS WELD 3-4		CWI			07-18-05	07-18-05	



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003 3-4 SUB-SET - Item: 68

Workorder: 65678/1-0 Sub:106 Op:130

Part: SE120-003 3-4 SUB-SET - - 3-4 PANEL SUB-SET

SHEET ZONE	DRAWING ID: SE120-004 Rev: 1	INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY	
		GAGE/EQUIP	BY SAMPLE	DATA/REMARKS	INSP	VERFD	AUDIT
* (20)	CHARACTERISTIC		MFG CWI	VISUAL	ACCEPT	683-K.M	933-D.L
	VWI INTERIOR COVER PASS WELD 3-4					07-18-05	07-19-05

A



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003 3-4 SUB-SET - Item: 69

Workorder: 65678/1-0 Sub:106 Op:150

Part: SE120-003 3-4 SUB-SET - - 3-4 PANEL SUB-SET

SHEET ZONE	DRAWING ID: SE120-004 Rev: 1 CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
		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	A
(20)	VWI EXTERIOR COVER PASS WELD 3-4		CWI				07-20-05	07-20-05	



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003 5-1 SUB-SET - Item: 70

Workorder: 65678/1-0 Sub:8 Op:30

Part: SE120-003 5-1 SUB-SET - - 5-1 PANEL SUB-SET

Drawing ID: SE120-004 Rev: 1		INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY			
SHEET	ZONE	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*	(10)		MFG CWI		VISUAL	ACCEPT	683-K.M	933-D.L	A
							06-28-05	06-28-05	



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003 5-1 SUB-SET - Item: 71

Workorder: 65678/1-0 Sub:8 Op:130

Part: SE120-003 5-1 SUB-SET - - 5-1 PANEL SUB-SET

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	WELD ACCEPTABLE P CUSTOMER DRAWIN PECIFICATION REQUI EMENTS.	709-K.A	933-D.L	A
(20)	VWI INTERIOR COVER PASS WELD 5-1		CWI			06-30-05	06-30-05	



INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-003 5-1 SUB-SET - Item: 72

Workorder: 65678/1-0 Sub:8 Op:150

Part: SE120-003 5-1 SUB-SET - - 5-1 PANEL SUB-SET

Drawing ID: SE120-004 Rev: 1

SHEET ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
		GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (20)	VWI EXTERIOR COVER PASS WELD 5-1		MFG CWI		VISUAL	ACCEPTED PER SPEC.	933-D.L 07-01-05	933-D.L 07-01-05	A





**Major**  
Tool & Machine, Inc.

**INSPECTION DATA CHECKLIST**

Page: 46  
Date: 04/29/06  
User ID: UPCHURC#

Quality Assurance Documentation for Part ID: SE120-003 5-1 SUB-SET - Item: 73

Workorder: 65678/1-0 Sub:103 Op:30

Part: SE120-003 5-1 SUB-SET - - 5-1 PANEL SUB-SET

Drawing ID: SE120-004 Rev: 1		INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY			
SHEET	ZONE	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*			MFG		VISUAL		358-D.M	933-D.L	
(10)			CWI			ACCEPT	07-25-05	07-25-05	A



INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-003 5-1 SUB-SET - Item: 74

Workorder: 65678/1-0 Sub:103 Op:130

Part: SE120-003 5-1 SUB-SET - - 5-1 PANEL SUB-SET

Drawing ID: SE120-004 Rev: 1		INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY			
SHEET	ZONE	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*			MFG		VISUAL		683-K.M	933-D.L	A
(20)			CWI			ACCEPT	07-25-05	07-25-05	



INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-003 5-1 SUB-SET - Item: 75

Workorder: 65678/1-0 Sub:103 Op:150

Part: SE120-003 5-1 SUB-SET - - 5-1 PANEL SUB-SET

SHEET ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY	
		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	A
(20)	VWI EXTERIOR COVER PASS WELD 5-1		CWI			07-26-05	07-26-05	



*Major*

Tool & Machine, Inc.

### INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-003 5-1-2 SUB-SET - Item: 76

Workorder: 65678/1-0 Sub:7 Op:30

Part: SE120-003 5-1-2 SUB-SET - - 5-1-2 PANEL SUB-SET

Drawing ID: SE120-004 Rev: 1

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*		VWI ROOT PASS WELD 1-2		MFG		VISUAL		709-K.A	933-D.L	A
(10)				CWI				06-28-05	06-28-05	



**Major**  
Tool & Machine, Inc.

**INSPECTION DATA CHECKLIST**

Page: 50  
Date: 04/29/06  
User ID: UPCHURC#

Quality Assurance Documentation for Part ID: SE120-003 5-1-2 SUB-SET - Item: 77

Workorder: 65678/1-0 Sub:7 Op:130

Part: SE120-003 5-1-2 SUB-SET - - 5-1-2 PANEL SUB-SET

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	WELD ACCEPTABLE P CUSTOMER DRAWIN PECIFICATION REQUI EMENTS.	709-K.A	933-D.L
(20)	VWI INTERIOR COVER PASS WELD 1-2		CWI			06-30-05	06-30-05



Major  
Tool & Machine, Inc.

INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-003 5-1-2 SUB-SET - Item: 78

Workorder: 65678/1-0 Sub:7 Op:150

Part: SE120-003 5-1-2 SUB-SET - - 5-1-2 PANEL SUB-SET

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY				
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT		
*		VWI EXTERIOR COVER PASS WELD 1-2		MFG		VISUAL				709-K.A	933-D.L	A
(20)				CWI						07-01-05	07-01-05	



Major  
Tool & Machine, Inc.

### INSPECTION DATA CHECKLIST

Page: 52  
Date: 04/29/06  
User ID: UPCHURC#

Quality Assurance Documentation for Part ID: SE120-003 5-1-2 SUB-SET - Item: 79

Workorder: 65678/1-0 Sub:102 Op:30

Part: SE120-003 5-1-2 SUB-SET - - 5-1-2 PANEL SUB-SET

Drawing ID: SE120-004 Rev: 1

SHEET ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY	
		GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (10)	VWI ROOT PASS WELD 1-2		MFG CWI	VISUAL	ACCEPT	683-K.M	933-D.L	A
						07-25-05	07-25-05	



Major  
Tool & Machine, Inc.

# INSPECTION DATA CHECKLIST

Page: 53  
Date: 04/29/06  
User ID: UPCHURC#

Quality Assurance Documentation for Part ID: SE120-003 5-1-2 SUB-SET - Item: 80

Workorder: 65678/1-0 Sub:102 Op:130

Part: SE120-003 5-1-2 SUB-SET - - 5-1-2 PANEL SUB-SET

Drawing ID: SE120-004 Rev: 1

SHEET ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY	
		GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (20)	VWI INTERIOR COVER PASS WELD 1-2		MFG CWI	VISUAL	ACCEPT	683-K.M	933-D.L	A
						07-25-05	07-25-05	





Major  
Tool & Machine, Inc.

INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-003 5-1-2 SUB-SET - Item: 81

Workorder: 65678/1-0 Sub:102 Op:150

Part: SE120-003 5-1-2 SUB-SET - - 5-1-2 PANEL SUB-SET

SHEET ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
		GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*			MFG		VISUAL	WELD ACCEPTABLE P CUSTOMER DRAWIN PECIFICATION REQUI	933-D.L	933-D.L	A
(20)	VWI EXTERIOR COVER PASS WELD 1-2		CWI			EMENTS.	07-26-05	07-26-05	



Major  
Tool & Machine, Inc.

INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-003 60D SUB-ASSY - Item: 82

Workorder: 65678/1-0 Sub:6 Op:250

Part: SE120-003 60D SUB-ASSY - - SIDE A 60 DEGREE VESSEL SEGMENT

SHEET ZONE	DRAWING ID: SE120-004 Rev: 1	CHARACTERISTIC	INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY		
			GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (10)		VWI ROOT PASS WELD 30D		MFG CWI	VISUAL	ACCEPT	709-K.A 07-16-05	581-D.E 07-16-05	A



Major  
Tool & Machine, Inc.

INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-003 60D SUB-ASSY - Item: 83

Workorder: 65678/1-0 Sub:6 Op:350

Part: SE120-003 60D SUB-ASSY - - SIDE A 60 DEGREE VESSEL SEGMENT

Drawing ID: SE120-004 Rev: 1		INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY			
SHEET	ZONE	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*			MFG		VISUAL		763-R.M	581-D.E	A
(20)			CWI			ACCEPT	07-20-05	07-20-05	

VVI EXTERIOR COVER PASS WELD 30



Major  
Tool & Machine, Inc.

INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-003 60D SUB-ASSY - Item: 84

Workorder: 65678/1-0 Sub:6 Op:370

Part: SE120-003 60D SUB-ASSY - - SIDE A 60 DEGREE VESSEL SEGMENT

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.	709-K.A	933-D.L	A
(20)	VWI INTERIOR COVER PASS WELD 30D		CWI				08-05-05	08-05-05	



Major  
Tool & Machine, Inc.

INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-003 60D SUB-ASSY - Item: 85

Workorder: 65678/1-0 Sub:94 Op:250

Part: SE120-003 60D SUB-ASSY - - SIDE B 60 DEGREE VESSEL SEGMENT

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*				MFG		VISUAL		ACCEPT PER CUSTOM DRAWINGS AND SPE FICATIONS.	709-K.A	933-D.L	A
(10)		VWI ROOT PASS WELD 30D		CWI					08-09-05	08-09-05	



Major  
Tool & Machine, Inc.

INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-003 60D SUB-ASSY - Item: 86

Workorder: 65678/1-0 Sub:94 Op:350

Part: SE120-003 60D SUB-ASSY - - SIDE B 60 DEGREE VESSEL SEGMENT

SHEET ZONE	DRAWING ID: SE120-004 Rev: 2 CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
		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	A
(20)	VWI EXTERIOR COVER PASS WELD 30		CWI				08-11-05	08-11-05	



Major  
Tool & Machine, Inc.

### INSPECTION DATA CHECKLIST

Page: 60  
Date: 04/29/06  
User ID: UPCHURC#

Quality Assurance Documentation for Part ID: SE120-003 60D SUB-ASSY - Item: 87

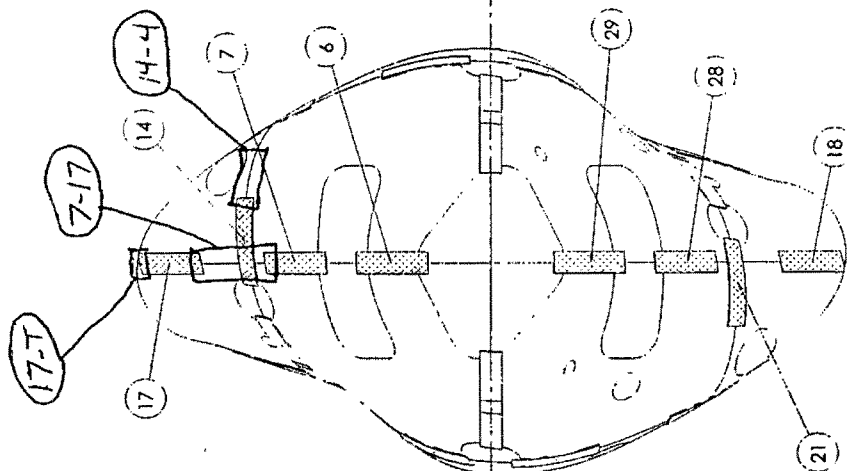
Workorder: 65678/1-0 Sub:94 Op:370

Part: SE120-003 60D SUB-ASSY - - SIDE B 60 DEGREE VESSEL SEGMENT

SHEET ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY				
		GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT			
* (20)	VWI INTERIOR COVER PASS WELD 30D		MFG CWI	VISUAL	OK	358-D.M	933-D.L		08-12-05	08-12-05	A







All shells above  
are labeled "A"

All shells below  
are labeled "B"

65678/1.0/220/10/818

SE120-003 H=1/4 A

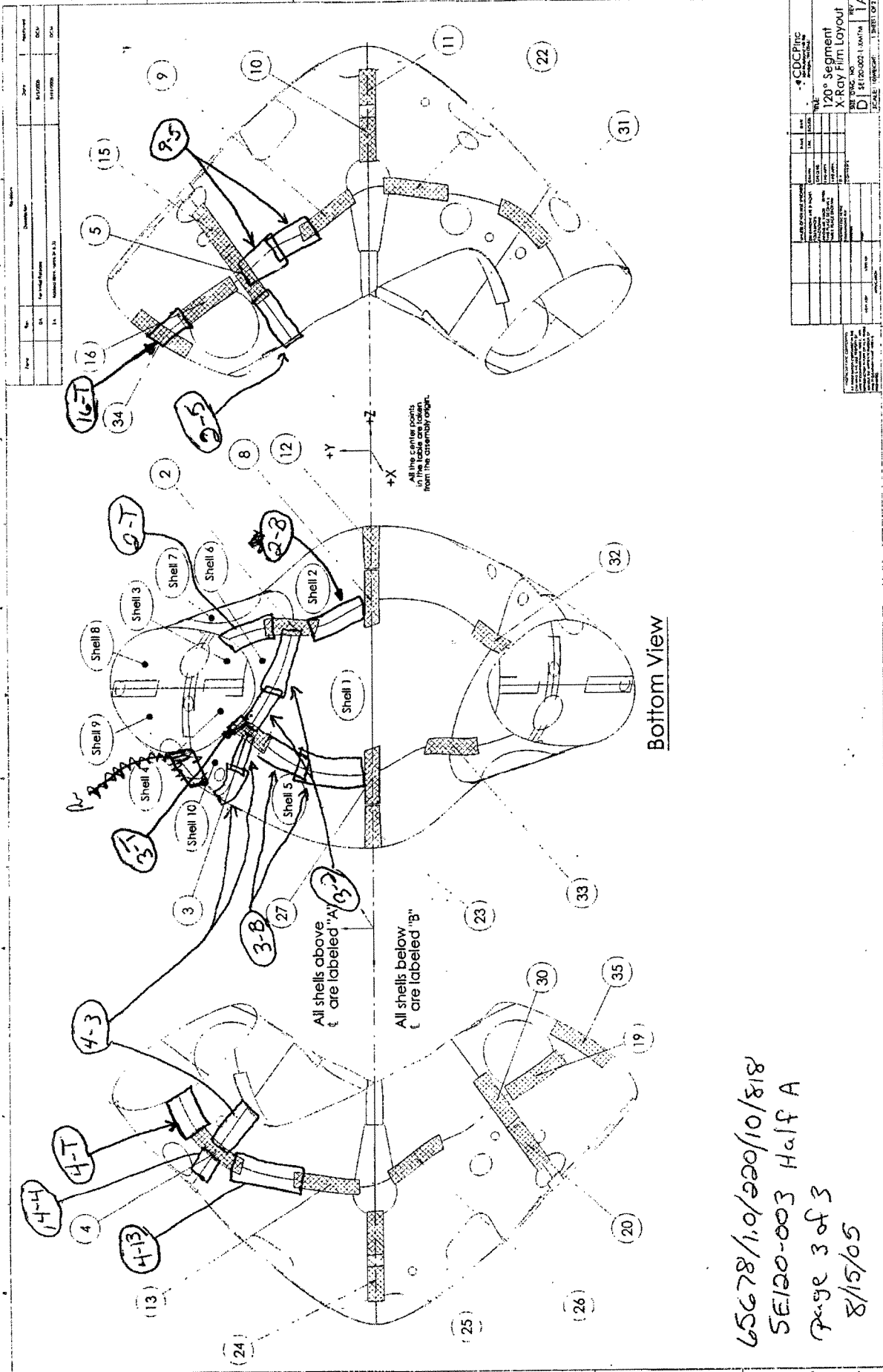
8/15/05

Page 2 of 3

Item	Shl	Zone	Film Name	Center Point	Location	Comments
2	1	E-4	1A-2A-6A-7A	(26.99,18.90,14.49)		
3	1	E-3	1A-5A-6A-10A	(42.34,29.64,-10.46)		
4	1	E-7	4A-5A-9A-10A	(54.03,37.83,-25.58)		
5	1	E-2	2A-3A-7A-8A	(42.35,29.66,21.15)		
6	2	D-7	3A-4A-2	(87.67,17.72,0.00)		
7	2	E-7	3A-4A-1	(72.08,34.99,0.00)		
8	1	D-4	1A-1B-2A-5B	(40.46,0.00,20.75)		
9	1	D-2	2A-3A	(56.08,10.15,34.41)		
10	1	D-1	3A-4B-1	(75.85,0.00,29.70)		
11	1	D-1	3A-4B-2	(85.55,0.00,22.13)		
12	1	D-4	2A-5B	(40.32,0.00,35.85)		
13	1	D-7	4A-5A	(62.27,11.62,-35.85)		
14	2	E-7	3A-4A-8A-9A	(42.52,43.77,-3.72)		
15	1	E-2	3A-8A	(52.97,37.09,14.99)		
16	1	E-2	7A-8A	(35.91,-38.76,18.38)		
17	2	E-7	8A-9A	(47.91,57.01,0.00)		
18	2	B-7	8B-9B	(47.91,-57.01,0.00)		
19	1	C-7	7B-8B	(35.91,-38.76,-18.38)		
20	1	C-7	3B-8B	(52.97,-37.09,-14.93)		
21	2	B-7	3B-4B-8B-9B	(62.52,-43.77,3.72)		
22	1	C-2	4B-5B	(62.27,-11.62,35.85)		
23	1	D-5	5A-2B	(40.32,0.00,-35.85)		
24	1	D-8	4A-3B-2	(85.55,0.00,-22.13)		
25	1	D-7	4A-3B-1	(75.85,0.00,-29.70)		
26	1	D-7	2B-3B	(56.08,-10.15,-34.41)		
27	1	D-5	1A-1B-5A-2B	(40.46,0.00,-20.75)		
28	2	B-7	3B-4B-1	(72.08,-34.99,0.00)		
29	2	C-7	3B-4B-2	(87.67,-17.72,0.00)		
30	1	C-7	2B-3B-7B-8B	(42.35,-29.66,-21.15)		
31	1	C-2	4B-5B-9B-10B	(54.03,-37.83,25.58)		
32	1	C-4	1B-5B-6B-10B	(42.34,-29.64,10.46)		
33	1	C-5	1B-2B-6B-7B	(26.99,-18.90,-14.49)		
34	1	E-2	7A-8A	(28.10,49.91,14.70)		
35	1	B-7	7B-8B	(28.10,-49.91,-14.70)		

CDCCRC  
120° Segment  
X-Ray Film Layout

DATE: 8/15/05  
TIME: 10:00  
BY: [Signature]  
REVISION: 1.0



Bottom View

65678/1.0/220/10/818  
 SE120-003 Half A  
 Page 3 of 3  
 8/15/05

REVISIONS		DATE	BY	CHKD	DESCRIPTION
1					
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35					

\*CDC Print  
 120° Segment  
 X-Ray Film Layout  
 D 8/15/05 J. S. W. TA  
 SCALE: 1:1

4959

10620 Chester Road  
Woodlawn, Ohio 45215



CLIENT		RADIOGRAPHER		JOB NO.		P.O. NO.		DATE	
Major Tool & Machine		James Berg II		18850291-3				8/17/05	
ISO DOP/RAY		SFD		FILM PROCESSING		FILM TYPE		FILM TECHNIQUE	
IR 192		15"		Auto		KODAK M1625		Double	
WELD PROCESS		MATERIAL SPEC.		TIME		ACCEPTANCE STANDARD		PB SCREENS	
GTAW		N/A		4:30		ASME VIII Div. 1, UN-5/1		.010"	
DESCRIPTION		MATERIAL THICKNESS		PENETRATOR		REMARKS		End View   Side View	
65678/1.0/220/30/818		.375"		ASTM B		⊗ Shots on this reader sheet & operation SEE MAP.		SINGLE WALL	
SE 120-003		N/A		N/A				DOUBLE WALL	
Page 1 of 3									
HAIFA REPAIR SHOTS									

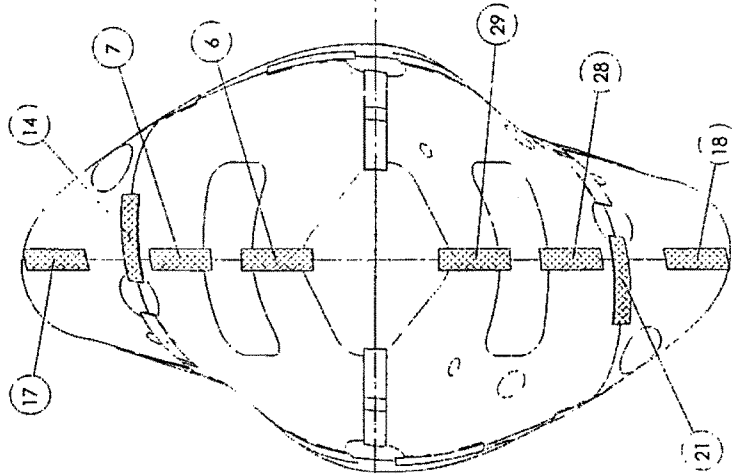
  

FITTING SEAM OR FITTING	FILM INTERVAL NUMBER	WELDER IDENTIFICATION	PENETRATOR		SLAG	POROSITY	POROSITY WITH TAIL	CRACK	LACK OF PEN	LACK FUSION	INTERNAL CONVEXITY	INTERNAL CONCAVITY	TUNGSTEN	MELT-THROUGH	BURR-THROUGH	CRATER-FIT	OXIDATION	INTERNAL UNDERCUT	EXTERNAL UNDERCUT	ALIGNED INDICATORS	WELD CONTOUR	MIS-MATCH	FILM ARTIFACT	VISUAL CONCERNS	FILM DENSITY	SEE REMARKS	ACCEPT	REFLECT	
			SIZE	QUALITY LEVEL																									
9-5 02		Km	B	.015"	✓																								
5 0-14					✓																								

*James Berg II*  
Cooperheat-MOS Signature

*Raymond P. Edwards*  
Customer Representative Signature

8/17/05  
Date



All shells above  
are labeled "A"

All shells below  
are labeled "B"

65678/1.0/220/30/818

SE 120-003

page 2 of 3

8/17/05

Item	Shl	Zone	Film Name	Center Point	Location	Comments
2	1	E-4	1A-2A-6A-7A	(28.99,18.90,14.49)		
3	1	E-3	1A-5A-6A-10A	(42.34,29.64,-10.46)		
4	1	E-7	4A-5A-9A-10A	(54.03,37.89,-25.58)		
5	1	E-2	2A-3A-7A-8A	(42.35,29.66,21.15)		
6	2	D-7	3A-4A-2	(87.67,17.72,0.00)		
7	2	E-7	3A-4A-1	(72.08,34.99,0.00)		
8	1	D-4	1A-1B-2A-5B	(40.46,0.00,20.75)		
9	1	D-2	2A-3A	(56.08,10.15,34.41)		
10	1	D-1	3A-4B-1	(75.85,0.00,29.70)		
11	1	D-1	3A-4B-2	(85.55,0.00,22.13)		
12	1	D-4	2A-5B	(40.32,0.00,35.85)		
13	1	D-7	4A-5A	(62.27,11.62,-35.85)		
14	2	E-7	3A-4A-8A-9A	(62.52,43.77,-3.72)		
15	1	E-2	3A-8A	(52.97,37.09,14.93)		
16	1	E-2	7A-8A	(35.91,38.76,18.38)		
17	2	E-7	8A-9A	(47.91,57.01,0.00)		
18	2	B-7	8B-9B	(47.91,-57.01,0.00)		
19	1	C-7	7B-8B	(35.91,-38.76,-18.38)		
20	1	C-7	3B-8B	(52.97,-37.09,-14.93)		
21	2	B-7	3B-4B-8B-9B	(62.52,-43.77,3.72)		
22	1	C-2	4B-5B	(62.27,-11.62,35.85)		
23	1	D-5	5A-2B	(40.32,0.00,-35.85)		
24	1	D-8	4A-3B-2	(85.55,0.00,-22.13)		
25	1	D-7	4A-3B-1	(75.85,0.00,-29.70)		
26	1	D-7	2B-3B	(56.08,-10.15,-34.41)		
27	1	D-5	1A-1B-5A-2B	(40.46,0.00,-20.75)		
28	2	B-7	3B-4B-1	(72.08,-34.99,0.00)		
29	2	C-7	3B-4B-2	(87.67,-17.72,0.00)		
30	1	C-7	2B-3B-7B-8B	(42.35,-29.66,-21.15)		
31	1	C-2	4B-5B-9B-10B	(54.03,-37.89,25.58)		
32	1	C-4	1B-5B-6B-10B	(42.34,-29.64,10.46)		
33	1	C-5	1B-2B-6B-7B	(26.99,-18.90,-14.49)		
34	1	E-2	7A-8A	(28.10,49.91,14.70)		
35	1	B-7	7B-8B	(28.10,-49.91,-14.70)		

120° Segment  
X-Ray Film Layout

SE 120-003  
page 2 of 3

8/17/05

CDCC

1A

1B

1C

1D

1E

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1M

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1T

1U

1V

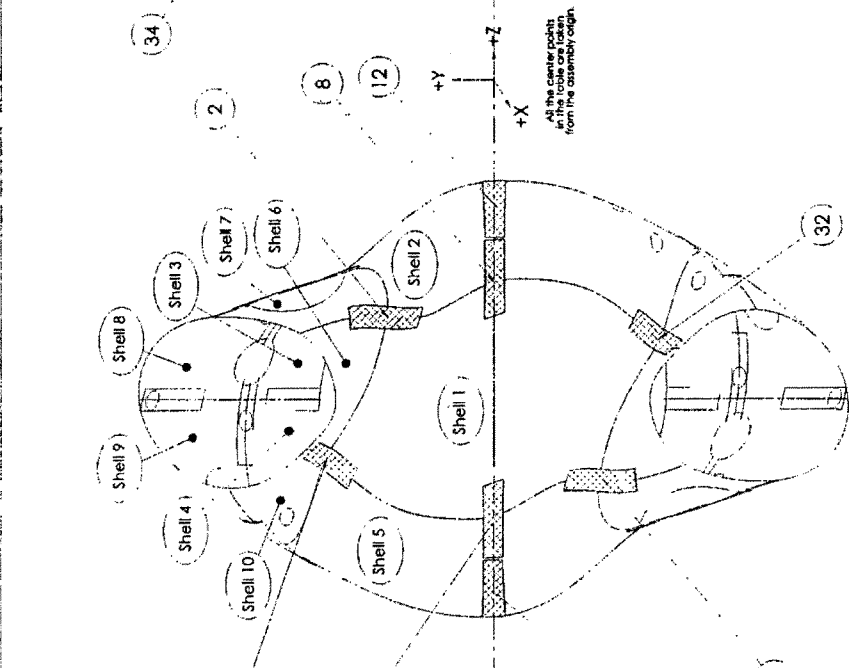
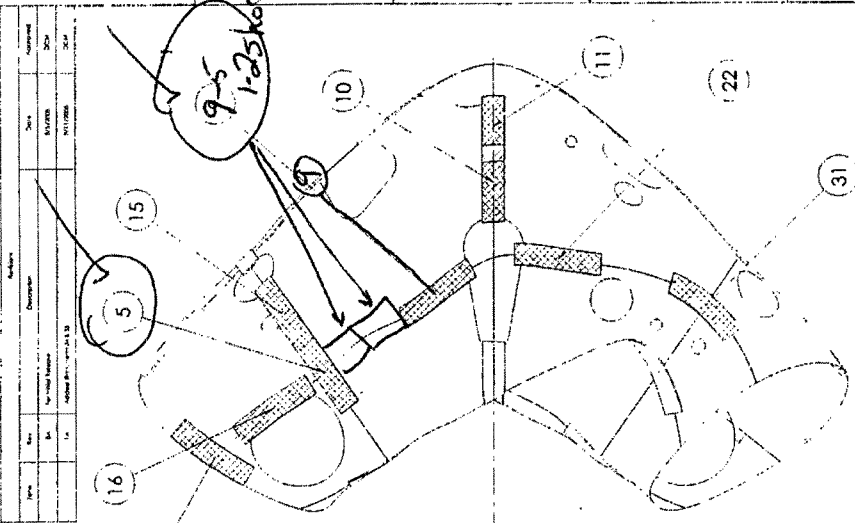
1W

1X

1Y

1Z

REPAIRS



Bottom View

All shells above  
are labeled "A"

All shells below  
are labeled "B"

All the center points  
in the table are taken  
from the assembly origin.

Part No.	Part Name	Qty	Material	Notes

Part No.	Part Name	Qty	Material	Notes

656 78/1.0/226 /30/818  
 SF 120 -003  
 Page 3 of 3  
 8/17/05

4959

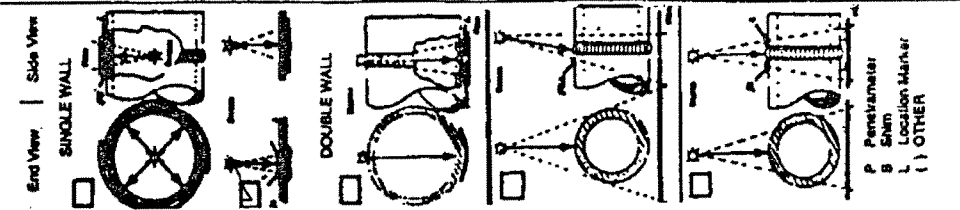
10520 Cheater Road  
Woodlawn, Ohio 45215



CLIENT	Major Tool + Machine	RADIOGRAPHER	Robert Weaver	JOB NO.	13850091	P.O. NO.		DATE	8/16/05
ISOTOPE/RAY	IR 192	FOCAL SPOT SIZE	15"	FILM PROCESSING	Auto	FILM TYPE	Kodak MX125	FILM TECHNIQUE	Double
WELD PROCESS	GTAW	MATERIAL SPEC.	625 Inconel	TIME	4:30	SHIM	N/A	ACCEPTANCE STANDARD	ASME VIII Div. 1 UN-51
DESCRIPTION	65678/1.0/20/30/818 SE120-003 Page 1 of 3	MATERIAL THICKNESS	375"	PENETRATOR	ASTM 1B				

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																										
17	0-14	K.M.	1B	.013"		✓																								
17-7	0-1					✓																				✓				
7	0-14					✓																				✓				
9-5	0-1					✓																				✓				
↓	1-2					✓																				✓				
5	0-14					✓																				✓				
13	0-14					✓																				✓				
3	0-14					✓																				✓				
3-2	0-1					✓																				✓				
3-B	0-1					✓																				✓				
↓	1-2					✓																				✓				

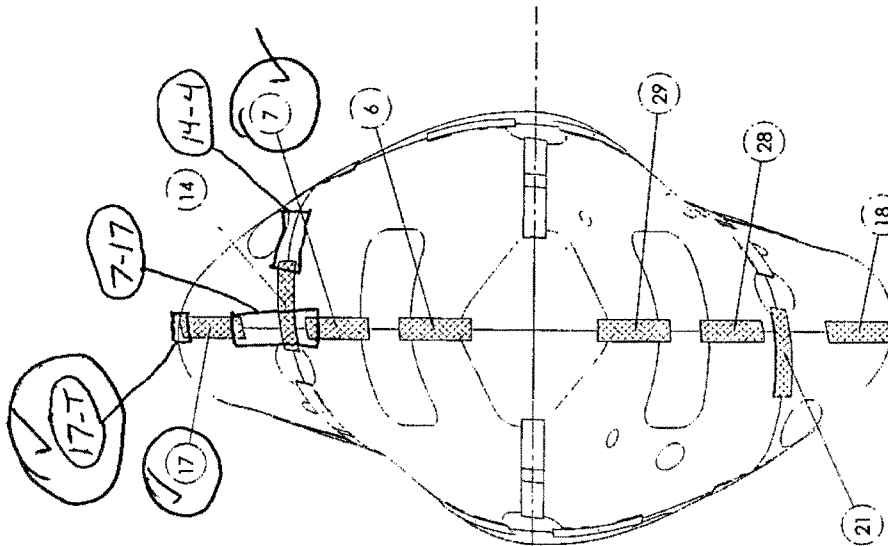
⊙ - shots on this reader + operation  
see map NCR-17954



8/16/05  
Date

Robert Weaver  
Customer Representative Signature

Robert Weaver 655514/II  
Cooperheat-MOS Signature



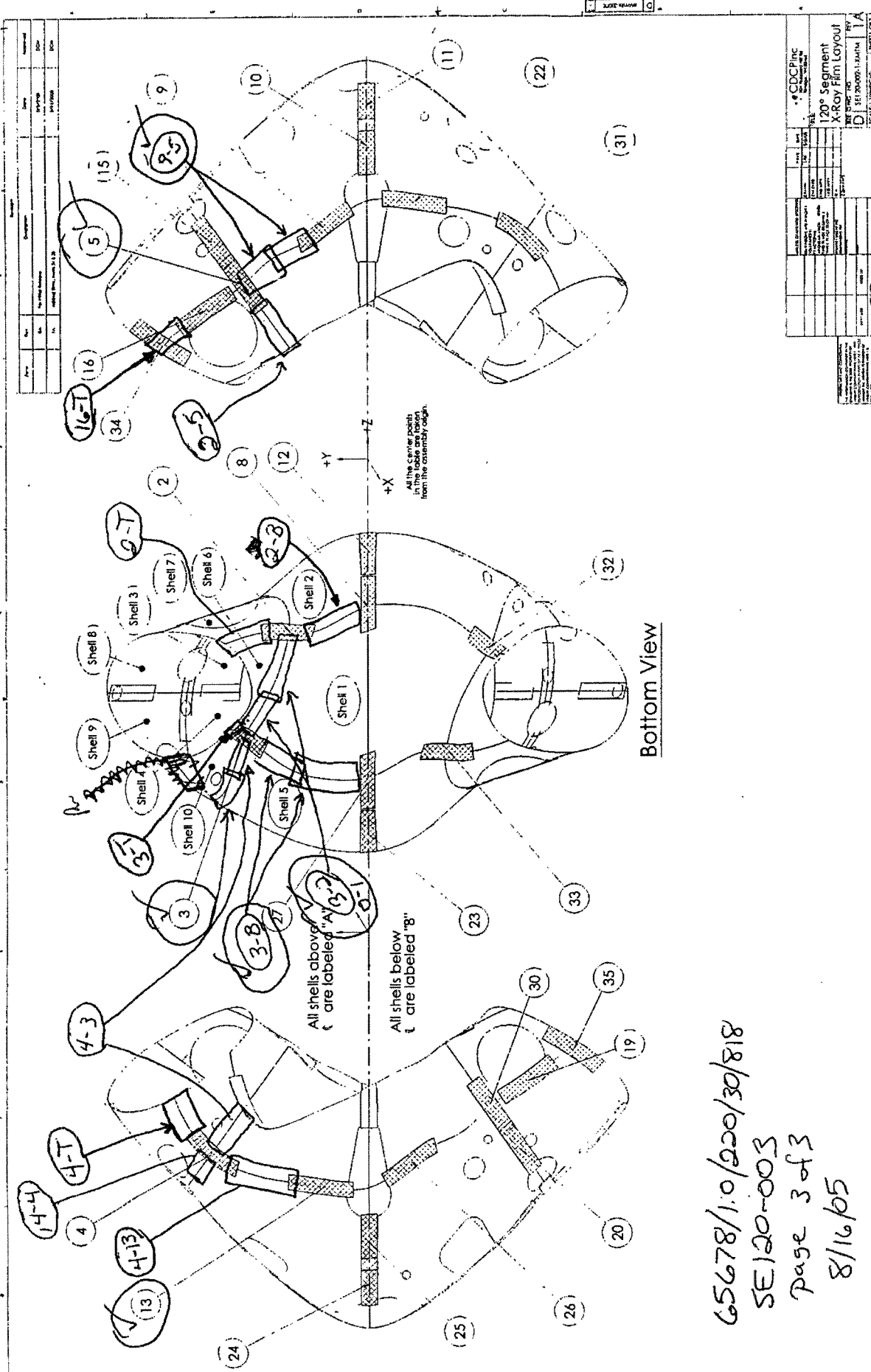
All shells above  
are labeled "A"

All shells below  
are labeled "B"

65678/1.0/220/30/818  
SE120-003  
Page 2 of 3  
8/16/05

Item	Shl	Zone	Film Name	Center Point	Locallon	Comments
2	1	E-4	1A-2A-6A-7A	(26.99,18.90,14.49)		
3	1	E-3	1A-5A-6A-10A	(42.34,29.64,-10.46)		
4	1	E-7	4A-5A-9A-10A	(54.03,37.83,-25.58)		
5	1	E-2	2A-3A-7A-8A	(42.35,29.66,21.15)		
6	2	D-7	3A-4A-2	(87.67,17.72,0.00)		
7	2	E-7	3A-4A-1	(72.08,34.99,0.00)		
8	1	D-4	1A-1B-2A-5B	(40.46,0.00,20.75)		
9	1	D-2	2A-3A	(56.08,10.15,34.41)		
10	1	D-1	3A-4B-1	(75.85,0.00,29.70)		
11	1	D-1	3A-4B-2	(85.55,0.00,22.13)		
12	1	D-4	2A-5B	(40.32,0.00,35.85)		
13	1	D-7	4A-5A	(62.27,11.62,-35.85)		
14	2	E-7	3A-4A-8A-9A	(62.52,43.77,-3.72)		
15	1	E-2	3A-8A	(52.97,37.09,14.93)		
16	1	E-2	7A-8A	(35.91,38.76,18.38)		
17	2	E-7	8A-9A	(47.91,57.01,0.00)		
18	2	B-7	8B-9B	(47.91,-57.01,0.00)		
19	1	C-7	7B-8B	(35.91,-38.76,-18.38)		
20	1	C-7	3B-8B	(52.97,-37.09,-14.93)		
21	2	B-7	3B-4B-8B-9B	(62.52,-43.77,3.72)		
22	1	C-2	4B-5B	(62.27,-11.62,35.85)		
23	1	D-5	5A-2B	(40.32,0.00,-35.85)		
24	1	D-8	4A-3B-2	(85.55,0.00,-22.13)		
25	1	D-7	4A-3B-1	(75.85,0.00,-29.70)		
26	1	D-7	2B-3B	(56.08,-10.15,-34.41)		
27	1	D-5	1A-1B-5A-2B	(40.46,0.00,-20.75)		
28	2	B-7	3B-4B-1	(72.08,-34.99,0.00)		
29	2	C-7	3B-4B-2	(87.67,-17.72,0.00)		
30	1	C-7	2B-3B-7B-8B	(42.35,-29.66,-21.15)		
31	1	C-2	4B-5B-9B-10B	(54.03,-37.83,25.58)		
32	1	C-4	1B-5B-6B-10B	(42.34,-29.64,10.46)		
33	1	C-5	1B-2B-6B-7B	(26.99,-18.90,-14.49)		
34	1	E-2	7A-8A	(28.10,49.91,14.70)		
35	1	B-7	7B-8B	(28.10,-49.91,-14.70)		

FILE  
120° Segment  
X-Ray Film Layout  
D  
SCALE: UNIFORM  
1A



Bottom View

65678/1.0/220/30/818  
 SE120-003  
 Page 3 of 3  
 8/16/05

*GDCP Inc	
FILE	120° Segment X-Ray Film Layout
REV	BY
DATE	SCALE
1	1:1





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# INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-003 8-9 SUB-SET - Item: 91

Workorder: 65678/1-0 Sub:97 Op:30

Part: SE120-003 8-9 SUB-SET - - 8-9 PANEL SUB-SET

Drawing ID: SE120-004 Rev: 1

SHEET ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY					
		GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT				
* (10)	VWI ROOT PASS WELD 8-9		MFG CWI	VISUAL	ACCEPT	791-D.W	840-G.M		07-06-05	07-06-05		A



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**INSPECTION DATA CHECKLIST**

Page: 62  
Date: 04/29/06  
User ID: UPCHURC#

Quality Assurance Documentation for Part ID: SE120-003 8-9 SUB-SET - Item: 92

Workorder: 65678/1-0 Sub:97 Op:130

Part: SE120-003 8-9 SUB-SET - - 8-9 PANEL SUB-SET

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		VWI INTERIOR COVER PASS WELD 8-9		MFG CWI		VISUAL			683-K.M	581-D.E	A
(20)						ACCEPT			07-07-05	07-07-05	



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### INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-003 8-9 SUB-SET - Item: 93

Workorder: 65678/1-0 Sub:97 Op:150

Part: SE120-003 8-9 SUB-SET - - 8-9 PANEL SUB-SET

Drawing ID: SE120-004 Rev: 1

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY				
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT		
*		VWI EXTERIOR COVER PASS WELD 8-9		MFG		VISUAL				683-K.M	933-D.L	
(20)				CWI		ACCEPT				07-07-05	07-11-05	A



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**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003 8-9 SUB-SET - Item: 94

Workorder: 65678/1-0 Sub:114 Op:30

Part: SE120-003 8-9 SUB-SET - - 8-9 PANEL SUB-SET

SHEET ZONE		CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
Drawing ID: SE120-004 Rev: 1			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	A	
(10)		VWI ROOT PASS WELD 8-9	CWI				07-26-05	07-26-05		



INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-003 8-9 SUB-SET - Item: 95

Workorder: 65678/1-0 Sub:114 Op:130

Part: SE120-003 8-9 SUB-SET - - 8-9 PANEL SUB-SET

Drawing ID: SE120-004 Rev: 1

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS		RESULTS	INSPECTED BY		
			GAGE/EQUIP	BY SAMPLE		INSP	VERFD	AUDIT
*		VWI INTERIOR COVER PASS WELD 8-9		MFG CWI	VISUAL INTERIOR COVER OK	763-R.M	933-D.L	A
(20)						07-28-05	07-28-05	



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003 8-9 SUB-SET - Item: 96

Workorder: 65678/1-0 Sub:114 Op:150

Part: SE120-003 8-9 SUB-SET - - 8-9 PANEL SUB-SET

Drawing ID: SE120-004 Rev: 1

SHEET ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY		
		GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (20)	VWI EXTERIOR COVER PASS WELD 8-9		MFG CWI	VISUAL	OK	197-T.FI	933-D.L	A
						07-28-05	07-28-05	



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003-11 - Item: 99

Workorder: 65678/1-0 Sub:131 Op:10

Part: SE120-003-11 - - PORT 7 REMOVAL, DETAIL ASSEMBLY, TEMPORARY RE-ATTACHMENT AND INSPECTION

Drawing ID: SE120-005 Rev: 0		INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY	
SHEET ZONE	CHARACTERISTIC	GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*	VISUAL INSPECT PORT 7A WELDS BACK STRIP TO PORT TUBE BLOCK TO BACK STRIP 1/8" TUBE TO BLOCK TIE STRAP SPOT WELDS		MFG	VISUAL	ACCEPT	837-J.DE	933-D.L	A
(10)			CWI			04-17-06	04-18-06	
*	VISUAL INSPECT PORT 7B WELDS BACK STRIP TO PORT TUBE BLOCK TO BACK STRIP 1/8" TUBE TO BLOCK TIE STRAP SPOT WELDS		MFG	VISUAL	BACK STRIP TO PORT TUBE, BLOCK TO BACK STRIP, 1/8" TUBE TO BLOCK	509-S.R	933-D.L	A
(20)			CWI			04-17-06	04-18-06	



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003-11 - Item: 100

Workorder: 65678/1-0 Sub:131 Op:20

Part: SE120-003-11 - - PORT 7 REMOVAL, DETAIL ASSEMBLY, TEMPORARY RE-ATTACHMENT AND INSPECTION

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*		⊕ ∅.25Ⓜ A B C	LASER	QA		J-1280	POS 0.134 FACE -0.0	522-R.D		A
(10)		PORT 7A POSITION (REINSTALLED)					65 / +0.041	04-18-06		
*		⊕ ∅.25Ⓜ A B C	LASER	QA		J-1280	POS 0.036 FACE -0.0	522-R.D		A
(20)		PORT 7B POSITION (REINSTALLED)					57 / +0.055	04-18-06		





**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003-11 - Item: 101

Workorder: 65678/1-0 Sub:131 Op:30

Part: SE120-003-11 - - PORT 7 REMOVAL, DETAIL ASSEMBLY, TEMPORARY RE-ATTACHMENT AND INSPECTION

SHEET	ZONE	DRAWING ID: SE120-004 Rev: 2D	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
				GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*			MAGNETIC PERMEABILITY 1.02 MAX (ENTIRE PORT LESS FLANGE WELD ZO	MASTER GAGE	QA		J-1271	LESS THAN 1.02	261-T.D		A
(10)											
*			MAGNETIC PERMEABILITY 1.2 MAX (PORT WALL TO FLANGE WELD ZONE)	MASTER GAGE	QA		J-1271	LESS THAN 1.2	04-19-06		A
(20)											
*			INTERIOR SURFACE FINISH: 32 MICRO-INCH RA	PROFILOMETER	QA		J-1308	8 TO 23 MICRO-INCH	04-19-06		A
(30)											
*			PORT EXTENSION WALL THICKNESS 0.188 +0.045/-0.010"	UT THICKNESS GA	QA		J-1009-NDT	.200 TO .220	04-19-06		A
(40)											
*			CLEANLINESS COMPLIES WITH PS483		QA		VISUAL	COMPLIES WITH PS48	261-T.D		A
(50)									04-19-06		
*			Q/A MANAGER / CFT VERIFY SUB-ASSY COMPLETION		QA			VERIFIED FINAL CON ITION W/ENGINEER	840-G.M		A
(60)									04-25-06		



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003-12A - Item: 102

Workorder: 65678/1-0 Sub:120 Op:10

**Part: SE120-003-12A - - PORT 12A AND 12B INSTALLATION**

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 DRAWINGS AND SPE FICATIONS	709-K.A	933-D.L	A
(20)		VWI - ROOT PASS WELD P12AV		CWI		VISUAL	ACCEPT	11-08-05	11-08-05	A
*				MFG		VISUAL		683-K.M	933-D.L	A
(60)		VWI - COVER PASS WELD P12AV		CWI		VISUAL	ACCEPT PER CUSTOM DRAWINGS AND SPE FICATIONS	11-10-05	11-10-05	A
*				MFG		VISUAL		709-K.A	933-D.L	A
(80)		VWI - ROOT PASS WELD P12BV		CWI		VISUAL	ACCEPT PER CUSTOM DRAWINGS AND SPE FICATIONS	11-08-05	11-08-05	A
*				MFG		VISUAL		683-K.M	933-D.L	A
(120)		VWI - COVER PASS WELD P12BV		CWI		VISUAL	ACCEPT	11-10-05	11-10-05	A



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**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003-12A - Item: 101

Workorder: 65678/1-0 Sub:120 Op:20

Part: SE120-003-12A - - PORT 12A AND 12B INSTALLATION

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
2*	F2	$\frac{1}{1}$ A PORT 12A FLANGE FACE	LASER	QA		1444	0.023	522-R.D			A
2*	G2	$\frac{.375}{.375}$ A B C PORT 12A SIDEWALL AND ADJACENT VESSEL WALL	LASER	QA		1444	-0.061 / +0.247 (AC CEPT PER N.C. 18594 ) [N/C:18594]	11-10-05			A
(60)								04-30-06			
2*	F2	$\frac{1}{1}$ A PORT 12B FLANGE FACE	LASER	QA		1444	0.044	522-R.D			A
(70)								11-10-05			
2*	G2	$\frac{.375}{.375}$ A B C PORT 12B SIDEWALL AND ADJACENT VESSEL WALL	LASER	QA		1444	-0.091 / +0.329 (AC CEPT PER N.C. 18594 ) [N/C:18594]	854-R.U			A
(80)								04-30-06			



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003-13 - Item: 104

Workorder: 65678/1-0 Sub:132 Op:10

**Part: SE120-003-13 - - PORT 8 REMOVAL, DETAIL ASSEMBLY, TEMPORARY RE-ATTACHMENT AND INSPECTION**

SHEET	ZONE	DRAWING ID: SE120-005 Rev: 0	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
				GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*			VISUAL INSPECT PORT 8A WELDS BACK STRIP TO PORT TUBE BLOCK TO BACK STRIP 1/8" TUBE TO BLOCK TIE STRAP SPOT WELDS		MFG		VISUAL	PORT 8A WELDS ARE OOD	763-R.M	053-M.D	A
(10)					CWI				04-18-06	04-18-06	
*			VISUAL INSPECT PORT 8B WELDS BACK STRIP TO PORT TUBE BLOCK TO BACK STRIP 1/8" TUBE TO BLOCK TIE STRAP SPOT WELDS		MFG		VISUAL	PORT 8B WELDS ARE OOD	763-R.M	933-D.L	A
(20)					CWI				04-18-06	04-18-06	



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**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003-13 - Item: 105

Workorder: 65678/1-0 Sub:132 Op:20

Part: SE120-003-13 - - PORT 8 REMOVAL, DETAIL ASSEMBLY, TEMPORARY RE-ATTACHMENT AND INSPECTION

SHEET ZONE	DRAWING ID: SE120-004 Rev: 2	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD / AUDIT	
* (10)	$\phi$ .25 (M)	A   B   C PORT 8A POSITION (REINSTALLED)	LASER	QA		J-1280	POS 0.062 FACE -0.0 36 / 0.050	522-R.D 04-19-06		A
* (20)	$\phi$ .25 (M)	A   B   C PORT 8B POSITION (REINSTALLED)	LASER	QA		J-1280	POS 0.052 FACE -0.0 14 / 0.030	522-R.D 04-19-06		A



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003-13 - Item: 106

Workorder: 65678/1-0 Sub:132 Op:30

**Part: SE120-003-13 - - PORT 8 REMOVAL, DETAIL ASSEMBLY, TEMPORARY RE-ATTACHMENT AND INSPECTION**

SHEET / ZONE	DRAWING ID: SE120-004 Rev: 2D CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
		GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*	MAGNETIC PERMEABILITY 1.02 MAX (ENTIRE PORT LESS FLANGE WELD ZONE)	MASTER GAGE	QA		J-1271	LESS THAN 1.02	261-T.D		A
(10)	MAGNETIC PERMEABILITY 1.2 MAX (PORT WALL TO FLANGE WELD ZONE)	MASTER GAGE	QA		J-1271	LESS THAN 1.2	04-19-06 261-T.D		A
(20)	INTERIOR SURFACE FINISH: 32 MICRO-INCH RA	PROFILOMETER	QA		J-1308	7 TO 13 MICRO-INCH	04-19-06 261-T.D		A
*	PORT EXTENSION WALL THICKNESS 0.226 +0.045/0.010"	UT THICKNESS GA	QA		J-1009-NDT	.252 TO .263	261-T.D		A
(40)	CLEANLINESS COMPLIES WITH PS483		QA		VISUAL	COMPLIES WITH PS48	04-19-06 261-T.D		A
(50)	Q/A MANAGER / CFT VERIFY SUB-ASSY COMPLETION		QA			VERIFIED FINAL CON TION W/ENGINEER	840-G.M 04-25-06		A
(60)									



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003-15 - Item: 107

Workorder: 65678/1-0 Sub:133 Op:10

**Part: SE120-003-15 - - PORT 9 REMOVAL, DETAIL ASSEMBLY, TEMPORARY RE-ATTACHMENT AND INSPECTION**

SHEET ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY	
		GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*	VISUAL INSPECT PORT 9A WELDS BACK STRIP TO PORT TUBE BLOCK TO BACK STRIP 1/8" TUBE TO BLOCK TIE STRAP SPOT WELDS		MFG	VISUAL	BACK STRIP TO PORT GOOD BLOCK TO BAC STRIP GOOD 1/8" TU BE TO BLOCK GOOD	763-R.M	933-D.L	A
(10)			CWI			04-13-06	04-13-06	
*	VISUAL INSPECT PORT 9B WELDS BACK STRIP TO PORT TUBE BLOCK TO BACK STRIP 1/8" TUBE TO BLOCK TIE STRAP SPOT WELDS		MFG	VISUAL	BACK STRIP TO PORT WELD GOOD BLOCK T BACK STRIP WELD GO D TIE STRAP SPOT WE LDS	763-R.M	933-D.L	A
(20)			CWI			04-12-06	04-12-06	



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INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-003-15 - Item: 108

Workorder: 65678/1-0 Sub:133 Op:20

Part: SE120-003-15 - - PORT 9 REMOVAL, DETAIL ASSEMBLY, TEMPORARY RE-ATTACHMENT AND INSPECTION

SHEET ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
		GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
* (10)	⌀.25 (A B C) PORT 9A POSITION (REINSTALLED)	LASER	QA		J-1280	POS 0.113 FACE -0.0 17 / -0.071	522-R.D 04-17-06			A
* (20)	⌀.25 (A B C) PORT 9B POSITION (REINSTALLED)	LASER	QA		J-1280	POS 0.047 FACE -0.0 05 / 0.030	522-R.D 04-17-06			A





**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003-15 - Item: 109

Workorder: 65678/1-0 Sub:133 Op:30

**Part: SE120-003-15 - - PORT 9 REMOVAL, DETAIL ASSEMBLY, TEMPORARY RE-ATTACHMENT AND INSPECTION**

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY				
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT		
*		MAGNETIC PERMEABILITY 1.02 MAX (ENTIRE PORT LESS FLANGE WELD ZONE)	MASTER GAGE	QA		J-1271	LESS THAN 1.02 MAX	261-T.D			A	
(10)		MAGNETIC PERMEABILITY 1.2 MAX (PORT WALL TO FLANGE WELD ZONE)	MASTER GAGE	QA		J-1271	LESS THAN 1.2 MAX	261-T.D	04-18-06			A
(20)		MAGNETIC PERMEABILITY 1.2 MAX (PORT WALL TO FLANGE WELD ZONE)	PROFILOMETER	QA		J-1308	7 TO 31 MICRO-INCH RA	261-T.D	04-18-06			A
*		INTERIOR SURFACE FINISH: 32 MICRO-INCH RA	UT THICKNESS GA	QA		J-770-NDT	.180 TO .205	261-T.D	04-18-06			A
(40)		PORT EXTENSION WALL THICKNESS 0.188 +0.045/-0.010"		QA		VISUAL	COMPLIES WITH PS48	261-T.D	04-18-06			A
(50)		CLEANLNESS COMPLIES WITH PS483		QA			REVIWED W/ENG.	840-G.M				A
*		Q/A MANAGER / CFT VERIFY SUB-ASSY COMPLETION		QA				04-19-06				A



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### INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-003-17 - Item: 110

Workorder: 65678/1-0 Sub:134 Op:10

Part: SE120-003-17 - - PORT 10 REMOVAL, DETAIL ASSEMBLY, TEMPORARY RE-ATTACHMENT AND INSPECTION

Drawing ID: SE120-005 Rev: 0		INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*		VISUAL INSPECT PORT 10A WELDS BACK STRIP TO PORT TUBE BLOCK TO BACK STRIP 1/8" TUBE TO BLOCK TIE STRAP SPOT WELDS		MFG		VISUAL	ACCEPT PER CUSTOM DRAWING AND SPECI ICATION.	709-K.A	933-D.L	A
(10)				CWI				04-13-06	04-13-06	
*		VISUAL INSPECT PORT 10B WELDS BACK STRIP TO PORT TUBE BLOCK TO BACK STRIP 1/8" TUBE TO BLOCK TIE STRAP SPOT WELDS		MFG		VISUAL	ACCEPT PER CUSTOM DRAWING AND SPECI ICATION.	709-K.A	933-D.L	A
(20)				CWI				04-13-06	04-13-06	



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003-17 - Item: 111

Workorder: 65678/1-0 Sub:134 Op:20

**Part: SE120-003-17 - - PORT 10 REMOVAL, DETAIL ASSEMBLY, TEMPORARY RE-ATTACHMENT AND INSPECTION**

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		⊕ ∅.25 (A   B   C)	LASER	QA		J-1280	POS 0.072 FACE -0.0 63 / 0.101	522-R.D 04-17-06			A
(10)		PORT 10A POSITION (REINSTALLED)									
*		⊕ ∅.25 (A   B   C)	LASER	QA		1444	POS 0.215 FACE -0.0 02 / 0.026	522-R.D 04-17-06			A
(20)		PORT 10B POSITION (REINSTALLED)									

**INSPECTION DATA CHECKLIST**



Quality Assurance Documentation for Part ID: SE120-003-17 - Item: 112

Workorder: 65678/1-0 Sub:134 Op:30

Part: SE120-003-17 - - PORT 10 REMOVAL, DETAIL ASSEMBLY, TEMPORARY RE-ATTACHMENT AND INSPECTION

SHEET ZONE	DRAWING ID: SE120-004 Rev: 2 CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
		GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*	MAGNETIC PERMEABILITY 1.02 MAX (ENTIRE PORT LESS FLANGE WELD ZONE)	MASTER GAGE	QA		J-1271	LESS THAN 1.02	261-T.D		A
(10)	MAGNETIC PERMEABILITY 1.2 MAX (PORT WALL TO FLANGE WELD ZONE)	MASTER GAGE	QA		J-1271	LESS THAN 1.2	04-18-06 261-T.D		A
(20)	INTERIOR SURFACE FINISH: 32 MICRO-INCH RA	PROFILOMETER	QA		J-1308	5 TO 9 MICRO-INCH R A	04-18-06 261-T.D		A
(30)	PORT EXTENSION WALL THICKNESS 0.250 +0.045/-0.010"	UT THICKNESS GA	QA		J-770-NDT	.261 TO .270	04-18-06 261-T.D		A
(40)	CLEANLINESS COMPLIES WITH PS483		QA		VISUAL	COMPLIES WITH PS48	261-T.D 04-18-06		A
(50)	Q/A MANAGER / CFT VERIFY SUB-ASSY COMPLETION		QA			VERIFIED FINAL CON TION W/ENGINEER	840-G.M 04-25-06		A
(60)									



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**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003-19 - Item: 113

Workorder: 65678/1-0 Sub:135 Op:10

**Part: SE120-003-19 - - PORT 11 REMOVAL, DETAIL ASSEMBLY, TEMPORARY RE-ATTACHMENT AND INSPECTION**

Drawing ID: SE120-005 Rev: 0		INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*		VISUAL INSPECT PORT 11A WELDS BACK STRIP TO PORT TUBE BLOCK TO BACK STRIP 1/8" TUBE TO BLOCK TIE STRAP SPOT WELDS		MFG		VISUAL	BACK STRIP TO PORT TUBE, BLOCK TO BACK STRIP, 1/8" TUBE T O BLOCK	509-S.R	053-M.D	A
(10)				CWI				04-18-06	04-18-06	
*		VISUAL INSPECT PORT 11B WELDS BACK STRIP TO PORT TUBE BLOCK TO BACK STRIP 1/8" TUBE TO BLOCK TIE STRAP SPOT WELDS		MFG		VISUAL	BACK STRIP TO PORT TUBE, BLOCK TO BACK STRIP, 1/8" TUBE T O BLOCK	509-S.R	053-M.D	A
(20)				CWI				04-18-06	04-19-06	



**Major**  
Tool & Machine, Inc.

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003-19 - Item: 114

Workorder: 65678/1-0 Sub:135 Op:20

**Part: SE120-003-19 - - PORT 11 REMOVAL, DETAIL ASSEMBLY, TEMPORARY RE-ATTACHMENT AND INSPECTION**

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		⌀ .25 (M) A B C	LASER	QA		J-1280	POS 0.117 FACE -0.0	522-R.D			A
(10)		PORT 11A POSITION (REINSTALLED)					86 / -0.020	04-19-06			
*		⌀ .25 (M) A B C	LASER	QA		J-1280	POS 0.034 FACE -0.0	522-R.D			A
(20)		PORT 11B POSITION (REINSTALLED)					27 / -0.073	04-18-06			



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003-19 - Item: 115

Workorder: 65678/1-0 Sub:135 Op:30

Part: SE120-003-19 - - PORT 11 REMOVAL, DETAIL ASSEMBLY, TEMPORARY RE-ATTACHMENT AND INSPECTION

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY				
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT		
*		MAGNETIC PERMEABILITY 1.02 MAX (ENTIRE PORT LESS FLANGE WELD ZONE)	MASTER GAGE	QA		J-1271	LESS THAN 1.02	533-B.C			A	
(10)		MAGNETIC PERMEABILITY 1.2 MAX (PORT WALL TO FLANGE WELD ZONE)	MASTER GAGE	QA		J-1271	LESS THAN 1.2	533-B.C				A
(20)		MAGNETIC PERMEABILITY 1.2 MAX (PORT WALL TO FLANGE WELD ZONE)	PROFILOMETER	QA		J-1308	21 TO 26	533-B.C				A
*		INTERIOR SURFACE FINISH: 32 MICRO-INCH RA	UT THICKNESS GA	QA		J-1009-NDT	.113 TO .116	840-G.M				A
(40)		PORT EXTENSION WALL THICKNESS: 0.120 +/--.015		QA		VISUAL	MEETS PS483	533-B.C				A
*		CLEANLINESS COMPLIES WITH PS483		QA			VERIFIED FINAL CON	840-G.M				A
(50)		Q/A MANAGER / CFT VERIFY SUB-ASSY COMPLETION		QA			TION W/ENGINEER	04-25-06				A
(60)												



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003-21 - Item: 116

Workorder: 65678/1-0 Sub:136 Op:10

**Part: SE120-003-21 - - PORT 15 REMOVAL, DETAIL ASSEMBLY, TEMPORARY RE-ATTACHMENT AND INSPECTION**

Drawing ID: SE120-005 Rev: 0C		INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*		VISUAL INSPECT PORT 15A WELDS BACK STRIP TO PORT TUBE BLOCK TO BACK STRIP 1/8" TUBE TO BLOCK TIE STRAP SPOT WELDS		MFG		VISUAL	ACCEPT	837-J.DE	933-D.L	A
(10)				CWI				04-18-06	04-18-06	
*		VISUAL INSPECT PORT 15B WELDS BACK STRIP TO PORT TUBE BLOCK TO BACK STRIP 1/8" TUBE TO BLOCK TIE STRAP SPOT WELDS		MFG			PORT 15B WELDS GOOD	763-R.M	053-M.D	A
(20)				CWI				04-18-06	04-18-06	





**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003-21 - Item: 117

Workorder: 65678/1-0 Sub:136 Op:20

**Part: SE120-003-21 - - PORT 15 REMOVAL, DETAIL ASSEMBLY, TEMPORARY RE-ATTACHMENT AND INSPECTION**

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		Φ ∅.25 (A   B   C)	LASER	QA		J-1280	POS 0.134 FACE 0.0 /-0.055	522-R.D 04-18-06			A
(10)		PORT 15A POSITION (REINSTALLED)									
*		Φ ∅.25 (A   B   C)	LASER	QA		J-1280	POS 0.072 FACE 0.00 2 / 0.055	522-R.D 04-19-06			A
(20)		PORT 15B POSITION (REINSTALLED)									



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003-21 - Item: 118

Workorder: 65678/1-0 Sub:136 Op:30

**Part: SE120-003-21 - - PORT 15 REMOVAL, DETAIL ASSEMBLY, TEMPORARY RE-ATTACHMENT AND INSPECTION**

SHEET	ZONE	DRAWING ID: SE120-004 Rev: 2D CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		MAGNETIC PERMEABILITY 1.02 MAX (ENTIRE PORT LESS FLANGE WELD ZONE)	MASTER GAGE	QA		J-1271	LESS THAN 1.02	261-T.D			A
(10)		MAGNETIC PERMEABILITY 1.2 MAX (PORT WALL TO FLANGE WELD ZONE)	MASTER GAGE	QA		J-1271	LESS THAN 1.2	04-19-06			A
(20)		INTERIOR SURFACE FINISH: 32 MICRO-INCH RA	PROFILOMETER	QA		J-1308	7 TO 24 MICRO-INCH RA	261-T.D			A
*		PORT EXTENSION WALL THICKNESS 0.226 +0.045/-0.010"	UT THICKNESS GA	QA		J-1009-NDT	.258 TO .262 I-15A	04-19-06			A
(40)		CLEANLINESS COMPLIES WITH PS483		QA		VISUAL	COMPLIES WITH PS48	503-B.H			A
*		Q/A MANAGER / CFT VERIFY SUB-ASSY COMPLETION		QA			VERIFIED FINAL CON ITION W/ENGINEER	04-25-06			A
(60)								04-19-06			A



INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-003-23 - Item: 119

Workorder: 65678/1-0 Sub:137 Op:10

Part: SE120-003-23 - - PORT DOME REMOVAL, DETAIL ASSEMBLY, TEMPORARY RE-ATTACHMENT AND INSPECTION

Drawing ID: SE122-007 Rev: 0		INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*		VISUAL INSPECT PORT DOME A WELD BACK STRIP TO PORT TUBE BLOCK TO BACK STRIP 1/8" TUBE TO BLOCK TIE STRAP SPOT WELDS		MFG		VISUAL	BACK STRIP TO PORT WELD GOOD BLOCK T BACK STRIP GOOD 1/8 " TUBE TO BLOCK G OOD	709-K.A	053-M.D	A
(10)				CWI				04-14-06	04-14-06	
*		VISUAL INSPECT PORT DOME B WELD BACK STRIP TO PORT TUBE BLOCK TO BACK STRIP 1/8" TUBE TO BLOCK TIE STRAP SPOT WELDS		MFG		VISUAL	BACK STRIP TO PORT WELD GOOD BLOCK T BACK STRIP GOOD 1/8 " TUBE TO BLOCK G OOD	763-R.M	933-D.L	A
(20)				CWI				04-13-06	04-13-06	



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003-23 - Item: 120

Workorder: 65678/1-0 Sub:137 Op:20

**Part: SE120-003-23 - - PORT DOME REMOVAL, DETAIL ASSEMBLY, TEMPORARY RE-ATTACHMENT AND INSPECTION**

Drawing ID: SE120-004 Rev: 2		INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY	
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD / AUDIT
*	(10)	$\phi$ .25 (M) A B C PORT 17A POSITION (REINSTALLED)	LASER	QA	J-1280	POS 0.156 FACE 0.01 3 / 0.065	522-R.D 04-17-06	
*	(20)	$\phi$ .25 (M) A B C PORT 17B POSITION (REINSTALLED)	LASER	QA	1444	POS. 0.201 FACE -0. 006 / -0.043	522-R.D 04-17-06	



INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-003-23 - Item: 119

Workorder: 65678/1-0 Sub:137 Op:30

Part: SE120-003-23 - - PORT DOME REMOVAL, DETAIL ASSEMBLY, TEMPORARY RE-ATTACHMENT AND INSPECTION

Drawing ID: SE120-004 Rev: 2D		INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY	
SHEET ZONE	CHARACTERISTIC	GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*	MAGNETIC PERMEABILITY 1.02 MAX (ENTIRE PORT LESS FLANGE WELD ZO	MASTER GAGE	QA	J-1271	LESS THAN 1.02	261-T.D		A
(10)						04-19-06		
*	MAGNETIC PERMEABILITY 1.2 MAX (PORT WALL TO FLANGE WELD ZONE)	MASTER GAGE	QA	J-1271	LESS THAN 1.2	261-T.D		A
(20)						04-19-06		
*	INTERIOR SURFACE FINISH: 32 MICRO-INCH RA	PROFILOMETER	QA	J-1308	10 TO 29 MICRO-INCH RA	261-T.D		A
(30)						04-19-06		
*	DOME WALL THICKNESS 0.375 +0.045/-0.010"	UT THICKNESS GA	QA	J-1009-NDT	.357 TO .393 (LOW O N DOME REF. I-17A/I -18A ONLY-ACCEPT T N.C.19663)	854-R.U		A
(40)						04-29-06		
*	PORT EXTENSION WALL THICKNESS 0.226 +0.045/-0.010" (17 & 18)	UT THICKNESS GA	QA	J-1009-NDT	.252 TO .265	261-T.D		A
(50)						04-19-06		
Drawing ID: SE122-007 Rev: 2		INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY	
SHEET ZONE	CHARACTERISTIC	GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*	CLEANLINESS COMPLIES WITH PS483		QA	VISUAL	COMPLIES WITH PS48	261-T.D		A
(60)						04-19-06		
*	Q/A MANAGER / CFT VERIFY SUB-ASSY COMPLETION		QA		VERIFIED FINAL CON TION W/ENGINEER	840-G.M		A
(70)						04-25-06		



**Major**  
Tool & Machine, Inc.

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003-3 - Item: 126

Workorder: 65678/1-0 Sub:127 Op:10

Part: SE120-003-3 - - PORT 2 REMOVAL, DETAIL ASSEMBLY, TEMPORARY RE-ATTACHMENT AND INSPECTION

Drawing ID: SE120-005 Rev: 0		INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*		VISUAL INSPECT PORT 2A WELDS BACK STRIP TO PORT TUBE BLOCK TO BACK STRIP 1/8" TUBE TO BLOCK TIE STRAP SPOT WELDS		MFG		VISUAL	BACK STRIP TO PORT TUBE, BLOCK TO BACK STRIP, 1/8" TUBE T O BLOCK	509-S.R	933-D.L	A
(10)				CWI				04-17-06	04-17-06	
*		VISUAL INSPECT PORT 2B WELDS BACK STRIP TO PORT TUBE BLOCK TO BACK STRIP 1/8" TUBE TO BLOCK TIE STRAP SPOT WELDS		MFG		VISUAL	BACK STRIP TO PORT TUBE, BLOCK TO BACK STRIP, 1/8" TUBE T O BLOCK	509-S.R	933-D.L	A
(20)				CWI				04-17-06	04-17-06	



INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-003-3 - Item: 127

Workorder: 65678/1-0 Sub:127 Op:20

Part: SE120-003-3 - - PORT 2 REMOVAL, DETAIL ASSEMBLY, TEMPORARY RE-ATTACHMENT AND INSPECTION

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*		Φ ∅.25 (M) A B C	LASER	QA		J-1280	POS 0.056 FACE -0.0	522-R.D		A
(10)		PORT 2A POSITION (REINSTALLED)					06 / 0.028	04-17-06		
*		Φ ∅.25 (M) A B C	LASER	QA		J-1280	POS 0.098 FACE 0.00	522-R.D		A
(20)		PORT 2B POSITION (REINSTALLED)					8 / 0.032	04-17-06		



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003-3 - Item: 128

Workorder: 65678/1-0 Sub:127 Op:30

Part: SE120-003-3 - PORT 2 REMOVAL, DETAIL ASSEMBLY, TEMPORARY RE-ATTACHMENT AND INSPECTION

SHEET ZONE	DRAWING ID: SE120-004 Rev: 2 CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY	
		GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*	MAGNETIC PERMEABILITY 1.02 MAX (ENTIRE PORT LESS FLANGE WELD ZONE)	MASTER GAGE	QA	J-1271	LESS THAN 1.02 MAX	261-T.D		A
*	MAGNETIC PERMEABILITY 1.2 MAX (PORT WALL TO FLANGE WELD ZONE)	MASTER GAGE	QA	J-1271	LESS THAN 1.2 MAX	261-T.D		A
(20)	INTERIOR SURFACE FINISH: 32 MICRO-INCH RA	PROFILOMETER	QA	J-1308	13 TO 24 MICRO-INCH RA	261-T.D		A
*	PORT EXTENSION WALL THICKNESS 0.226 +0.045/0.010"	UT THICKNESS GA	QA	J-770-NDT	.241 TO .261	261-T.D		A
(40)	CLEANLINESS COMPLIES WITH PS483		QA	VISUAL	COMPLIES WITH PS48	261-T.D		A
*	Q/A MANAGER / CFT VERIFY SUB-ASSY COMPLETION		QA		VERIFIED FINAL CON TION W/ENGINEER	840-G.M		A
(60)						04-18-06		





**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003-5 - Item: 129

Workorder: 65678/1-0 Sub:128 Op:10

Part: SE120-003-5 - - PORT 4 REMOVAL, DETAIL ASSEMBLY, TEMPORARY RE-ATTACHMENT AND INSPECTION

SHEET	ZONE	DRAWING ID: SE120-005 Rev: 0C	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
				GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*			VISUAL INSPECT PORT 4A WELDS BACK STRIP TO PORT TUBE BLOCK TO BACK STRIP 1/8" TUBE TO BLOCK TIE STRAP SPOT WELDS		MFG		VISUAL	ACCEPTED	299-M.G	053-M.D	A
(10)					CWI				04-14-06		
*			VISUAL INSPECT PORT 4B WELDS BACK STRIP TO PORT TUBE BLOCK TO BACK STRIP 1/8" TUBE TO BLOCK TIE STRAP SPOT WELDS		MFG		VISUAL	ACCEPTED	299-M.G	933-D.L	A
(20)					CWI				04-14-06	04-17-06	



**Major**  
Tool & Machine, Inc.

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003-5 - Item: 130

Workorder: 65678/1-0 Sub:128 Op:20

**Part: SE120-003-5 - - PORT 4 REMOVAL, DETAIL ASSEMBLY, TEMPORARY RE-ATTACHMENT AND INSPECTION**

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*		⌀.25 <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C	LASER	QA		J-1280	POS 0.278 FACE -0.1 12 / +0.102 [N/C:19 667-Doc:19667]	522-R.D		R
(10)		PORT 4A POSITION (REINSTALLED)						04-20-06		
*		⌀.25 <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C	LASER	QA		J-1280	POS 0.193 FACE -0.0 33 / 0.054	522-R.D		A
(20)		PORT 4B POSITION (REINSTALLED)						04-18-06		



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003-5 - Item: 131

Workorder: 65678/1-0 Sub:128 Op:30

Part: SE120-003-5 - PORT 4 REMOVAL, DETAIL ASSEMBLY, TEMPORARY RE-ATTACHMENT AND INSPECTION

SHEET	ZONE	DRAWING ID: SE120-004 Rev: 2D	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
				GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*			MAGNETIC PERMEABILITY 1.02 MAX (ENTIRE PORT LESS FLANGE WELD ZO	MASTER GAGE	QA		J-1271	LESS THAN 1.02	261-T.D		A
(10)			MAGNETIC PERMEABILITY 1.2 MAX (PORT WALL TO FLANGE WELD ZONE)	MASTER GAGE	QA		J-1271	LESS THAN 1.2	04-19-06		A
(20)			INTERIOR SURFACE FINISH: 32 MICRO-INCH RA	PROFILOMETER	QA		J-1307	12-28	04-19-06		A
(30)			PORT EXTENSION WALL THICKNESS 0.500 +0.055/-0.010"	UT THICKNESS GA	QA		J-1009-NDT	.495 TO .535	04-20-06		A
(40)			CLEANLINESS COMPLIES WITH PS483		QA		VISUAL	COMPLIES WITH PS48	533-B.C		A
(50)			Q/A MANAGER / CFT VERIFY SUB-ASSY COMPLETION		QA			VERIFIED FINAL CON	04-21-06		A
(60)								TION W/ENGINEER	261-T.D		A
									04-19-06		
									840-G.M		
									04-25-06		



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003-7 - Item: 132

Workorder: 65678/1-0 Sub:129 Op:10

Part: SE120-003-7 - - PORT 5 REMOVAL, DETAIL ASSEMBLY, TEMPORARY RE-ATTACHMENT AND INSPECTION

Drawing ID: SE120-005 Rev: 0		INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*		VISUAL INSPECT PORT 5A WELDS BACK STRIP TO PORT TUBE BLOCK TO BACK STRIP 1/8" TUBE TO BLOCK TIE STRAP SPOT WELDS		MFG		VISUAL	ACCEPT	837-J.DE	053-M.D	A
(10)				CWI				04-18-06	04-18-06	
*		VISUAL INSPECT PORT 5B WELDS BACK STRIP TO PORT TUBE BLOCK TO BACK STRIP 1/8" TUBE TO BLOCK TIE STRAP SPOT WELDS		MFG		VISUAL	BACK STRIP TO PORT TUBE, BLOCK TO BAC K STRIP, 1/8" TUBE TO BLOCK	509-S.R	053-M.D	A
(20)				CWI				04-18-06	04-18-06	



**Major**  
Tool & Machine, Inc.

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003-7 - Item: 133

Workorder: 65678/1-0 Sub:129 Op:20

**Part: SE120-003-7 - PORT 5 REMOVAL, DETAIL ASSEMBLY, TEMPORARY RE-ATTACHMENT AND INSPECTION**

SHEET ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY	
		GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (10)	$\varnothing$ .25 (A)   B   C PORT 5A POSITION (REINSTALLED)	LASER	QA	J-1280	POS 0.167 FACE -0.0 38 / 0.022	522-R.D		A
* (20)	$\varnothing$ .25 (A)   B   C PORT 5B POSITION (REINSTALLED)	LASER	QA	J-1280	POS 0.007 FACE -0.0 18 / 0.004	522-R.D		A



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003-7 - Item: 134

Workorder: 65678/1-0 Sub:129 Op:30

Part: SE120-003-7 - - PORT 5 REMOVAL, DETAIL ASSEMBLY, TEMPORARY RE-ATTACHMENT AND INSPECTION

Drawing ID: SE120-004 Rev: 2D		INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*		MAGNETIC PERMEABILITY 1.02 MAX (ENTIRE PORT LESS FLANGE WELD ZO	MASTER GAGE	QA	J-1271	LESS THAN 1.02	261-T.D		A
(10)		MAGNETIC PERMEABILITY 1.2 MAX (PORT WALL TO FLANGE WELD ZONE)	MASTER GAGE	QA	J-1271	LESS THAN 1.2	04-19-06		A
(20)		INTERIOR SURFACE FINISH: 32 MICRO-INCH RA	PROFILOMETER	QA	J-1308	8 TO 32 MICRO-INCH (HIGH ON I-5B ONLY)	261-T.D		A
(30)		PORT EXTENSION WALL THICKNESS 0.188 +0.045/-0.010"	UT THICKNESS GA	QA	J-1009-NDT	.193 TO .226	04-19-06		A
(40)		CLEANLINESS COMPLIES WITH PS483		QA	VISUAL	COMPLIES WITH PS48	261-T.D		A
(50)		Q/A MANAGER / CFT VERIFY SUB-ASSY COMPLETION		QA		VERIFIED FINAL CON TION W/ENGINEER	04-19-06		A
(60)							840-G.M		
							04-25-06		



**Major**  
Tool & Machine, Inc.

**INSPECTION DATA CHECKLIST**

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Date: 04/29/06  
User ID: UPCHURC#

Quality Assurance Documentation for Part ID: SE120-003-9 - Item: 135

Workorder: 65678/1-0 Sub:130 Op:10

**Part: SE120-003-9 - - PORT 6 REMOVAL, DETAIL ASSEMBLY, TEMPORARY RE-ATTACHMENT AND INSPECTION**

Drawing ID: SE120-005 Rev: 0		INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*		VISUAL INSPECT PORT 6A WELDS BACK STRIP TO PORT TUBE BLOCK TO BACK STRIP 1/8" TUBE TO BLOCK TIE STRAP SPOT WELDS		MFG	VISUAL	PORT 6A WELDS ARE OOD	763-R.M	933-D.L	A
(10)				CWI			04-17-06	04-17-06	A
*		VISUAL INSPECT PORT 6B WELDS BACK STRIP TO PORT TUBE BLOCK TO BACK STRIP 1/8" TUBE TO BLOCK TIE STRAP SPOT WELDS		MFG	VISUAL	BACK STRIP TO PORT TUBE GOOD BLOCK T BACK STRIP GOOD 1/8 " TUBE TO BLOCK GO OD T	763-R.M	933-D.L	A
(20)				CWI			04-17-06	04-17-06	



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003-9 - Item: 136

Workorder: 65678/1-0 Sub:130 Op:20

Part: SE120-003-9 - - PORT 6 REMOVAL, DETAIL ASSEMBLY, TEMPORARY RE-ATTACHMENT AND INSPECTION

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		⊕ ∅.25Ⓜ A B C	LASER	QA		J-1280	POS 0.175 FACE -0.0	522-R.D			A
(10)		PORT 6A POSITION (REINSTALLED)					90 / 0.060	04-17-06			
*		⊕ ∅.25Ⓜ A B C	LASER	QA		J-1280	POS 0.100 FACE -0.0	522-R.D			A
(20)		PORT 6B POSITION (REINSTALLED)					28 / 0.035	04-17-06			





**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-003-9 - Item: 137

Workorder: 65678/1-0 Sub:130 Op:30

Part: SE120-003-9 - PORT 6 REMOVAL, DETAIL ASSEMBLY, TEMPORARY RE-ATTACHMENT AND INSPECTION

SHEET ZONE	DRAWING ID: SE120-004 Rev: 2	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
		CHARACTERISTIC	GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*		MAGNETIC PERMEABILITY 1.02 MAX (ENTIRE PORT LESS FLANGE WELD ZONE)	MASTER GAGE	QA	J-1271	ACCEPT	261-T.D		A
(10)		MAGNETIC PERMEABILITY 1.2 MAX (PORT WALL TO FLANGE WELD ZONE)	MASTER GAGE	QA	J-1271	ACCEPT	04-18-06		A
(20)		INTERIOR SURFACE FINISH: 32 MICRO-INCH RA	PROFILOMETER	QA	J-1308	7 TO 12 MICRO-INCH RA	261-T.D	04-18-06	A
(30)		PORT EXTENSION WALL THICKNESS 0.250 +0.045/-0.010"	UT THICKNESS GA	QA	J-770-NDT	0.262 TO 0.272	261-T.D	04-18-06	A
(40)		CLEANLINESS COMPLIES WITH PS483		QA	VISUAL	COMPLIES WITH PS48	261-T.D	04-18-06	A
(50)		Q/A MANAGER / CFT VERIFY SUB-ASSY COMPLETION		QA		VERIFIED FINAL CON TION W/ENGINEER	840-G.M		A
(60)							04-25-06		



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**INSPECTION DATA CHECKLIST**

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User ID: UPCHURC#

Quality Assurance Documentation for Part ID: SE120-003-DOME A - Item: 138

Workorder: 65678/1-0 Sub:122 Op:10

Part: SE120-003-DOME A - - PORT DOME A AND DOME B INSTALLATION

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY				
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT		
*	(20)	VWI - ROOT PASS WELD PDAV		MFG CWI		VISUAL MAGLIGHT & 10	ACCEPT	683-K.M	581-D.E	10-20-05	10-20-05	A
*	(60)	VWI - COVER PASS WELD PDAV		MFG CWI		VISUAL	ACCEPT PER CUSTOM DRAWINGS AND SPE FICATIONS	709-K.A	933-D.L	11-01-05	11-04-05	A
*	(80)	VWI - ROOT PASS WELD PDBV		MFG CWI		VISUAL	ROOT PASS GOOD	763-R.M	933-D.L	11-02-05	11-02-05	A
*	(120)	VWI - COVER PASS WELD PDBV		MFG CWI		VISUAL	ACCEPT PER CUSTOM DRAWINGS AND SPE FICATIONS	709-K.A	933-D.L	11-03-05	11-04-05	A



INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-003-DOME A - Item: 133

Workorder: 65678/1-0 Sub:122 Op:20

Part: SE120-003-DOME A - PORT DOME A AND DOME B INSTALLATION

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
2*	G2	<input type="checkbox"/> .375 <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C	LASER	QA		1444	+0.249 / -0.450 (+ & - CONDITIONS ARE ON ADJACENT SKIN)( ACCEPT TO NC 18553) [N/C:18553]	854-R.U		A
(30)		PORT DOME A SIDEWALL AND ADJACENT VESSEL WALL								
2*	G2	<input type="checkbox"/> .375 <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C	LASER	QA		1444	+0.080 / -0.270 (- CONDITION ON ADJA NT SKIN)(ACCEPT TO NC 18553)	854-R.U		A
(40)		PORT DOME B SIDEWALL AND ADJACENT VESSEL WALL								



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INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-003-NB - Item: 140

Workorder: 65678/1-0 Sub:119 Op:10

Part: SE120-003-NB - - PORT NB INSTALLATION

SHEET ZONE		Drawing ID: SE120-004 Rev: 2	INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY		
	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*			MFG		VISUAL	ACCEPT PER CUSTOM DRAWINGS AND SPE FICATIONS	709-K.A	933-D.L	A
(20)	VWI - ROOT PASS WELD PNBV		CWI		VISUAL	ACCEPT PER CUSTOM DRAWINGS AND SPE FICATIONS	10-12-05	10-12-05	
*			MFG		VISUAL	ACCEPT PER CUSTOM DRAWINGS AND SPE FICATIONS	709-K.A	933-D.L	A
(60)	VWI - COVER PASS WELD PNBV		CWI		VISUAL	ACCEPT PER CUSTOM DRAWINGS AND SPE FICATIONS	10-13-05	10-13-05	



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 PORT NB - Item: 141

Workorder: 65678/1-0 Sub:223 Op:10

Part: SE120-004 PORT NB - REWORK / REPAIR PER N/C - N/C #

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*		VWI ROOT PASS		MFG		VISUAL		728-R.D	581-D.E	A
(30)		INNER PATCH WELD		CWI				10-18-05	10-18-05	
*		VWI COVER PASS		MFG		VISUAL		837-J.DE	581-D.E	A
(70)		INNER PATCH WELD		CWI				10-18-05	10-19-05	
*		VWI ROOT PASS		MFG		VISUAL		683-K.M	581-D.E	A
(80)		OUTER PATCH WELD		CWI				10-19-05	10-31-05	
*		VWI COVER PASS		MFG		VISUAL		709-K.A	933-D.L	A
(120)		OUTER PATCH WELD		CWI				11-02-05	11-02-05	

INSPECTION DATA CHECKLIST



Quality Assurance Documentation for Part ID: SE120-004 - Item: 136

Workorder: 65678/1-0 Sub:1 Op:20

SHEET ZONE		Drawing ID: SE120-004 Rev: 2		INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY			
		CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*	(10)	<input type="checkbox"/> 0.375 A B C FINAL VESSEL PROFILE	LASER	QA		J-1280	-0.795 / +0.593 [N/ C:19522-Doc:19293]	522-R.D			R
3*	D3	<input checked="" type="checkbox"/> 0.05 HALF A	LASER	QA		J-1280	FLAT 0.037 PROFILE	522-R.D			A
(20)		RFD 12-016									
3*	D3	<input checked="" type="checkbox"/> 0.05 HALF B	LASER	QA		J-1280	FLAT 0.041 PROFILE	522-R.D			A
(30)		RFD 12-016									
*		<input checked="" type="checkbox"/> .25 A B C <input checked="" type="checkbox"/> 17"	LASER	QA		J-1280	-0.096 / -0.035	05-02-06			R
(40)		HALF -A- BOSS A FINAL									
*		<input checked="" type="checkbox"/> .25 A B C <input checked="" type="checkbox"/> 17"	LASER	QA		J-1280	1.663	522-R.D			R
(50)		HALF -A- BOSS B FINAL									
*		<input checked="" type="checkbox"/> .25 A B C <input checked="" type="checkbox"/> 17"	LASER	QA		J-1280	0.940	05-02-06			R
(60)		HALF -A- BOSS C FINAL									
*		<input checked="" type="checkbox"/> .25 A B C <input checked="" type="checkbox"/> 17"	LASER	QA		J-1280	0.195	05-02-06			A
(70)		HALF -A- BOSS D FINAL									
*		<input checked="" type="checkbox"/> .25 A B C <input checked="" type="checkbox"/> 17"	LASER	QA		J-1280	0.365	05-02-06			R
(80)		HALF -B- BOSS A FINAL									
*		<input checked="" type="checkbox"/> .25 A B C <input checked="" type="checkbox"/> 17"	LASER	QA		J-1280	0.667	05-02-06			R
(90)		HALF -B- BOSS A FINAL									
*		<input checked="" type="checkbox"/> .25 A B C	LASER	QA		J-1280	1.144	05-02-06			R



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### INSPECTION DATA CHECKLIST

(90)	Ⓟ 17"	HALF -B- BOSS B FINAL							05-02-06		
*	⊕ .25 A B C								522-R.D		R
(100)	Ⓟ 17"	HALF -B- BOSS C FINAL							05-02-06		
*	⊕ .25 A B C								522-R.D		R
(110)	Ⓟ 17"	HALF -B- BOSS D FINAL							05-02-06		



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004 - Item: 143

Workorder: 65678/1-0 Sub:1 Op:30

Part: SE120-004 - -

Drawing ID: SE120-002 Rev: 1		INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*		VESSEL WALL MATERIAL THICKNESS 10% MAX POLOIDAL THINNING BELOW STK (0.375 +.040"/-.010") .338 MINIMUM WALL THICKNESS	UT THICKNESS GA	QA	J-1009-NDT	.365 TO .414	261-T.D		A
(10)							04-28-06		A
*		MAGNETIC PERMEABILITY 1.02 MAX	MASTER GAGE	QA	J-1271	LESS THAN 1.02	261-T.D		A
(20)							04-28-06		A
*		INTERIOR SURFACE FINISH: 32 MICRO-INCH RA	PROFILOMETER	QA	J-1308	6 TO 30 MICRO-INCH	261-T.D		A
(30)							04-28-06		A





INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-004 - Item: 144

Workorder: 65678/1-0 Sub:2 Op:60

Part: SE120-004 - - VACUUM TESTING / PORT REMOVAL / VESEL FLANGE MACHINING / FINAL INSPECTION ACTIVITIES SE120-003-1 120 DEGREE

SHEET ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
		GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
3* (10)	$\square \begin{matrix} 0.015 \\ 10 \end{matrix}$	CALIPER	MFG QA		P-4834	WITH/IN.015	492-R.E 03-08-06	576-J.GE 03-07-06	A
Drawing ID: SE121-013 Rev: 0									
* (30)	0.188 +/-0.005"	CALIPER	MFG QA		P-4834	.185/.191	492-R.E 03-07-06	576-J.GE 03-07-06	A
* (40)	0.637 +/-0.005" NOTE: DIMENSION WILL LIKELY BE SL OUT OF TOLERANCE, I.D. CUT AS DETA	CALIPER	MFG QA		P-4834	.480 TO .900	492-R.E 03-07-06	576-J.GE 03-07-06	R
* (50)	0.469 +/-0.005" NOTE: DIMENSION WILL LIKELY BE SL OUT OF TOLERANCE, HOLES CUT AS D	CALIPER	MFG QA		P-4834	.432 TO .240	492-R.E 03-07-06	576-J.GE 03-07-06	R
Drawing ID: SE122-072 Rev: 1									
* (60)	1.25 +/-0.010" PORT NB FLANGE THICKNESS AFTER REWORK	CALIPER	MFG QA		P-4834	1.140/1.190	492-R.E 03-08-06	854-R.U 03-08-06	R
* (80)	$\square \begin{matrix} 0.015 \\ 80 \end{matrix}$ PORT NB FACE FLATNESS AFTER REWORK NOTE 1.5" LIMIT OF TOLERANCE	INDICATOR	MFG QA		P-4927	WITH/IN.007	492-R.E 03-08-06	854-R.U 03-08-06	A



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INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-004-17A - Item: 145

Workorder: 65678/1-0 Sub:125 Op:10

Part: SE120-004-17A - - PORT 17A AND 17B INSTALLATION

SHEET	ZONE	DRAWING ID: SE120-004 Rev: 2	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
				GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*	(20)	VWI - ROOT PASS WELD P17AV		MFG CWI		VISUAL	ACCEPT	683-K.M	933-D.L	12-08-05	12-08-05	A
*	(40)	VWI - COVER PASS WELD P17AV		MFG CWI		VISUAL	ACCEPT	837-J.DE	933-D.L	12-09-05	12-14-05	A
*	(60)	VWI - ROOT PASS WELD P17BV		MFG CWI		VISUAL	ACCEPT	683-K.M	581-D.E	12-09-05	12-09-05	A
*	(80)	VWI - COVER PASS WELD P17BV		MFG CWI		VISUAL	ACCEPT	683-K.M	933-D.L	12-14-05	12-14-05	A



INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-004-17A - Item: 140

Workorder: 65678/1-0 Sub:125 Op:20

Part: SE120-004-17A - - PORT 17A AND 17B INSTALLATION

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS	INSPECTED BY			
			GAGE/EQUIP	BY	SAMPLE		SER#	DATA/REMARKS	INSP	VERFD
16*	D8	Φ 0.25 (M)   A   B   C	LASER	QA		0.252 TOP +0.010 / -0.033 (ACCEPT TO N C 18833) [N/C:18833	854-R.U			A
(30)		PORT 17A POSITION				J	04-30-06			
16*	D8	Φ 0.25 (M)   A   B   C	LASER	QA		0.057 TOP -0.058 / -0.018	522-R.D			A
(40)		PORT 17B POSITION					12-10-05			



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**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004-18A - Item: 147

Workorder: 65678/1-0 Sub:126 Op:10

**Part: SE120-004-18A - - PORT 18A AND 18B INSTALLATION**

SHEET ZONE		DRAWING ID: SE120-004 Rev: 2	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
			CHARACTERISTIC	GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*	(20)	VWI - ROOT PASS WELD P18AV		MFG CWI		VISUAL	ACCEPT	683-K.M	933-D.L	A
*	(40)	VWI - COVER PASS WELD P18AV		MFG CWI		VISUAL	ACCEPT	837-J.DE	933-D.L	A
*	(60)	VWI - ROOT PASS WELD P18BV		MFG CWI		VISUAL	ACCEPT	683-K.M	581-D.E	A
*	(80)	VWI - COVER PASS WELD P18BV		MFG CWI		VISUAL	ACCEPT	683-K.M	933-D.L	A



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004-18A - Item: 148

Workorder: 65678/1-0 Sub:126 Op:20

Part: SE120-004-18A - - PORT 18A AND 18B INSTALLATION

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY	
			GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
17*	B5	⌀ .25 (M) A B C	LASER	QA	1444	0.203 TOP +0.006 / +0.031	522-R.D		A
(30)		PORT 18A POSITION					12-10-05		
17*	B5	⌀ .25 (M) A B C	LASER	QA	1444	0.179 TOP +0.011 / +0.037	522-R.D		A
(40)		PORT 18B POSITION					12-10-05		

INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-004-2A - Item: 149

Workorder: 65678/1-0 Sub:123 Op:10

Part: SE120-004-2A - ALL ROUND PORT EXTENSION INSTALLATION

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY				
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT		
		Drawing ID: SE120-004 Rev: 2										
*				MFG		VISUAL	O.K. PER CUSTOMER R	771-B.S	581-D.E			A
(20)		VWI - ROOT PASS WELD P2AV		CWI			EQUIREMENTS	12-05-05	12-05-05			
*				MFG		VISUAL	ACCEPT	837-J.DE	933-D.L			A
(40)		VWI - COVER PASS WELD P2AV		CWI				12-09-05	12-12-05			
*				MFG		VISUAL	ACCEPT	683-K.M	933-D.L			A
(60)		VWI - ROOT PASS WELD P2BV		CWI				12-06-05	12-06-05			
*				MFG		VISUAL	ACCEPTABLE	728-R.D	933-D.L			A
(80)		VWI - COVER PASS WELD P2BV		CWI				12-12-05	12-12-05			
*				MFG		VISUAL	ACCEPT	683-K.M	933-D.L			A
(100)		VWI - ROOT PASS WELD P5AV		CWI				12-01-05	12-01-05			
*				MFG		VISUAL	ACCEPT	837-J.DE	933-D.L			A
(120)		VWI - COVER PASS WELD P5AV		CWI				12-01-05	12-12-05			
*				MFG		VISUAL	ACCEPT	709-K.A	933-D.L			A
(140)		VWI - ROOT PASS WELD P5BV		CWI				12-02-05	12-02-05			
*				MFG		VISUAL	ACCEPT	837-J.DE	933-D.L			A
(160)		VWI - COVER PASS WELD P5BV		CWI				12-03-05	12-05-05			
*				MFG		VISUAL	ACCEPT	683-K.M	933-D.L			A
(180)		VWI - ROOT PASS WELD P6AV		CWI				12-01-05	12-01-05			
*				MFG		VISUAL	ACCEPT	837-J.DE	933-D.L			A
(200)		VWI - COVER PASS WELD P6AV		CWI				12-01-05	12-12-05			
*				MFG		VISUAL	ACCEPT	709-K.A	933-D.L			A
(220)		VWI - ROOT PASS WELD P6BV		CWI				11-30-05	11-30-05			
*				MFG		VISUAL	ACCEPT	709-K.A	933-D.L			A
(240)		VWI - COVER PASS WELD P6BV		CWI				12-02-05	12-05-05			
*				MFG		VISUAL	ACCEPT	771-B.S	581-D.E			A
(260)		VWI - ROOT PASS WELD P7AV		CWI			O.K. PER CUSTOMER R	12-05-05	12-05-05			
*				MFG		VISUAL	EQUIREMENST	12-05-05	12-05-05			A
(280)		VWI - COVER PASS WELD P7AV		CWI			ACCEPT	837-J.DE	933-D.L			
*				MFG		VISUAL	ACCEPT	12-09-05	12-12-05			
(300)		VWI - ROOT PASS WELD P7BV		CWI			O.K. PER CUSTOMER R	771-B.S	581-D.E			
*				MFG		VISUAL	EQUIREMENTS	12-05-05	12-05-05			A
				MFG		VISUAL	ACCEPT	837-J.DE	933-D.L			A





INSPECTION DATA CHECKLIST

User ID: UPCHURC#

			MFG	VISUAL	ACCEPT	709-K.A 11-30-05	933-D.L 11-30-05	A
* (700)	VWI - ROOT PASS WELD P15BV		CWI	VISUAL	ACCEPT			
* (720)	VWI - COVER PASS WELD P15BV		MFG CWI	VISUAL	ACCEPT	709-K.A 12-02-05	933-D.L 12-05-05	A





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**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004-2A - Item: 144

Workorder: 65678/1-0 Sub:123 Op:20

Part: SE120-004-2A - ALL ROUND PORT EXTENSION INSTALLATION

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
4*	D5	Φ   $\phi$ .25   A   B   C	LASER	QA		1444	0.241 TOP +0.027 / +0.043	522-R.D			A
(30)		PORT 2A POSITION									
4*	D5	Φ   $\phi$ .25   A   B   C	LASER	QA		1444	0.175 TOP -0.293 / -0.270	522-R.D			A
(40)		PORT 2B POSITION									
6*	A5	Φ   $\phi$ .25   A   B   C	LASER	QA		1444	0.196 TOP -0.125 / -0.168	522-R.D			A
(70)		PORT 5A POSITION									
6*	A5	Φ   $\phi$ .25   A   B   C	LASER	QA		1444	0.226 TOP -0.046 / -0.063	522-R.D			A
(80)		PORT 5B POSITION									
7*	A5	Φ   $\phi$ .25   A   B   C	LASER	QA		1444	0.178 TOP +0.141 / +0.196	522-R.D			A
(110)		PORT 6A POSITION									
7*	A5	Φ   $\phi$ .25   A   B   C	LASER	QA		1444	0.194 TOP -0.056 / +0.028	522-R.D			A
(120)		PORT 6B POSITION									
8*	A5	Φ   $\phi$ .25   A   B   C	LASER	QA		1444	0.096 TOP +0.057 / +0.136	522-R.D			A
(150)		PORT 7A POSITION									
8*	A5	Φ   $\phi$ .25   A   B   C	LASER	QA		1444	0.111 TOP +0.036 / -0.004	522-R.D			A
(160)		PORT 7B POSITION									
9*	B5	Φ   $\phi$ .25   A   B   C	LASER	QA		1444	0.248 TOP +0.024 / +0.048	522-R.D			A
(190)		PORT 8A POSITION									
9*	B5	Φ   $\phi$ .25   A   B   C	LASER	QA		1444	0.184 TOP -0.035 / -0.019	522-R.D			A
(200)		PORT 8B POSITION									
10*	B5	Φ   $\phi$ .25   A   B   C	LASER	QA		1444	0.252 TOP +0.021 / +0.061 (ACCEPT TO NC 18834) [N/C:18834]	854-R.U			A
(230)		PORT 9A POSITION									
10*	B5	Φ   $\phi$ .25   A   B   C	LASER	QA		1444	0.208 TOP +0.097 / +0.126	522-R.D			A
(240)		PORT 9B POSITION									
11*	C5	Φ   $\phi$ .25   A   B   C	LASER	QA		1444	POSITION 0.332 TOP SURFACE -0.134 / -0.155 (ACCEPT TO NC 18748) [N/C:18748]	854-R.U			A
(270)		PORT 10A POSITION									
11*	C5	Φ   $\phi$ .25   A   B   C	LASER	QA		1444	POSITION 0.148 TOP SURFACE -0.194 / -0	522-R.D			A

### INSPECTION DATA CHECKLIST



(280)	PORT 10B POSITION							12-01-05	
12* (310)	A7 φ .25 (M) A B C PORT 11A POSITION	LASER	QA	1444	.201 0.098 / TOP -0.167 / -0.155			522-R.D 12-10-05	A
12* (320)	A7 φ .25 (M) A B C PORT 11B POSITION	LASER	QA	1444	0.231 TOP -0.209 / -0.229			522-R.D 12-10-05	A
14* (350)	B5 φ .25 (M) A B C PORT 15A POSITION	LASER	QA	1444	0.130 TOP -0.087 / -0.071			522-R.D 12-05-05	A
14* (360)	B5 φ .25 (M) A B C PORT 15B POSITION	LASER	QA	1444	0.228 TOP +0.078 / +0.090			522-R.D 12-04-05	A



INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-004-4A - Item: 151

Workorder: 65678/1-0 Sub:121 Op:10

Part: SE120-004-4A - - PORT 4A AND 4B INSTALLATION

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*				MFG		VISUAL	ACCEPT PER CUSTOM DRAWINGS AND SPE FICATIONS	709-K.A	581-D.E	A
(20)		VWI - ROOT PASS WELD P4AV		CWI		VISUAL	ACCEPT PER CUSTOM DRAWINGS AND SPE FICATIONS	11-20-05	11-20-05	A
*				MFG		VISUAL	ACCEPT PER CUSTOM DRAWINGS AND SPE FICATIONS	709-K.A	933-D.L	A
(60)		VWI - COVER PASS WELD P4AV		CWI		VISUAL	ACCEPT PER CUSTOM DRAWINGS AND SPE FICATIONS	12-20-05	11-30-05	A
*				MFG		VISUAL	ACCEPT PER CUSTOM DRAWINGS AND SPE FICATIONS	709-K.A	933-D.L	A
(80)		VWI - ROOT PASS WELD P4BV		CWI		VISUAL	ACCEPT PER CUSTOM DRAWINGS AND SPE FICATIONS	11-20-05	11-30-05	A
*				MFG		VISUAL	ACCEPT	709-K.A	933-D.L	A
(120)		VWI - COVER PASS WELD P4BV		CWI		VISUAL	ACCEPT	11-28-05	11-30-05	A



**Major**  
Tool & Machine, Inc.

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-004-4A - Item: 146

Workorder: 65678/1-0 Sub:121 Op:20

Part: SE120-004-4A - - PORT 4A AND 4B INSTALLATION

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY	
			GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
5*	B5	∅ .25 (M) A B C	LASER	QA	1444	POSITION 0.341 TOP SURFACE +0.081 / +0 .152 (ACCEPT PER NC 18748) [N/C:18748]	854-R.U		A
(30)		PORT 4A POSITION					04-30-06		
5*	B5	∅ .25 (M) A B C	LASER	QA	1444	POSITION 0.284 TOP SURFACE +0.051 / +0 .073 (ACCEPT PER NC 18748) [N/C:18748]	854-R.U		A
(40)		PORT 4B POSITION					04-30-06		

JUN-21-2005 TUE 08:21 AM TEK MIDWEST

FAX NO. 708 430 0147

P. 01



GREENVILLE TUBE  
P.O. Box 30 Greenville, PA 16125  
REPORT OF TESTS

Phone (724)-588-6300  
Fax (724)-588-1492

Customer

City

Our Order GM-4987

C.P.O. M49128631

Date May 26, 2005

Material: Type 316/316 L

(x) Seamless ( ) Welded and Drawn ( ) As Welded

Condition Bright Annealed

Finish Cold Drawn, Bright Annealed and Passivated

Spec. ASTM-A-269-04/A-213-04b/SA-213-04(EAW)

MAJOR TOOL & MACHINE CO.  
P.O. PO5-03220

REF # 1010873

Each Tube on this order has been spectrographically Checked for MO

Heat Number	Size			Length
	O.D.	I.D.	Wall	
2D994	125"		.035" Avg	17'24"

Chemical Analysis

	%C	%Mn	%P	%S	%Si	%Ni	%Cr	%Mo	%Ti	%Cb+TA	%Fe	%N
Ladle	019	1.43	022	.001	37	12.01	17.15	2.13				04
Prod	019	1.45	.028	003	37	12.24	17.36	-2.181				04
	%Cu	%Co	%Al	%Nb+TA	%Nb	%TA	%Al+Ti	%Cb+Nb	%Cb			
Ladle	.22	.15										
Prod	.18	15										

Mechanical and Non-Destructive Tests

Tensile Strength	Yield Strength	% Elongation in 2"	Eddy Current	Hydro Test	Air Test
104,721	57,904	55	Passed		
103,488	54,208	55			

Mechanical Destructive and Other Tests

Hardness	Bend	Reverse Bend	Flange	Reverse Flat	Flare	Flat	Grain Size	Other Tests
RB 73/76					PASSED	PASSED		JUN 22 2005

ASTM-A-262, Practice

Corrosion Test

A B C D E 97361 21

WE HEREBY CERTIFY THAT THE HEAT NUMBERS, ANALYSIS AND TESTS DETAILED HEREON, ARE CORRECT AS CONTAINED IN THE RECORDS OF THIS CORPORATION"

Important Notice: Any discrepancy in the amount of tubing must be reported within 24 hours after receipt by the customer. Greenville Tube certifies that the material used for the P.O. No. stated above is free from mercury and low melting alloy contamination.

Signed:

Robert Ryan  
Quality Control Manager / Metallurgical Engineer

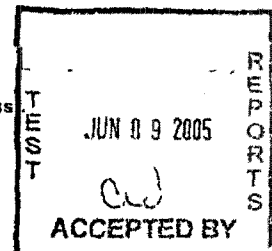
Cathy Rocole  
Quality Control Ass.

Test performed on O.D. corrected for curvature per ASTM-E-18  
Inverted from 15-T Scale

City of origin of raw material producer, China  
City of origin of melt Taiwan



JUN 24 2005





1565 FLBETWOOD DRIVE  
ELGIN, IL 60123  
CERTIFICATE OF ANALYSIS

CUSTOMER:

METALMEN SALES, INC.  
P.O. BOX 54  
NEW YORK, NY 10044

ORDER(S) T36726  
SALES ORDER 78524-1  
QUANTITY 2,310 00

SPEC. 4749 AMS 5599 F I625 ANNEALED 3891 ASTM B443 93 I525 GRADE 1  
APPR. GE S400, S1000 D,  
DESC. ALLOY 625 2B ANNEALED COIL Cust. Part #138020136008-01  
Gauge: .010+/- .001 (.009/.011) PAPER INTERLEAVE #3 EDGE  
Width: 36.000+/- .01 MARK WEIGHT OF PAPER INTERLEAVE

HEAT NO 265096802 *Maton Tool Po Pos-03219* *1pc* 12"x12" CHEMICAL PROPERTIES

ALUMINUM (Al)	0.2000 ✓	BERYLLIUM (Be)	
BORON (B)	0.0030	CALCIUM (Ca)	
CARBON (C)	0.0200 ✓	CHROMIUM (Cr)	21.5500 ✓
COBALT (Co)	0.1300 ✓	COLUM.+TANTALUM (Cb+Ta)	3.5100 ✓
COLUMBIUM (Cb)	3.4600	COPPER (Cu)	0.0800
HYDROGEN (H)		IRON (Fe)	4.4700 ✓
LANTHANUM (La)		MAGNESIUM (Mg)	0.0050 ✓
MANGANESE (Mn)	0.3200	MOLYBDENUM (Mo)	2.4300 ✓
NICKEL (Ni)	60.3100 ✓	NITROGEN (N)	
OXYGEN (O)		PHOSPHORUS (P)	0.0050 ✓
SILICON (Si)	0.2000 ✓	SULFUR (S)	0.0020 ✓
TANTALUM (Ta)	<.05	TITANIUM (Ti)	0.2500 ✓
TUNGSTEN (W)	0.1100	VANADIUM (V)	
ZIRCONIUM (Zr)		NICKEL+COBALT (Ni+Co)	60.4400

AS SHIPPED PROPERTIES:  
DIR TENSILE / YIELD ✓ %ELG (2"/4D) % R/A GRAIN HARDNESS WRAP BEND ✓  
F 138000 72500 46.0 ✓ 9.0 PASS\*

AS SHIPPED PROPERTIES:  
DIR TENSILE YIELD %ELG (2"/4D) % R/A GRAIN HARDNESS WRAP BEND

AFTER H/T @ ROOM TEMPERATURE; H/T AT F+/- F HRS+/- HRS COOL  
DIR TENSILE YIELD %ELG (2"/4D) % R/A GRAIN HARDNESS WRAP BEND

AFTER H/T @ ROOM TEMPERATURE, H/T AT F+/- F HRS+/- HRS COOL  
DIR TENSILE YIELD %ELG (2"/4D) % R/A GRAIN HARDNESS WRAP BEND

TESTED @ F;  
DIR TENSILE YIELD H/T AT F+/- F HRS+/- HRS COOL  
%ELG (2"/4D) % R/A GRAIN HARDNESS WRAP BEND

DIR STRESS RUPTURE F  
HOURS %ELG (2"/4D) PSI IGO IGA MICRO  
LOT CODE-100421 ; \*1.0TX180 ; ELEC.ETCH/10%OXALIC/100XMPG

JUN 16 2005  
97132 *DS*

WE HEREBY CERTIFY THE MATERIAL SHIPPED ON THE ABOVE ORDER CONFORMS TO THE  
STATED CHEMICAL AND PHYSICAL REQUIREMENTS AND PROCESSED FREE OF MERCURY  
(UNLESS OTHERWISE STATED).

AUTHORIZED SIGNATURE:

DATE: 01-08-01



JUN 18 2005

QUALITY MANAGER - RICHARD OMICTEK



INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-005-40 - Item: 155

Workorder: 65678/1-0 Sub:138 Op:10

Part: SE120-005-40 - - PORT 2 BACKING STRIP

SHEET	ZONE	Drawing ID: Rev: CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY	
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD
*		MAGNETIC PERMEABILITY 1.02 MAX	MASTER GAGE	QA		J-1165	LESS THAN 1.02	854-R.U	
(20)								08-21-05	A





CUSTOMER COPY

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

**HAYNES**  
International

Product Description • Description Produit • Material Beschreibung

0.125 (0.120/0.130) x 0/0 x 0/0  
SE120-004-66MTM REV:1A  
HAYNES(R) 625 ALLOY SHEET  
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  
20050628086

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

Customer Reference  
Reference Client  
Kundenbestellnummer  
P05-03064

Date Entered  
Date De Commande  
Bestelldatum  
06/03/05

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, 00e1, UNS# N06625, Gr. 1; PS-489, E

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

Ultimate Zugfestigkeit	0.2% Yield Bel Raum Temp.			%RA		
	1% Yield Lim. Elast. A 1%	0.2% Yield Lim. Elast. A 0.2%	0.2% Strain 0.2% Streckgrenze	% Elong in % Allong EN	% RA	% RA
137000 PSI		74000 PSI	44 %			

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

Ultimate Zugfestigkeit	0.2% Yield Wärm Zugversuch			%RA		
	1% Yield Lim. Elast. A 1%	0.2% Yield Lim. Elast. A 0.2%	0.2% Strain 0.2% Streckgrenze	% Elong in % Allong EN	% RA	% RA

Stress Rupture Temperature • Essai A Charge De Rupture Zehstandversuch

Test Essai Versuch	Temp	Stress Contrainte Spannung	Hours Heures Stunden	% Elong in % Allong EN		% RA	
				% Elong in % Allong EN	% RA	% RA	% RA

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

*Amanda Aguirre*

(1) 3942629401

6/28/2005



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CUSTOMER COPY

Haynes International  
1070 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902



CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS

Invoice No No. de Facture Rechnungs Nr 442551001-0	Date Entered Date De Commande Bestelldatum 06/03/05	Customer Reference Reference Client Kundenbestelldaten P05-03064	Report No. Rapport No Zeugnis Nr 20050628086	Pages of Pages Page de Pages Anzahl der Seiten 3 Of 4
---	--	---	---	--

Sold To • Client • Bestellauftrag  
**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 • Spécification		Uniformity		Corrosion Rate		Oxidation Rate		Charpy Impact Test			Creep Rupture						
Aged Hardness Dureté Vieilli Gealterte Härte	Grain Size Grosser De Grain Korngrösse	IGA	Attack Depth	Corrosion	Test Method	IGA	Attack Depth	Toughness Avg	Toughness 1	Toughness 2	Toughness 3	Test Essai Versuch	Temp	Stress Contrainte Spannung	Hours Heure Stunden	% Elong in % Along En % Dehnung	% Elong @ 15 Hrs
98 HRB	(1)(A) 7.5		0.0801 IN	MPY													

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

*Amanda Aguirre*



THE DATA ON THIS CERTIFICATE IS BASED ON THE ANALYSIS OF THE SAMPLES SUBMITTED. THE ANALYSTS ARE NOT RESPONSIBLE FOR THE RESULTS OF THE ANALYSIS. THE ANALYSTS ARE NOT RESPONSIBLE FOR THE RESULTS OF THE ANALYSIS. THE ANALYSTS ARE NOT RESPONSIBLE FOR THE RESULTS OF THE ANALYSIS. THE ANALYSTS ARE NOT RESPONSIBLE FOR THE RESULTS OF THE ANALYSIS.

CUSTOMER COPY

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

**HAYNES**  
International

Invoice No. No. De Facture Rechnungs Nr 442551001-0	Date Entered Date De Commande Bestelldatum 06/03/05	Customer Reference Référence Client Kundenbestellnr P05-03064	Report No. Rapport No Zeugnis Nr 20050628086	Pages of Pages Page de Pages Anzahl der Seiten 4 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  
ASTM-B-443, 00cl, 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  
0.125 (0.120/0.130) x 0/0 x 0/0  
SE120-004-66MTM REV:1A  
HAYNES(R) 625 ALLOY SHEET  
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: 3942629401 (6 PC)  
(A) 1750 °F to 1950 °F

Certified By • Certifié Par • Bescheinigt Durch: Amanda Aguirre  
Certification Technician  
6/28/2005

*Amanda Aguirre*



THE DATA CONTAINED HEREIN WAS OBTAINED BY HAYNES INTERNATIONAL, INC. AND REPRESENTS THE BEST AVAILABLE INFORMATION AT THE TIME OF TESTING. THIS MATERIAL MEETS THE REQUIREMENTS OF THE LATEST SPECIFICATIONS AS APPLICABLE. HAYNES INTERNATIONAL, INC. ACCEPTS NO LIABILITY FOR THE REPRODUCTION OF THIS DOCUMENT IN FULL OR IN PART WITHOUT THE WRITTEN CONSENT OF HAYNES INTERNATIONAL, INC. SPECIFICATION MARKING REQUIREMENTS MAY BE VARYING ON ORDERS REQUIRING MULTIPLE MATERIAL SPECIFICATIONS.

**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

Purchase Order Numbers

P05-03064

Best Regards,

 6/21/2005  
Marlin C. Losch III





**Major**  
Tool & Machine, Inc.

### INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-005-41 - Item: 157

Workorder: 65678/1-0 Sub:145 Op:10

Part: SE120-005-41 - - PORT 5 BACKING STRIP

Drawing ID: Rev:		INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY		
SHEET	ZONE	GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*		MASTER GAGE	QA	J-1165	LESS THAN 1.02	854-R.U		
(20)		MAGNETIC PERMEABILITY 1.02 MAX				08-21-05		A

FILE COPY 2

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

**HAYNES**  
International

Product Description • Description Produit • Material Beschreibung  
0.125 (0.120/0.130) X 0/0 X 0/0  
SE120-004-68MTM REV: 1A  
HAYNES(R) 625 ALLOY SHEET  
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. 442557001-0	Date Entered Date de Commande Bestelldatum 06/03/05	Customer Reference Référence Client Kundenbestellnr. P05-03064	Report No. Rapport No. Zeugnis Nr. 20050628088	Pages of Pages Page de Pages Anzahl der Seiten 1 Of 4
---	--	---	---	--

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 • Spécification • Spezifikation ASME-SB-443, 04, UNS# N06625, Gr. 1; PS-489, E	Quantity Ordered Quantité Commandée Bestellmenge 6 PC	Quantity Shipped Quantité Expédiée Liefermenge 6 PC
---	--	--

Heat Number Numéro De Cade Charge Nr.		Chemical Analysis • Analyse Chimique • Chemische Analyse																	
2650 5 6801		Al	B	C	Cr	Co	Cu	Fe	Mn	Mo	Ni	N	P	S	Si	Ti	V	W	BUTT END *03
2650 5 6801		0.28		0.025	3.51	0.2101	0.0587	4.0106	0.2503	8.66	60.59	0.006	0.004	0.24	0.3585				
2650 5 6801		3.5026	Zr <0.05		Bi	Se	La	Pb	Mg	Y	Ag	Ca	Al+Ti	Ni+Co	Ni+Mo				BUTT END *03

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

*Amanda Aguirre*

6/28/2005

RECEIVED  
JUL 5 2005  
97829 DT  
Lena 4-6

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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  
0.125 (0.120/0.130) x 0/0 x 0/0

SE120-004-68MTM REV: 1A  
HAYNES(R) 625 ALLOY SHEET  
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. 442557001-0	Date Entered Date De Commande Bestelldatum 06/03/05	Customer Reference Référence Client Kundenbestellblatt P05-03064	Report No. Rapport No. Zeugnis Nr. 20050628088	Pages of Pages Page de Pages Anzahl der Seiten 2 Of 4
---	--	---	---	--

Sold To • Client • Bestellaufschrift 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 • Spécification • Spezifikation ASME-SB-443, 04, UNS# N06625, Gr. 1; 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 Hic.Temp. Warm Zugversuch		Stress Rupture Temperature • Essai A Charge De Rupture Zeitstandversuch				
Ultimate Zugfestigkeit	0.2% Yield Lim. Elast. A 0.2% 0.2% Streckgrenze	% Elong In % Allong EN % Dehnung	%RA	Test Essai Versuch	Stress Contrainte Spannung	Hours Heures Stunden	% Elong In % Allong EN % Dehnung	% RA
137000 PSI	74000 PSI	44 %		(1)(A)				

Certified By • Certifié Par • Bescheinigt Durch: Amanda Aguirre  
Certification Technician  
6/28/2005  
(1) 394262940

*Amanda Aguirre*  
MTM 016

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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

0.125 (0.120/0.130) x 0/0 x 0/0  
SE120-004-68MTM REV: 1A  
HAYNES(R) 625 ALLOY SHEET  
Nadcap CERTIFICATE NUMBER 0089  
S400E,S1000E, EN 10204 3.1.B, AS9100

CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEJEGNIS		Report No. Rapport Nr Zugsatz Nr 20050628088	Pages of Pages Page de Pages Anzahl der Seiten 3 Of 4											
Customer Reference Référéncé Client Kundenbestelldaten P05-03064		Quantity Ordered Quantité Commandée Bestellmenge 6 PC	Quantity Shipped Quantité Expédiée Liefermenge 6 PC											
Date Entered Date De Commande Bestelldatum 06/03/05		Ship To • Destination • Bestimmung	Product Description • Description Produit • Material Beschreibung											
Date of Manufacture Date De Fabrication Herstellungstermin 06/03/05		MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA	0.125 (0.120/0.130) x 0/0 x 0/0 SE120-004-68MTM REV: 1A HAYNES(R) 625 ALLOY SHEET Nadcap CERTIFICATE NUMBER 0089 S400E,S1000E, EN 10204 3.1.B, AS9100											
Sold To • Client • Bestimmungsschrift		MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA												
Specification • Spécification • Spezifikation		ASMIE-SB-443, 04, UNS# N06625, Gr. 1; PS-489, E												
Annealed Hardness Dureté Recuit Gelegtheit Härte	Grain Size Grosser De Grain Korngrösse	Grain Size Grain Size	Aged Hardness Dureté Vieilli Gealtert Härte	IGA	Corrosion Rate Corrosion	Oxidation Rate	Charpy Impact Test			Creep Rupture				
							Toughness Avg Fl. Lks.	Toughness 2 Fl. Lks.	Toughness 3 Fl. Lks.	Stress Compressive Spannung PSI	Hours Hours Stunden	% Elong @ 15 Hrs	% Elong @ 15 Hrs	
98 HRB	(1X)	7.5		0.0001 IN	MPY									

(1) 3942629401

6/28/2005

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

*Amanda Aguirre*



THIS DATA CERTIFICATE IS HEREBY ISSUED ON BEHALF OF THE PRODUCTS IN THE SUBJECT SPECIFICATION. THIS MATERIAL MEETS THE REQUIREMENTS OF THE LISTED SPECIFICATIONS, AS SHOWN BY ANY EXCEPTED OR PURCHASE ORDER REQUIREMENTS. THE KNOWLEDGE OF FALSE DECLARATIONS OR FRAUDULENT PRACTICES OR OFFENSES IN THIS DOCUMENT MAY BE WAIVED ON ORDER REQUIRING MULTIPLE MATERIAL SPECIFICATIONS. THIS DOCUMENT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN CONSENT OF HAYNES INTERNATIONAL, INC.



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

**HAYNES**  
**International**

Product Description • Description Produit • Material Beschreibung

0.125 (0.120/0.130) x 0/0 x 0/0  
SE120-004-68MTM REV: 1A  
HAYNES(R) 625 ALLOY SHEET  
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. 442557001-0	Date Entered Date De Commande Bestelldatum 06/03/05	Customer Reference Reference Client Kundenbestelldaten P05-03064	Report No. Rapport No. Zeugnis Nr. 20050628088
Sold To • Client • Bestellmanskriht 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 ASME-SB-443, 04, UNS# N06625, Gr. 1; PS-489, E		Quantity Ordered Quantite Commandee Bestellmenge 6 PC	Quantity Shipped Quantite Expediee 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: 3942629401 (6 PC)  
(A) 1750 °F to 1950 °F

Certified By • Certifie Par • Bescheinigt Durch: Amanda Aguirre

Certification Technician

*Amanda Aguirre*



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**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

**Purchase Order Numbers**

P05-03064

Best Regards,

  
6/29/2005

Marlin C. Losch III





**Major**  
Tool & Machine, Inc.

**INSPECTION DATA CHECKLIST**

Page: 123  
Date: 04/29/06  
User ID: UPCHURC#

Quality Assurance Documentation for Part ID: SE120-005-42 - Item: 159

Workorder: 65678/1-0 Sub:146 Op:10

Part: SE120-005-42 - - PORT 6 BACKING STRIP

SHEET	ZONE	Drawing ID: Rev: CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY	
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD
*		MAGNETIC PERMEABILITY 1.02 MAX	MASTER GAGE	QA		J-1165	LESS THAN 1.02	854-R.U	
(20)								08-21-05	A

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

**HAYNES**  
International

Product Description • Description Produit • Material Beschreibung

0.125 (0.120/0.130) x 0/0 x 0/0  
SE120-004-69MTM REV:1A  
HAYNES(R) 625 ALLOY SHEET  
Nadcap CERTIFICATE NUMBER 0089  
S400E,S1000E, EN 10204 3.1.B, AS9100

CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKZEUGZEUGNIS

Invoice No. No. De Facture Rechnungs Nr. 442680001-0	Date Entered Date De Commande Bestelldatum 06/06/05	Customer Reference Reference Client Kundenbezeichnung P05-03064	Report No. Rapport No. Zeugnis Nr. 20050628081	Pages of Pages Page de Pages Anzahl der Seiten 1 Of 4
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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 • Spécification • Spezifikation  
ASME-SB-443.04, UNS# N06625, Gr. 1; PS-489, E

Heat Number Numero de Coche Charge Nr.	Chemical Analysis • Analyse Chimique • Chemische Analyse															
	Al	B	C	Cr	Co	Fe	Mn	Mo	Ni	P	S	Si	Ti	V	W	
2650 5 6801	0.28		0.025	21.89	0.2101	4.0106	0.2503	8.66	60.59	0.006	0.004	0.24	0.3585			BUTT END *03
2650 5 6801	3.5026	<0.05														BUTT END *03

**RECEIVED**  
JUL 5 2005  
97831  
1797381 R/S

*Amara 7-9*

6/28/2005

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

*Amanda Aguirre*

MTM  
016

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

**HAYNES**  
International

Product Description • Description Produit • Material Beschreibung

0.125 (0.120/0.130) x 0/0 x 0/0  
SE120-004-69MTM REV:1A  
HAYNES(R) 625 ALLOY SHEET  
Nadcap CERTIFICATE NUMBER 0089  
S400E,S1000E, EN 10204 3.1.B, AS9100

Invoice No Rechnungs Nr 442680001-0	Date Entered Date De Commande 06/06/05	Customer Reference Reference Client Kundenbestelldaten P05-03064	Report No. Rapport Nr Zeugnis Nr 20050628081	Pages of Pages Page de Pages Anzahl der Seiten 2 Of 4
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Ship To • Client • Bestellauftragschrift  
MAJOR TOOL AND MACHINE INC  
1458 E 19TH ST  
INDIANAPOLIS  
IN 46218 USA

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

Quantity Ordered  
Quantite Commandee  
Bestelldmenge  
6 PC

Quantity Shipped  
Quantite Expediee  
Liefermenge  
6 PC

Specification • Spezifikation  
ASME-SB-443, 04, UNS# N06625, Gr. 1; 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	
Ullmane Essai Versuch Temp.	1% Yield Lim. Elast. A 1% 1% Streckgrenze	1% Yield Lim. Elast. A 1% 1% Streckgrenze	Ullmane Essai Versuch Temp.
137000 PSI	74000 PSI 44 %	0.2% Yield Lim. Elast. A 0.2% 0.2% Streckgrenze	% Elong In % Allong EN % Dehnung
		0.2% Yield Lim. Elast. A 0.2% 0.2% Streckgrenze	% RA
		0.2% Yield Lim. Elast. A 0.2% 0.2% Streckgrenze	% RA

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

*Amanda Aguirre*



6/28/2005 (1) 3942629401

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Kokomo, Indiana, 46902

<b>CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS</b>	
Invoice No. No. De Facture Rechnungs-Nr 442680001-0	Date Entered Date De Commande Bestelldatum 06/06/05
Customer Reference Reference Client Kundenbestellkaten P05-03064	Report No. Rapport No Zeugnis Nr 20050628081
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>
Specification • Specification • Spezifikation ASME-SB-443, 04, UNS# N06625, Gr. 1; PS-489, E	Quantity Ordered Quantité Commandée Bestellmenge 6 PC
Quantity Shipped Quantité Expédiée Liefermenge 6 PC	Pages of Pages Page de Pages Anzahl der Seiten 4 Of 4
Product Description • Description Produit • Material Beschreibung <b>0.125 (0.120/0.130) x 0/0 x 0/0</b> <b>SEI20-004-69MTM REV:1A</b> <b>HAYNES(R) 625 ALLOY SHEET</b> <b>Nadcap CERTIFICATE NUMBER 0089</b> <b>S400E,S1000E, EN 10204 3.1.B, AS9100</b>	

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: 3942629401 (6 PC)  
 (A) 1750 °F to 1950 °F

6/28/2005

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

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**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~~

Purchase Order Numbers

P05-03064

Best Regards,

 6/21/2005  
Marlin C. Losch III







**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE120-005-43 - Item: 161

Workorder: 65678/1-0 Sub:147 Op:10

Part: SE120-005-43 - - PORT 7 BACKING STRIP

Drawing ID: Rev:		INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY		
SHEET	ZONE	GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*		MASTER GAGE	QA	J-1165	LESS THAN 1.02	854-R.U		
(20)		MAGNETIC PERMEABILITY 1.02 MAX				08-21-05		A

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

**HAYNES**  
**International**

Product Description • Description Produit • Material Beschreibung

0.120/0.130 x 0/0 x 0/0  
SE120-004-70MTM REV: 1A  
HAYNES(R) 625 ALLOY SHEET  
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 442681001-0	Date Entered Date De Commande Bestelldatum 06/06/05	Customer Reference Reference Client Kundenbestellidatien P05-03064	Report No Rapport No Zeugnis Nr 20050628092	Pages of Pages Page de Pages Anzahl der Seiten 1 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 • 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
---	--	--	--

Specification • Specification • Spezifikation  
ASME-SB-443, 04, UNS# N06625, Gr. 1; PS-489, E

Heat Number Numero De Coche Charge Nr	Chemical Analysis • Analyse Chimique • Chemische Analyse																	
	Al	B	C	Cr-Ta (Nb-Ta)	Co	Cr	Cu	Fe	Mn	Mo	Ni	P	S	Si	Ti	V	W	
2650 S 6801	0.28		0.025	3.51	0.2101	21.89	0.0587	4.0106	0.2503	8.66	60.59	0.006	0.004	0.24	0.3585			BUTT END *03
2650 S 6801	3.5026	<0.05																BUTT END *03

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Series 10.72

MTM  
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Certification Technician

*Amanda Aguirre*

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PO Box 9013  
Kokomo, Indiana, 46902

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

Invoice No. No. De Facture Rechnungs Nr. 4422681001-0	Date Entered Date de Commande Bestelldatum 06/06/05	Customer Reference Référence Client Kundenbestellnummer P05-03064	Report No. Rapport No. Zeugnis Nr. 20050628092	Pages of Pages Page de Pages Anzahl der Seiten 2 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>		
Specification • Spécification • Spezifikation ASME-SB-443, 04, UNS# N06625, Gr. 1; 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.				
Ultimate Zugfestigkeit 137000 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	% RA
			44 %	(1)(A)
Tensile Test at Elevated Temperature • Essai De Traction A Hte. Temp. Warm Zugversuch				
Test Essai Versuch	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
Temp:				% 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:				% RA

(1) 394262940

6/28/2005

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

*Amanda Aguirre*



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

**HAYNES**  
**International**

Product Description • Description Produit • Materiali Bestreßung

0.120/0.130 x 0/0 x 0/0  
SE120-004-70MTM REV: 1A  
HAYNES(R) 625 ALLOY SHEET -  
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 442681001-0	Date Entered Date De Commande Bestelldatum 06/06/05	Customer Reference Reference Client Kundenbestelldaten P05-03064	Report No. Rapport No Zeugnis Nr 20050628092	Pages of Pages Page de Pages Anzahl der Seiten 3 Of 4
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Sold To • Client • Bestelname 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
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Specification • Spezifikation ASME-SB-443.04, UNS# N06625, Gr. 1; PS-489, E	Quantity Ordered Quantité Commandée Bestellmenge 6 PC	Quantity Shipped Quantité Expédiée Liefermenge 6 PC
--	--	--

Annealed Hardness Dureté Recuit Geprüft Härte	Aged Hardness Dureté Vieilli Geprüft Härte	Grain Size Grossor De Grain Korngrösse	IGA	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.	Test Essai Versuch	Stress Constraine Spannung PSI	Hours Heures Stunden	% Elong @ % Allong EN % Dehnung
98 HRB	(J)(A)	7.5	0.0001 IN		MPY									

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

*Amanda Aguirre*

(1) 394262940  
6/28/2005

910  
MAY

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

**HAYNES**  
**International**

Product Description • Description Produit • Material Beschreibung

0.120/0.130 x 0/0 x 0/0  
SE120-004-70MTM REV: 1A  
HAYNES(R) 625 ALLOY SHEET  
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. 442681001-0	Date Entered Date De Commande Bestelldatum 06/06/05	Customer Reference Référence Client Kundenbestellnummer P05-03064	Report No. Rapport No. Zeugnis Nr. 20050628092
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 • Spécification • Spezifikation ASME-SB-443, 04, UNS# N06625, Gr. 1; 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: 3942629401 (6 PC)  
(A) 1750 °F to 1950 °F

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

6/28/2005

*Amanda Aguirre*



**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

**Purchase Order Numbers**

P05-03064

Best Regards,

  
6/21/2005

Marlin C. Losch III





INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-005-44 - Item: 163

Workorder: 65678/1-0 Sub:148 Op:10

Part: SE120-005-44 - - PORT 8 BACKING STRIP

Drawing ID: Rev:		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-1165	LESS THAN 1.02	854-R.U 08-21-05	A

1mc093762.TIF

FILE COPY 2

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

**HAYNES International**

Product Description • Description • Beschreibung  
 0.125 (0.12/0.13) x 36 x 120

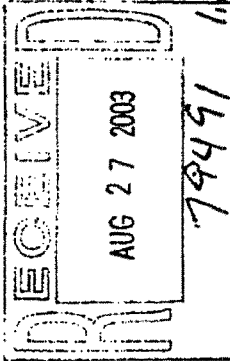
HAYNES(R) 625 ALLOY SHEET  
 NADCAP CERTIFICATE NUMBER 0089  
 S400E,S1000E, EN 10204 3.1.B

<b>Invoice No</b> No. De Facture Rechnungs Nr. 391282001-0	<b>Date Entered</b> Date de Commande Bestelldatum 08/14/03	<b>Customer Reference</b> Reference Client Kundenspezifikaion P03-03302	<b>Report No.</b> Rapport No. Zeugnis Nr. 20030822079	<b>Pages of Pages</b> Page de Page Anzahl der Seiten 1 OF 4
<b>Sold To • Client • Bestellanwacherft</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</b> AMS 5599 Rev F ASTM-B-443 Rev 99 N06625 1		<b>Quantity Ordered</b> Quantité Commandée Bestellmenge 1 PC		

<b>Quantity Shipped</b> Quantité Expédiée Liefermenge 1 PC
---

Heat Number Numéro de Chaudière Ch-Nr.	Chemical Analysis • Analyse Chimique • Chemische Analyse														
	Al	B	C	Co	Cr	Cu	Fe	Mn	Ni	P	S	Si	Ti	V	W
2650 3 6874	0.16		0.030	3.63	0.23	21.79	4.71	0.28	8.86	0.008	0.002	0.11	0.26		
2650 3 6874	3.580														

**Certified By • Certifié Par • Bescheinigt Durch:** Paul Guest  
 Certification Supervisor/Technician



*Paul D. Guest*

MTM 016  
 8-28-03

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2mc093762.TIF

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

Product Description • Description Produit • Material Beschreibung  
0.125 (0.12/0.13) x 36 x 120

HAYNES(R) 625 ALLOY SHEET  
NADCAP CERTIFICATE NUMBER 0089  
S400E,S1000E, EN 10204 3.1.B

**CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS**  
Report No.  
Zozgafis Nr.  
20030822079  
Page of Pages  
Anzahl der Seiten  
2 of 4

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

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

Quantity Ordered  
Quantité Commandée  
Bestellmenge  
1 PC

Quantity Shipped  
Quantité Expédiée  
Liefermenge  
1 PC

AMS 5599 Rev F ASTM-B-443 Rev 99 N06625 1

Specifications • Specifications • Spezifikationen

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

Ultimate Zugfestigkeit	15% Yield Lim. Elong. A 1%	0.2% Yield Lim. Elong. A 0.2%	0.2% Strain Lim. Elong. A 0.2%	% Elong. in % Allong. EN	Reduction % Déformation	MPa	MPa
134000 PSI		72000 PSI	46 %			(1) (A)	

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

Ultimate Zugfestigkeit	15% Yield Lim. Elong. A 1%	0.2% Yield Lim. Elong. A 0.2%	0.2% Strain Lim. Elong. A 0.2%	% Elong. in % Allong. EN	Reduction % Déformation	MPa	MPa

Stress Rupture Temperature • Essai A Charge De Rupture Zeitsatzversuch

Yield Verzuch	Stress Spannung	Hours Halted Standzeit	% Elong. in % Allong. EN	% RA

08/22/03 (1) 3438301501

Certified By • Certifié Par • Bescheinigt Durch: Paul Gwest  
Certification Supervisor/Technician

*Paul D. Gwest*

MTM  
016  
12.2.03

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DIE VERGEGENWARTEN ANGABEN WAREN AUS PROBEKÖRPERN ERHALTEN, DIE ALS REPRÄSENTATIV FÜR DIE ANGABENGEHÖRIGEN PRODUKTE ANGESEHEN WERDEN. WIR ÜBERNEHMEN KEINE HAFTUNG FÜR NACHRICHTEN, DIE AUS DER NUTZUNG DIESER ZEICHEN ERHELTEN WERDEN.  
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DIESE MATERIALIEN SIND EIGENTUM VON HAYNES INTERNATIONAL. ALLE RECHTE SIND RESERVIERT. DIE ANGABEN SIND WIE ERHALTEN, OHNE GARANTIE FÜR IRGEND EINE ART VON VERWENDBARKEIT ODER FÜR EINE BESTIMMTE ANWENDUNG.  
SPECIFICATION MAKING REQUIREMENTS MAY BE FOUND ON OUR WEBSITE AT WWW.HAYNES.COM

3mc093762.TIF

FILE COPY 2

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

**HAYNES**  
International

Product Description • Description Produit • Material Beschreibung

0.125 (0.12/0.13) x 36 x 120

HAYNES(R) 625 ALLOY SHEET  
NADCAP CERTIFICATE NUMBER 0089  
S400E,S1000E, EN 10204 3.1.B

<b>CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS</b>	
Invoice No. No. Du Receipt Rechnung Nr. 391282001-0	Date Entered Date De Commande Bestelldatum 08/14/03
Customer Reference Référence Client Kundenscheid/Mat.-Nr. P03-03302	Report No. Rapport No. Zeugnis Nr. 20030822079
Sold To • Client • Bestelldienst MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA	Ship To • Destinataire • Bestelldienst MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA
Quantity Ordered Quantité Commandée Bestellmenge 1 PC	Quantity Shipped Quantité Expédiée Liefermenge 1 PC

Specifications • Spécifications • Spezifikationen

AMS 5599 Rev F ASTM-B-443 Rev 99 N06625 1

Annealed Härten Diversité Brûlés Geplattete Blätter	Acid Hardness Dureté Vitriol Gehärtet Blätter	Grain Size Grossesse De Grains Korngrösse	Grain Size Produit Grain Size	Grain Size Produit Grain Size	Grain Size Produit Grain Size	KGA	Uniformity	Corrosion Rate	Oxidation Rate	Charpy Impact Test				Creep Register				
										AA	AA	AA	AA	Toughness Avg	Toughness 1	Toughness 2	Toughness 3	Test Basal Vertical Temp
98 HRB			8			0.0901 In		APT										(1)

08/22/03 (1) 3438301501

Certified By • Certifié Par • Bescheinigt Durch: Paul Guest  
Certification Supervisor/Technician

*Paul O. Guest*

MIN 016  
8.28.03

THE DATA CONTAINED HEREIN WERE OBTAINED FROM A TEST OR CONFORMANCE TO AN INTERNATIONAL STANDARD. THE PRODUCTS IN THIS SUBJECT WERE MANUFACTURED AND ANALYZED TO THE BEST OF OUR KNOWLEDGE AND BELIEF. WE DO NOT MAKE ANY LEGAL LIABILITY FROM USE OF THIS CERTIFICATE. THE USER SHALL BE RESPONSIBLE FOR THE PROPER USE OF THIS CERTIFICATE. THE USER SHALL BE RESPONSIBLE FOR THE PROPER USE OF THIS CERTIFICATE. THE USER SHALL BE RESPONSIBLE FOR THE PROPER USE OF THIS CERTIFICATE. THE USER SHALL BE RESPONSIBLE FOR THE PROPER USE OF THIS CERTIFICATE.

4mc093762.TIF

<b>CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS</b>			
Order No. No. de Commande 391282001-0	Date of Certificate Date de Certification 08/14/03	Customer Reference Référence Client P03-03302	Report No. Numéro de Rapport 20030822079
Ship To • Client • Destinataire MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA		Ship To • Destinataire • Besondere MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA	
Specification • Spécification • Spezifikation AMS 5599 Rev P ASTM-B-443 Rev 99 NO6625 1		Quantity Ordered Quantité Commandée 1 PC	Quantity Shipped Quantité Expédiée 1 PC

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

Product Description • Description Produit • Materialbeschreibung  
 0.125 (0.1270.13) x 36 x 120  
 HAYNES(R) 625 ALLOY SHEET  
 NADCAP CERTIFICATE NUMBER 0089  
 S400E,S1000E, EN 10204 3.1.B

This material is free of mercury contamination.  
 This material has passed the bend test as specified in 'AMS 5599'  
 This material has been annealed and cooled in a protective atmosphere.  
 Mill Orders Used: 3438301501 (1 PC)  
 (A) 1750 °F to 1950 °F

08/22/03

Certified By • Certifié Par • Bescheinigt Durch: Paul Guest  
 Certification Supervisor/Technicien

*Paul O. Guest*



8.28.03

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Major  
Tool & Machine, Inc.

### INSPECTION DATA CHECKLIST

Page: 126  
Date: 04/29/06  
User ID: UPCHURC#

Quality Assurance Documentation for Part ID: SE120-005-45 - Item: 165

Workorder: 65678/1-0 Sub:149 Op:10

Part: SE120-005-45 - - PORT 9 BACKING STRIP

Drawing ID: Rev:		INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY	
SHEET ZONE	CHARACTERISTIC	GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD / AUDIT
*	MAGNETIC PERMEABILITY 1.02 MAX	MASTER GAGE	QA	J-1165	LESS THAN 1.02	854-R.U	
(20)						08-21-05	A

FILE COPY 2

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

**HAYNES**  
**International**

Product Description • Description Produit • Material Beschreibung  
0.125 (0.120/0.130) x 0/0 x 0/0  
SE120-004-72MTM REV:1A  
HAYNES(R) 625 ALLOY SHEET  
Nadcap CERTIFICATE NUMBER 0089  
S400E,S1000E, EN 10204 3.1.B, AS9100

CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIE • WERKSZEUGNIS

Invoice No No. De Facture Rechnungs Nr 442687001-0	Date Entered Date De Commande Bestelldatum 06/06/05	Customer Reference Reference Client Kundenbestelldaten P05-03064	Report No. Zeugnis Nr 20050628091	Pages of Pages Page de Pages Anzahl der Seiten 1 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
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Quantity Ordered Quantite Commandee Bestellmenge 6 PC	Quantity Shipped Quantite Expediee Liefermenge 6 PC
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ASME-SB-443, 04, UNS# N06625, Gr. 1; PS-489, E	Specification • Spezifikation																																																																								
Client Number Numero de Cotee Charge-Nr 2650 5 6801	Chemical Analysis • Analyse Chimique • Chemische Analyse																																																																								
2650 5 6801	<table border="1"> <tr> <th>Al</th> <th>B</th> <th>C</th> <th>Ca</th> <th>Cr</th> <th>Cu</th> <th>Fe</th> <th>Mn</th> <th>Mo</th> <th>Ni</th> <th>N</th> <th>P</th> <th>S</th> <th>Si</th> <th>Ti</th> <th>V</th> <th>W</th> <th>BUTT END #03</th> </tr> <tr> <td>0.28</td> <td></td> <td>0.025</td> <td>3.51</td> <td>0.2101</td> <td>0.0587</td> <td>4.0106</td> <td>0.2503</td> <td>8.66</td> <td>60.59</td> <td>0.006</td> <td>0.004</td> <td>0.004</td> <td>0.24</td> <td>0.3585</td> <td></td> <td></td> <td></td> </tr> <tr> <td>EN59</td> <td>Tr</td> <td>Zr</td> <td>Bi</td> <td>Se</td> <td>La</td> <td>Pb</td> <td>Mg</td> <td>Y</td> <td>Ag</td> <td>Co</td> <td>Al-Ti</td> <td>NHCo</td> <td>Ni-Mo</td> <td></td> <td></td> <td></td> <td>BUTT END #03</td> </tr> <tr> <td></td> <td>&lt;0.05</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	Al	B	C	Ca	Cr	Cu	Fe	Mn	Mo	Ni	N	P	S	Si	Ti	V	W	BUTT END #03	0.28		0.025	3.51	0.2101	0.0587	4.0106	0.2503	8.66	60.59	0.006	0.004	0.004	0.24	0.3585				EN59	Tr	Zr	Bi	Se	La	Pb	Mg	Y	Ag	Co	Al-Ti	NHCo	Ni-Mo				BUTT END #03		<0.05																
Al	B	C	Ca	Cr	Cu	Fe	Mn	Mo	Ni	N	P	S	Si	Ti	V	W	BUTT END #03																																																								
0.28		0.025	3.51	0.2101	0.0587	4.0106	0.2503	8.66	60.59	0.006	0.004	0.004	0.24	0.3585																																																											
EN59	Tr	Zr	Bi	Se	La	Pb	Mg	Y	Ag	Co	Al-Ti	NHCo	Ni-Mo				BUTT END #03																																																								
	<0.05																																																																								

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

*Amanda Aguirre*

6/28/2005

RECEIVED  
JUL 5 2005  
97833 ASD  
Lima 16.18

APK 7-5-05

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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

0.125 (0.120/0.130) x 0/0 x 0/0  
SE120-004-72MTM REV:1A  
HAYNES(R) 625 ALLOY SHEET -  
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 442687001-0	Date Entered Date De Commande Bestelldatum 06/06/05	Customer Reference Référence Client Kundenbestellnummer P05-03064	Report No. Rapport No Zeigete Nr 20050628091	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 Bestelmenge 6 PC	Quantity Shipped Quantité Expédiée Liefermenge 6 PC
---	--

Specification • Spécification • Spezifikation  
ASME-SB-443, 04, 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 Hte.Temp. Warm Zugversuch			Stress Rupture Temperature • Essai A Charge De Rupture Zelstandversuch				
Ultimate Zugfestigkeit	1% Yield Lim. Elast. A 1% 1% Streckgrenze	0.2% Yield Lim. Elast. A 0.2% 0.2% Streckgrenze	Ultimate Zugfestigkeit	1% Yield Lim. Elast. A 1% 1% Streckgrenze	0.2% Yield Lim. Elast. A 0.2% 0.2% Streckgrenze	Test Essai Versuch	Stress Constrainte Spannung	Hours Heures Stunden	% Elong in % Allong EN % Dehnung	% RA
137000 PSI		74000 PSI								
		44 %								
		(1)(A)								

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

*Amanda Aguirre*

6/28/2005 (1) 3942629401

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REU  
7-5-05



FILE COPY 2

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

**HAYNES**  
**International**

Product Description • Description Produit • Material Bezeichnung

0.125 (0.120/0.130) x 0/0 x 0/0  
SE120-004-72MTM REV:1A  
HAYNES(R) 625 ALLOY SHEET  
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 442687001-0	Date Entered Date de Commande Bestelldatum 06/06/05	Customer Reference Reference Client Kundenbestellnr P05-03064	Report No. Rapport No Zeichn. Nr 20050628091
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 • Specification • Spezifikation ASME-SB-443, 04, UNS# N06625, Gr. 1; 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: 3942629401 (6 PC)  
(A) 1750 °F to 1950 °F

6/28/2005

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

*Amanda Aguirre*

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APU  
7-5-05



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

Purchase Order Numbers

P05-03064

Best Regards,

 6/21/2005  
Marlin C. Losch III

AKU  
7-5-05



Major  
Tool & Machine, Inc.

INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-005-46 - Item: 167

Workorder: 65678/1-0 Sub:150 Op:10

Part: SE120-005-46 - - PORT 10 BACKING STRIP

Drawing ID: Rev:		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-1165	LESS THAN 1.02	854-R.U 08-21-05	A

FILE COPY 2

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

**HAYNES**  
**International**

Product Description • Description Produit • Material Beschreibung

0.125 (0.120/0.130) x 0/0 x 0/0  
SE120-004-73MTM REV:1A  
HAYNES(R) 625 ALLOY SHEET  
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 442690001-0	Date Entered Date De Commande Bestelldatum 06/06/05	Customer Reference Reference Client Kundenbestelldaten P05-03064	Report No. Zeugnis Nr 20050628080	Pages of Pages Page de Pages Anzahl der Seiten 1 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 Expeditee Liefermenge 6 PC
--	---

ASME-SB-443, 04, UNS# N06625, Gr. 1; PS-489, E

Specification • Spécification • Spezifikation

Chemical Analysis • Analyse Chimique • Chemische Analyse

Item Number Numero de Caisse Charge Nr	Al	B	C	Co	Cr	Cu	Fe	Mn	Mo	Ni	P	S	Si	Ti	V	W	
2650 5 6801	0.28		0.025	0.2101	21.89	0.0587	4.0106	0.2503	8.66	60.59	0.006	0.004	0.24	0.3585			BUTT END *03
2650 5 6801	3.5026	<0.05															BUTT END *03

6/28/2005

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

*Amanda Aguirre*

RECEIVED  
JUL 5 2005  
97826 RD  
Luis 19.01

RTM  
016

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**HAYNES**  
**International**

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

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

Invoice No. No. De Facture Rechnungs Nr 442690001-0	Date Entered Date De Commande Bestelldatum 06/06/05	Customer Reference Reference Client Kundenbestelldaten P05-03064	Report No. Zeugnis Nr 20050628080	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**

Quantity Ordered  
Quantite Commandee  
Bestellemenge  
6 PC

Quantity Shipped  
Quantite Expeditee  
Liefermenge  
6 PC

Specification • Spezifikation  
ASME-SB-443, 04, UNS# N06625, Gr. 1; PS-489, E

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

Ultimate Zugfestigkeit	Bei Room Temp.		%RA	
	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
137000 PSI	74000 PSI	44 %	(1)(A)	

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

Test Essai Versuch	Temp.	Warm Zugversuch		%RA	
		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	%RA	
				% Elong in % Allong EN % Dehnung	% RA

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

*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 ON PURCHASE ORDER REQUIREMENTS. THIS HAS BEEN FOUND OF FALSE, INACCURATE OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PENALIZED AS A VIOLATION UNDER FEDERAL STATUTES INCLUDING 18 U.S.C. 1017. THIS DOCUMENT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN CONSENT OF HAYNES INTERNATIONAL, INC. SPECIFICATION FOR MODIFIED REQUIREMENTS MAY BE AVAILABLE ON ORDER 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

0.125 (0.120/0.130) x 0/0 x 0/0  
SE120-004-73MTM REV:1A  
HAYNES(R) 625 ALLOY SHEET  
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 442690001-0	Date Entered Date De Commande Bestelldatum 06/06/05	Customer Reference Référence Client Kundenbestelldaten P05-03064	Report No. Rapport No Zeigals Nr 20050628080	Pages of Pages Page de Pages Anzahl der Seiten 3 Of 4
--	--	---	---	--

Sold To • Client • Bestellanrschrift 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 • Spécification • Spezifikation ASME-SB-443, 04, UNS# N06625, Gr. 1; PS-489, E	Quantity Ordered Quantité Commandée Bestellmenge 6 PC	Quantity Shipped Quantité Expédiée Liefermenge 6 PC
---	--	--

Annealed Hardness Dureté Recuit Geglättet Härte	Aged Hardness Dureté Vieilli Gealtert Härte	Grain Size Grosser De Grain Korngrösse			IGC	Uniformity	Corrosion Rate		Oxidation Rate
		Grain Size Gran. Size	Prevalent Gran. Size	Reery. Gran. Grain %			Uniformity Grain %	Corrosion Method	
98 HRB	(1)(A)	7.5							

Certified By • Certifié Par • Bescheinigt Durch: Amanda Aguirre Certification Technician	6/28/2005	(1) 3942629401
---	-----------	----------------

*Amanda Aguirre*



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PO Box 9013  
Kokomo, Indiana, 46902

**HAYNES**  
**International**

Product Description • Description Produit • Material Beschreibung

0.125 (0.120/0.130) x 0/0 x 0/0  
SE120-004-73MTM REV:1A  
HAYNES(R) 625 ALLOY SHEET  
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. 442690001-0	Report No. Rapport No. Zeugnis Nr. 20050628080
Date Entered Date De Commande Bestelldatum 06/06/05	Customer Reference Reference Client Kundenbestellnummer P05-03064
Sold To • Client • Bestelldatumschrift <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 • Spezifikation ASME-SB-443, 04, UNS# N06625, Gr. 1; PS-489, E	Quantity Ordered Quantité Commandée Bestellmenge 6 PC
Quantity Shipped Quantité Expédiée Liefermenge 6 PC	Pages of Pages Page de Pages Anzahl der Seiten 4 Of 4

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: 3942629401 (6 PC)  
(A) 1750 °F to 1950 °F

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

*Amanda Aguirre*

6/28/2005



**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

Purchase Order Numbers

P05-03064

Best Regards,

 6/21/2005

Marlin C. Losch III





Major  
Tool & Machine, Inc.

### INSPECTION DATA CHECKLIST

Page: 128  
Date: 04/29/06  
User ID: UPCHURC#

Quality Assurance Documentation for Part ID: SE120-005-47 - Item: 169

Workorder: 65678/1-0 Sub:151 Op:10

Part: SE120-005-47 - - PORT 11 BACKING STRIP

Drawing ID: Rev:		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-1165	LESS THAN 1.02	854-R.U	
						08-21-05	A





**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

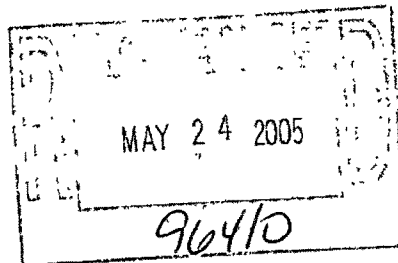
**MATERIAL**  
Alloy 625 welded pipe 2-1/2" sch 10

**SIZE**

**QTY**  
20 ft

**CONFORMS TO:**  
ASTM-B-705, PS483, PS 489

**RM ID: A8519**



*Line 1  
B-7*

**Certified By:**

*Randy Bawli*

*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 37877

CUST NO: 557513  
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: AB519 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	8.8153	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
PLATTENING	OK	TENSION	OK
HYDRO PRESSURE	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 50049) 1.1.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





Major  
Tool & Machine, Inc.

### INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-005-48 - Item: 171

Workorder: 65678/1-0 Sub:152 Op:10

Part: SE120-005-48 - - PORT 15 BACKING STRIP

Drawing ID: Rev:		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-1165	LESS THAN 1.02	854-R.U	
						08-21-05	A



FILE COPY 2

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

**HAYNES**  
International

Product Description • Description Produit • Material Bezeichnung

0.125 (0.120/0.130) x 0/0 x 0/0  
SE120-004-75MTM REV:1A  
HAYNES(R) 625 ALLOY SHEET  
Nadcap CERTIFICATE NUMBER 0089  
S400E,S1000E, EN 10204 3.1.B, AS9100

CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS

Invoice No. Rechnungs Nr. 442713001-0	Date Entered Bestelldatum 06/06/05	Customer Reference Kundenbestellkate POS-03064	Report No. Rapport No. Zeugnis Nr. 20050628078	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 • Destination • Bestellaenge MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA
---	--

Specification • Specification • Spezifikation

ASME-SB-443, 04, UNS# N06625, Gr. 1; 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.

Ultimate Zugfestigkeit	1% Yield Lim. Elast. A 1%	0.2% Yield Lim. Elast. A 0.2%	% Elong In % Allong EN	%RA
74000 PSI	1% Strickgrenze	0.2% Strickgrenze	% Dehnung	%RA
			44 %	
			(U)(A)	

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

Ultimate Zugfestigkeit	1% Yield Lim. Elast. A 1%	0.2% Yield Lim. Elast. A 0.2%	% Elong In % Allong EN	%RA
	1% Strickgrenze	0.2% Strickgrenze	% Dehnung	%RA

Stress Rupture Temperature • Essai A Charge De Rupture Zeitstandversuch

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

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

(1) 3942629401

6/28/2005

*Amanda Aguirre*



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

**HAYNES**  
**International**

Product Description • Description Produit • Material Beschreibung

0.125 (0.120/0.130) x 0/0 x 0/0  
SE120-004-75MTM REV:1A  
HAYNES(R) 625 ALLOY SHEET  
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. 442713001-0	Date Entered Date De Commande Bestelldatum 06/06/05	Customer Reference Reference Client Kundenbestellidatn P05-03064	Report No. Rapport No. Zeugnis Nr. 20050628078	Pages of Pages Page de Pages Anzahl der Seiten 4 Of 4
Sold To • Client • Bestellverursacher 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 Shipped Quantité Expédiée Liefermenge 6 PC
Specification • Spécification • Spezifikation ASME-SB-443, 04, UNS# N06625, Gr. 1; PS-489, E		Quantity Ordered Quantité Commandée Bestellmenge 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: 3942629401 (6 PC)  
(A) 1750 °F to 1950 °F

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

*Amanda Aguirre*

6/28/2005



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**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

Purchase Order Numbers

P05-03064

Best Regards,

 6/21/2005

Marlin C. Losch III







Major  
Tool & Machine, Inc.

### INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE120-006-6 - Item: 173

Workorder: 65678/1-0 Sub:144 Op:10

Part: SE120-006-6 - - PORT 4 BACKING STRIP

SHEET ZONE	Drawing ID: Rev: CHARACTERISTIC	INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY		
		GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (20)	MAGNETIC PERMEABILITY 1.02 MAX	MASTER GAGE	QA	J-1165	LESS THAN 1.02	854-R.U		
						08-21-05		A



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

**HAYNES**  
International

Product Description • Description Produit • Material Beschreibung  
0.125 (0.120/0.130) x 0/0 x 0/0  
SE120-004-67MTM REV:1A  
HAYNES(R) 625 ALLOY SHEET  
Nadcap CERTIFICATE NUMBER 0089  
S400E,S1000E, EN 10204 3.1.B, AS9100

CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS		Customer Reference Référence Client Kundenbestellnummern		Report No. Rapport Nr Zeugnis Nr		Pages of Pages Page de Pages Anzahl der Seiten	
Date Entered Date de Commande Bestelldatum		P05-03064		20050628084		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		Quantity Ordered Quantité Commandée Bestellmenge		Quantity Shipped Quantité Expédiée Liefermenge	
Specification • Spécification • Spezifikation ASME-SB-443, 04, UNS# N06625, Gr. 1; PS-489, E		6 PC		6 PC		6 PC	
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	% Elong in % Allong EN	Hours Stundon	% RA	% RA
137000 PSI	74000 PSI	74000 PSI	44 %	(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	% Elong in % Allong EN	Hours Stundon	% RA	% RA
Stress Rupture Temperature • Essai A Charge De Rupture Zeitstandversuch							
Test Essai Versuch	Temp:	Temp:	Temp:	Temp:	Temp:	Temp:	Temp:

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

*Amanda Aguirre*

6/28/2005 (1) 3942629401

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7-5-05  
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Haynes International  
1020 West Park Avenue  
PO Box 9013  
Kokomo, Indiana, 46902

**HAYNES**  
International

Product Description • Description Produit • Material Beschreibung  
0.125 (0.120/0.130) x 0/0 x 0/0  
SE120-004-67MTM REV:1A  
HAYNES(R) 625 ALLOY SHEET  
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. 442715001-0	Date Entered Date De Commande Bestelldatum 06/06/05	Customer Reference Référence Client Kundenbestellnummer P05-03064	Report No. Rapport No. Zeugnis Nr. 20050628084										
Sold To • Client • Bestelbranschrift 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											
Specification • Spécification ASME-SB-443, 04, UNS# N06625, Gr. 1; PS-489, E		Quantity Ordered Quantité Commandée Bestellmenge 6 PC	Quantity Shipped Quantité Expédiée Liefermenge 6 PC										
Annealed Hardness Dureté Recuit Gehtert Härte	Grain Size Grosscur 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 Constrainte Spannung PSI	Hours Heures Stunden	% Elong In % Allong EN % Dehnung	% Elong @ 15 Hrs	
98 HRB	(1)(A) 7.5	0.0001 IN	NIPY										

(1) 3942629401

6/28/2005

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

*Amanda Aguirre*

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REK  
7-5-05

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

**HAYNES**  
**International**

<b>CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKZEUGNIS</b>	
Invoice No. No. De Facture Rechnungs Nr 442715001-0	Date Entered Date De Commande Bestelldatum 06/06/05
Customer Reference Reference Client Kundenbestellkizaten P05-03064	Report No. Rapport No Zeugnis Nr 20050628084
Pages of Pages Page de Pages Anzahl der Seiten 4 Of 4	
Sold To • Client • Bestellanwrschrift <b>MAJOR TOOL AND MACHINE INC</b> 1458 E 19TH ST INDIANAPOLIS IN 46218 USA	Ship To • Destinataire • Bestelldmenge <b>MAJOR TOOL AND MACHINE INC</b> 1458 E 19TH ST INDIANAPOLIS IN 46218 USA
Specification • Spezifikation ASME-SB-443, 04, 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 Bestrebuung  
 0.125 (0.120/0.130) x 0/0 x 0/0  
 SE120-004-67MTM REV:1A  
 HAYNES(R) 625 ALLOY SHEET  
 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: 3942629401 (6 PC)  
 (A) 1750 °F to 1950 °F

6/28/2005

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

*Amanda Aguirre*

THE DATA CONTAINED HEREIN WAS OBTAINED FROM SAUPEIS THAT ARE REPRESENTATIVE OF THE PRODUCTS IN THE SUBJECT CATEGORY. THIS MATERIAL IS FREE FROM MERCURY, CADMIUM, RADIUM, AND ALPHA SOURCE CONTAMINATION. THE DATA CONTAINED HEREIN WAS OBTAINED FROM SAUPEIS THAT ARE REPRESENTATIVE OF THE PRODUCTS IN THE SUBJECT CATEGORY. THIS MATERIAL IS FREE FROM MERCURY, CADMIUM, RADIUM, AND ALPHA SOURCE CONTAMINATION. THE DATA CONTAINED HEREIN WAS OBTAINED FROM SAUPEIS THAT ARE REPRESENTATIVE OF THE PRODUCTS IN THE SUBJECT CATEGORY. THIS MATERIAL IS FREE FROM MERCURY, CADMIUM, RADIUM, AND ALPHA SOURCE CONTAMINATION.

AKU  
2-5-05

**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

Purchase Order Numbers

P05-03064

Best Regards,

 6/21/2005  
Marlin C. Losch III

AKU  
7-5-05



FILE COPY 2

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

**HAYNES**  
**International**

Product Description • Description Produit • Material Beschreibung

0.125 (0.120/0.130) x 0/0 x 0/0  
SE120-004-76MTMREV:1A  
HAYNES(R) 625 ALLOY SHEET  
Nadcap CERTIFICATE NUMBER 0089  
S400E,S1000E, EN 10204 3.1.B, AS9100

Invoice No. No. De Facture Rechnungs Nr. 442718001-0	Date Entered Date De Commande Bestelldatum 06/06/05	Customer Reference Références Client Kundenreferenznummern P05-03064	Report No. Rapport No. Zugsatz Nr. 20050628079	Pages of Pages Page de Pages Anzahl der Seiten 2 Of 4
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Ship 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 • Spezifikation  
**ASME-SB-443, 04, UNS# N06625, Gr. 1; 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 Hts.Temp. Warm Zugversuch	
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
137000 PSI	74000 PSI	44 %	(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	Stress Contrainte Spannung	Hours Heures Stunden	% Elong in % Allong EN % Dehnung	% RA
Temp:				

678/2005 (1) 3942629401

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

*Amanda Aguirre*

MTM 016 JUL 07 2005

THE DATA CONTAINED HEREIN WAS OBTAINED FROM SAMPLES THAT ARE REPRESENTATIVE OF THE PRODUCT IN THE QUANTITY SHIPPED. THIS MATERIAL MEETS THE REQUIREMENTS OF THE UNITED SPECIFICATIONS MODIFIED BY ANY EXCEPTIONS OR PURCHASE ORDER REQUIREMENTS. THE REPLYING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS ON THIS DOCUMENT MAY BE PUNISHED UNDER 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 VARY ON ORDERS REGARDING MATERIALS MATERIAL SPECIFICATIONS.



FILE COPY 2

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



CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS

Invoice No. No. De Facture Rechnungs Nr. 442718001-0	Date Entered Date De Commande Bestelldatum 06/06/05	Customer Reference Reference Client Kundenbestellungen P05-03064	Report No. Rapport No. Zeugnis Nr. 20050628079	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  
**ASME-SB-443, 04, UNS# N06625, Gr. 1; PS-489, E**

Annealed Hardness Dureté Recuit Caglièrli Härte	Aged Hardness Dureté Vieilli Gealtert Härte	Grain Size Grossueur De Grain Korngrösse		IGA	Corrosion Rate	Oxidation Rate	Charpy Impact Test			Creep Rupture					
		Grain Size Profound Grain Size	Grain Size Micro Grain %				Uniformity	Corrosion	Test Method	Toughness Avg Fl. Lbs.	Toughness 1 Fl. Lbs.	Toughness 2 Fl. Lbs.	Toughness 3 Fl. Lbs.	Stress Constraine Spannung PSI	Hours Heres Stunden
98 HRB	(1)(A)	7.5		0.0001 IN	MPY										

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

*Amanda Aguirre*  
 JUL 07 2005



6/28/2005 (1) 3942629401

THE DATA CONTAINED HEREIN WAS OBTAINED FROM SAMPLES THAT ARE REPRESENTATIVE OF THE PRODUCT IN THE QUANTITIES SHOWN. THIS MATERIAL MEETS THE REQUIREMENTS OF THE LISTED SPECIFICATION WHEN RECEIVED BY ANY EXCEPTOR OR PURCHASER UNDER REQUIREMENTS. THE REQUIREMENT OF FAILURE, REJECTION OR FRAUDULENT STATEMENTS OR ERRORS IN THIS DOCUMENT MAY BE SPECIFICATION MARKING REQUIREMENTS MAY BE WAIVED ON ORDERS MEETING MULTIPLE MATERIAL SPECIFICATIONS. THE DATA CONTAINED HEREIN WAS OBTAINED FROM SAMPLES THAT ARE REPRESENTATIVE OF THE PRODUCT IN THE QUANTITIES SHOWN. THIS MATERIAL MEETS THE REQUIREMENTS OF THE LISTED SPECIFICATION WHEN RECEIVED BY ANY EXCEPTOR OR PURCHASER UNDER REQUIREMENTS. EXCEPT IN FULL, WITHOUT THE WRITTEN CONSENT OF HAYNES INTERNATIONAL, INC.



JUL 07 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

Purchase Order Numbers

P05-03064

Best Regards,

6/21/2005

Marlin C. Losch III

6327

G.O. CARLSON Inc  
Producers of Stainless Steel,  
Nickel Alloys and Titanium  
THORNDALE, PA. 19372

DATE: 07-Dec-95

GOC: 88022

TEST CERTIFICATE

\*\*\*\* SOLD TO: \*\*\*\*

\*\*\*\* SHIP TO: \*\*\*\*

JOSEPH T RYERSON & SON  
P O BOX 16445  
DENVER CO 80216

EATON METAL PRODUCTS  
844 S CHESTNUT  
SALT LAKE CITY UT 84104

CUSTOMER ORDER #  
25WX903593

CUSTOMER MARK #  
25WX9035930101/2016633

\*\*\*\*\*  
C 625 BB HOT ROLLED, ANNEALED, DESCALED  
UNS N06625, PLATE  
ASME SB443, GRADE 1, ASME B2PV CODE SECTION II, 1992 EDITION, 1994 ADDENDA,  
\*\*\*\*\*

ITEM DESCRIPTION MARK: 25WX9035930101/2016633  
1 1.625 x 58 x 157

Qty	Heat/Slab	Test Dir	Yield-.2% PSI	Tensile PSI	Elong-2in %
795	1 5L211-1A	TT	76970	141310	42.45

Materials produced under this order have not come into contact with Mercury or its compounds within G.O. Carlson, Inc. facilities.

No welding performed

100% Melted, Rolled, and Manufactured in the U.S.A.

\*\*\*\*\* LADLE ANALYSIS \*\*\*\*\*

HEAT:	C	MN	P	S	SI	CR	NI	MO
5L211	0.036	0.035	0.007	0.000	0.100	22.325	61.160	8.985
5L211	CBTA	FE	AL	TI	CO			
	3.300	3.580	0.100	0.120	0.025			

Heat Treat Practice: 1850°F ± 25°F for 1 hour per inch of material thickness or 30 minutes, whichever is greater. Air cool.

*Susan B. Waldeman*

Susan B. Waldeman  
Certification Administrator  
G. O. Carlson, Inc.

I HEREBY CERTIFY THE ABOVE FIGURES ARE CORRECT AS CONTAINED IN RECORDS OF THIS CORPORATION.

SWORN TO AND SUBSCRIBED BEFORE ME THIS \_\_\_\_\_ DAY OF \_\_\_\_\_

PAGE #

#3637

JUL 27 2005  
RECEIVED  
JUL 26 2005  
98643 JH

MTM 017

Line 3

05/28/04 FRI 14:45 FAX 8188824490

→→→ HIGH TEMP

001

6327

**METALS TECHNOLOGY, INC.**  
19801 Nordhoff Street  
Northridge, California 91324  
(818) 882-6414 (323) 873-7144 FAX: (818) 882-4490

CERTIFIED TEST REPORT NO. 329663 (Page 1 of 1)

5/28/2004

CUSTOMER: HIGH TEMP METALS HEAT NO.: 5L211  
P.O.: 1335 PART NO.: 1.625 X 58 X 157 (1 PLATE)  
MATERIAL: 625  
SPECS: SEE REMARKS

## \*\*\* TENSILE TEST RESULTS \*\*\*

TEMP	DIA. (in.)	AREA (in. <sup>2</sup> )	YIELD (lbs)	YIELD (ksi)	ULT (lbs)	ULT (ksi)	ELONG %	R.A. %
RT	.252	.0499	3800	76.0	6495	130	45	49

## REQUIREMENTS

RT			60.0		120.0	30.0	---	
YIELD @ 0.2% OFFSET			STRAIN RATE: .005 in./in./min		GAGE: 1.0			

## \*\*\* CHEMISTRY \*\*\*

ELEMENT	VALUE
C	0.02
Mn	0.04
Si	0.10
P	0.006
S	0.001
Cr	21.97
Ni	61.03
Mo	9.50
Co	0.06
Cb	3.54
Ta	0.01
Cb+Ta	3.55
Ti	0.18
Al	0.16
Fe	3.36

NOTES: SPECTROGRAPHIC

## \*\*\* REMARKS \*\*\*

SPECS: AMS 5599F, AMS 5666E, S400E, S1000E, EMS 95377A, ASTM-B-443-00,  
ASTM-B-446-00, NADCAP 0002, ASME-SB-443, ASME-SB-446

CERTIFICATE SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF THE LABORATORY.

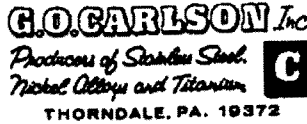
TESTS LISTED ABOVE  
MEET SPECIFICATION REQUIREMENTS

RESPECTFULLY SUBMITTED,

MTI VENDOR CODE T5001

*J.A. Baxter* 5-28-04  
J.A. BAXTER, V.P. OF OPERATIONS  
METALS TECHNOLOGY, INC.

6327



DATE: 07-Dec-95

GOC: 88022

TEST CERTIFICATE

\*\*\*\* SOLD TO: \*\*\*\*

\*\*\*\* SHIP TO: \*\*\*\*

JOSEPH T RYERSON & SON  
P O BOX 16445  
DENVER CO 80216

EATON METAL PRODUCTS  
844 S CHESTNUT  
SALT LAKE CITY UT 84104

CUSTOMER ORDER #  
25WX903593

CUSTOMER MARK #  
25WX9035930101/2016633

\*\*\*\*\*  
C 625 BB HOT ROLLED, ANNEALED, DESCALED  
UNS N06625; PLATE  
ASME SB443, GRADE 1, ASME B2PV CODE SECTION II, 1992 EDITION, 1994 ADDENDA.  
\*\*\*\*\*

ITEM DESCRIPTION MARK: 25WX9035930101/2016633  
1 1.625 x 58 x 157

Qty Heat/Slab

Test Dir	Yield-.2% Tensile PSI	Tensile PSI	Elong-2in %
TT	76970	141310	42.45

Materials produced under this order have not come into contact with Mercury or its compounds within G.O. Carlson, Inc. facilities.

No Welding Performed

100% Melted, Rolled, and Manufactured in the U.S.A.

\*\*\*\*\* L A D D L E A N A L Y S I S \*\*\*\*\*

HEAT:	C	MN	P	S	SI	CR	NI	MO
5L211	0.036	0.035	0.007	0.000	0.100	22.325	61.160	8.985
	CBTA	FE	AL	TI	CO			
5L211	3.300	3.580	0.100	0.120	0.025			

Heat Treat Practice: 1850°F ± 25°F for 1 hour per inch of material thickness or 30 minutes, whichever is greater. Air cool.

Susan S. Waldeman  
Certification Administrator  
G. O. Carlson, Inc.

I HEREBY CERTIFY THE ABOVE FIGURES ARE CORRECT AS CONTAINED IN RECORDS OF THIS CORPORATION.

SWORN TO AND SUBSCRIBED BEFORE ME THIS \_\_\_\_\_ DAY OF \_\_\_\_\_

PAGE #

#3637

05/28/04 FRI 14:45 FAX 8188824490

--- HIGH TEMP

001

6327

**METALS TECHNOLOGY, INC.**  
19801 Nordhoff Street  
Northridge, California 91324  
(818) 882-6414 (323) 873-7144 FAX: (818) 882-4490

CERTIFIED TEST REPORT NO. 329663 (Page 1 of 1)

5/28/2004

CUSTOMER: HIGH TEMP METALS  
P.O.: 1335  
MATERIAL: 625  
SPECS: SEE REMARKS

HEAT NO.: 5L211  
PART NO.: 1.625 X 58 X 157 (1 PLATE)

*** TENSILE TEST RESULTS ***								
TEMP	DIA. (in.)	AREA (in. <sup>2</sup> )	YIELD (lbs)	YIELD (ksi)	ULT (lbs)	ULT (ksi)	ELONG %	R.A. %
RT	.252	.0499	3800	76.0	6495	130	45	49
REQUIREMENTS								
RT				60.0		120.0	30.0	---
YIELD @ 0.2% OFFSET			STRAIN RATE: .005 in./in./min		GAGE: 1.0			

## \*\*\* CHEMISTRY \*\*\*

ELEMENT	VALUE
C	0.02
Mn	0.04
Si	0.10
P	0.006
S	0.001
Cr	21.97
Ni	61.03
Mo	9.50
Co	0.06
Cb	3.54
Ta	0.01
Cb+Ta	3.55
Ti	0.18
Al	0.16
Fe	3.36

NOTES: SPECTROGRAPHIC

## \*\*\* REMARKS \*\*\*

SPECS: AMS 5599F, AMS 5666E, S400E, S1000E, EMS 95377A, ASTM-B-443-00,  
ASTM-B-446-00, NADCAP 0002, ASME-SB-443, ASME-SB-446

CERTIFICATE SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF THE LABORATORY.

TESTS LISTED ABOVE  
MEET SPECIFICATION REQUIREMENTS

MTI VENDOR CODE T5001

RESPECTFULLY SUBMITTED,

*J.A. Baxter* 5-28-04  
J.A. BAXTER, V.P. OF OPERATIONS  
METALS TECHNOLOGY, INC.

INSPECTION DATA CHECKLIST



Quality Assurance Documentation for Part ID: SE120-014-FJS - Item: 178

Workorder: 65678/1-0 Sub:193 Op:60

Part: SE120-014-FJS - - SPACER SUB-ASSEMBLY

Drawing ID: SE120-004 Rev: 2D		INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY		
SHEET ZONE	CHARACTERISTIC	GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
4* (10)	$\phi$ .250 A B C PORT FJS POSITION	LASER	QA	1444	0.060	522-R.D		
						04-27-06		A
Drawing ID: SE121-014 Rev: 1C		INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY		
SHEET ZONE	CHARACTERISTIC	GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (20)	$\square$ 0.375 FINAL SPACER PROFILE	LASER	QA	1444	-0.140 / +0.143	522-R.D		
* (30)	SPACER MAGNETIC PERMEABILITY 1.02 Mu MAX	MASTER GAGE	QA	J-1271	ACCEPT	04-27-06		
* (40)	SPACER INTERIOR SURFACE FINISH 32 MICRO-INCH RA	PROFILOMETER	QA	J-1308	.012 TO .031	533-B.C		
* (50)	SPACER WALL THICKNESS 0.375 +0.04/-0	UT THICKNESS GA	QA	J-1009-NDT	.385 - .415	04-25-06		
						321-C.L		A
						04-26-06		





Major  
Tool & Machine, Inc.

# INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE121-014 PORT - Item: 179

Workorder: 65678/1-0 Sub:193 Op:15

Part: SE121-014 PORT - - SPACER SUB-ASSEMBLY

Drawing ID: SE120-004 Rev: 2

SHEET / ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
		GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
* (100)	VW1 - ROOT PASS WELD PSV		MFG CWI			GOOD	358-D.M 12-29-05	840-G.M 12-29-05	A
* (120)	VW1 - COVER PASS WELD PSV		MFG CWI	VISUAL		GOOD	358-D.M 12-29-05	933-D.L 01-03-06	A



*Major*

Tool & Machine, Inc.

INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE121-014 S10-S6 SUB-SET - Item: 180

Workorder: 65678/1-0 Sub:206 Op:30

Part: SE121-014 S10-S6 SUB-SET - - S10-S6 PANEL SUB-SET

Drawing ID: SE120-004 Rev: 2

SHEET ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS		RESULTS	INSPECTED BY		
		GAGE/EQUIP	BY SAMPLE		DATA/REMARKS	INSP	VERFD
* (10)	VWI ROOT PASS WELD S10-S6		MFG CWI	VISUAL O.K. PER CUSTOMER REQUIREMENTS	R771-B.S	933-D.L	A
					11-11-05	11-11-05	



Major  
Tool & Machine, Inc.

### INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE121-014 S10-S6 SUB-SET - Item: 175

Workorder: 65678/1-0 Sub:206 Op:130

Part: SE121-014 S10-S6 SUB-SET - - S10-S6 PANEL SUB-SET

Drawing ID: SE120-004 Rev: 2D		INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY	
SHEET ZONE	CHARACTERISTIC	GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD / AUDIT
* (20)	VW1 EXTERIOR COVER PASS WELD S10		MFG CWI		VISUALLY INSPECTED	840-G.M	
						05-02-06	



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE121-014 S10-S6 SUB-SET - Item: 182

Workorder: 65678/1-0 Sub:206 Op:150

Part: SE121-014 S10-S6 SUB-SET - - S10-S6 PANEL SUB-SET

SHEET ZONE	DRAWING ID: SE120-004 Rev: 2	INSPECTION INSTRUCTIONS		RESULTS	INSPECTED BY			
		GAGE/EQUIP	BY SAMPLE		DATA/REMARKS	INSP	VERFD	AUDIT
* (20)	CHARACTERISTIC		MFG CWI	VISUAL	O.K. PER CUSTOMER R771-B.S	11-11-05	933-D.L	A
	VWI INTERIOR COVER PASS WELD S10-				EQUIREMENTS	11-11-05	11-11-05	



Major  
Tool & Machine, Inc.

### INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE121-014 S10-S6-S7 SUB-SET - Item: 183

Workorder: 65678/1-0 Sub:205 Op:30

Part: SE121-014 S10-S6-S7 SUB-SET - - S10-S6-S7 PANEL SUB-SET

Drawing ID: SE120-004 Rev: 2

SHEET * (10)	ZONE CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY	
		GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
	VWI ROOT PASS WELD S6-S7		MFG CWI	VISUAL	O.K. PER CUSTOMER EQUIREMENTS	R771-B.S	933-D.L	A



Major  
Tool & Machine, Inc.

### INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE121-014 S10-S6-S7 SUB-SET - Item: 179

Workorder: 65678/1-0 Sub:205 Op:150

Part: SE121-014 S10-S6-S7 SUB-SET - - S10-S6-S7 PANEL SUB-SET

Drawing ID: SE120-004 Rev: 2

SHEET ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY		
		GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD AUDIT	
* (20)	VWI INTERIOR COVER PASS WELD S6-S		MFG CWI	VISUAL	O.K. PER CUSTOMER REQUIREMENTS	R771-B.S 11-11-05	933-D.L 11-11-05	A



Major  
Tool & Machine, Inc.

### INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE121-014 S10-S6-S7 SUB-SET - Item: 184

Workorder: 65678/1-0 Sub:205 Op:150

Part: SE121-014 S10-S6-S7 SUB-SET - S10-S6-S7 PANEL SUB-SET

Drawing ID: SE120-004 Rev: 2

SHEET ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY		
		GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (20)	VWI INTERIOR COVER PASS WELD S6-S		MFG CWI	VISUAL	O.K. PER CUSTOMER REQUIREMENTS	R771-B.S	933-D.L	A
						11-11-05	11-11-05	



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE121-014 S8-S9 SUB-SET - Item: 186

Workorder: 65678/1-0 Sub:209 Op:30

Part: SE121-014 S8-S9 SUB-SET - - S8-S9 PANEL SUB-SET

SHEET ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY		
		GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (10)	VWI ROOT PASS WELD S8-S9		MFG CWI	VISUAL	OK PER SPEC.	093-M.S 11-19-05	581-D.E 11-19-05	A





**Major**  
Tool & Machine, Inc.

### INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE121-014 S8-S9 SUB-SET - Item: 181

Workorder: 65678/1-0 Sub:209 Op:130

Part: SE121-014 S8-S9 SUB-SET - - S8-S9 PANEL SUB-SET

Drawing ID: SE120-004 Rev: 2D		INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY	
SHEET ZONE	CHARACTERISTIC	GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD AUDIT
* (20)	VWI EXTERIOR COVER PASS WELD S8-		MFG CWI		VISUALLY INSPECTED	840-G.M	840-G.M
						05-02-06	05-02-06

A



Major  
Tool & Machine, Inc.

### INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE121-014 S8-S9 SUB-SET - Item: 188

Workorder: 65678/1-0 Sub:209 Op:150

Part: SE121-014 S8-S9 SUB-SET - - S8-S9 PANEL SUB-SET

Drawing ID: SE120-004 Rev: 2

SHEET ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY		
		GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (20)	VW1 INTERIOR COVER PASS WELD S8-S		MFG CWI	VISUAL	ACCEPT	709-K.A	933-D.L	A
						11-21-05	11-21-05	



Major  
Tool & Machine, Inc.

### INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE121-014 - Item: 189

Workorder: 65678/1-0 Sub:193 Op:12

Part: SE121-014 - - SPACER SUB-ASSEMBLY

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*	(10)	VWI ROOT PASS WELD SFA		MFG CWI		VISUAL	ACCEPTABLE	933-D.L 12-21-05	933-D.L 12-21-05	A
*	(20)	VWI ROOT PASS WELD SFB		MFG CWI		VISUAL	ACCEPTABLE	933-D.L 12-21-05	933-D.L 12-21-05	A
*	(110)	VWI EXTERIOR COVER PASS WELD SF		MFG CWI		VISUAL	GOOD	933-D.L 12-22-05	933-D.L 12-22-05	A
*	(120)	VWI EXTERIOR COVER PASS WELD SF		MFG CWI		VISUAL	GOOD	358-D.M 12-22-05	933-D.L 12-22-05	A



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE121-014 - Item: 190

Workorder: 65678/1-0 Sub:193 Op:13

Part: SE121-014 - - SPACER SUB-ASSEMBLY

Drawing ID: SE121-014 Rev: 0

SHEET ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY		
		GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (10)	<div style="border: 1px solid black; padding: 2px; display: inline-block;"> <math>\triangle</math> 0.375         </div> SPACER PROFILE (INCL. FLANGES, PARTIALLY WELDED)	LASER	QA	1444	0.1487 TO -0.0882	137-G.F		
						12-27-05		A



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE121-014 - Item: 191

Workorder: 65678/1-0 Sub:193 Op:14

Part: SE121-014 - - SPACER SUB-ASSEMBLY

SHEET ZONE	DRAWING ID: SE120-004 Rev: 2 CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
		GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*			MFG				771-B.S	581-D.E	A
(10)	VWI INTERIOR COVER PASS WELD SFA		CWI			ACCEPTABLE PER CU OER REQUIREMENTS	12-28-05	12-28-05	
*			MFG			GOOD	358-D.M	581-D.E	A
(20)	VWI INTERIOR COVER PASS WELD SFB		CWI			GOOD	12-28-05	12-28-05	
*			MFG			GOOD	358-D.M	581-D.E	A
(30)	VWI INTERIOR COVER PASS WELD S7-S		CWI			GOOD	12-28-05	12-28-05	
*			MFG			GOOD	358-D.M	581-D.E	A
(40)	VWI INTERIOR COVER PASS WELD S9-S		CWI			GOOD	12-28-05	12-28-05	

4959

10520 Chester Road  
Woodlawn, Ohio 45215



CLIENT	Major Tool & Machine	RADIOGRAPHER	Robert Weaver	JOB NO	13860001	F.O. NO	NA	DATE	1/5/06
ISOTOPE/RAY	IR192	DIA. X LEADY	.118" X .079"	CURIES/HA	41	FOCAL SPOT SIZE	.142"	SFD	15"
WELD PROCESS	GTAW	MATERIAL SPEC.	625 Inconel	MATERIAL DIAMETER	NA	MATERIAL THICKNESS	.375"	PENETRATOR	ASTM B
DESCRIPTION	65678/1.0/193/05/818 SE 121-014 Page 1 of 2	INTERNAL LEVEL	Robert Weaver II	TIME	1:45	FILM TYPE	Kodak AA Double	FILM TECHNIQUE	PI SCREENS
		REMARKS				ACCEPTANCE STANDARD	ASME VIII, Div. 1, UW-51		

SEAM OR FITTING	FILM INTERVAL NUMBER	WELDER IDENTIFICATION	PENETRATOR		SLAG	POROSITY	POROSITY WITH TAIL	CRACK	LACK OF PEN	LACK FUSION	INTERNAL CONVEYTY	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																								
1	A-B	UV	B	010"		✓																				✓		
2						✓																				✓		
3						✓																				✓		
4						✓								✓												✓		
5						✓																				✓		
6						✓																				✓		

End View	Side View
<input type="checkbox"/> SINGLE WALL	<input type="checkbox"/> DOUBLE WALL

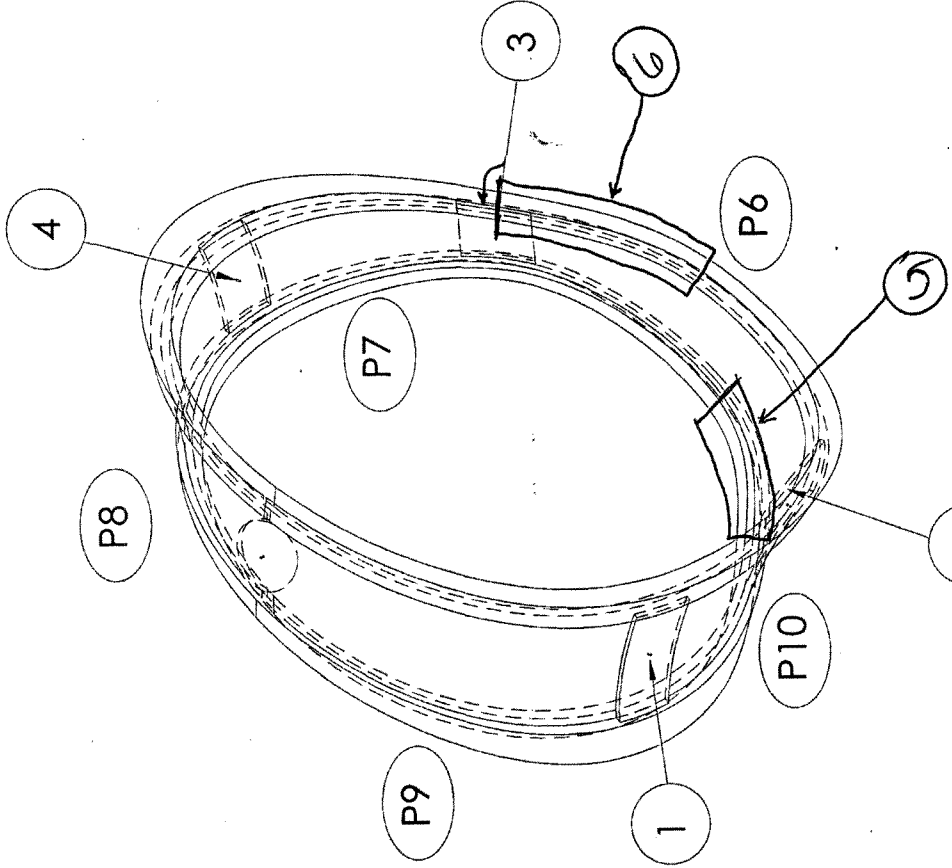
P Penetrator	B Shim	L Location Marker	1) OTHER
--------------	--------	-------------------	----------

1/5/06  
Date

*Robert Weaver*  
Customer Representative Signature

655514/II  
Cooperheat-MQS Signature

Rev	By	Date	Description
0A	LAK	8/9/05	for initial Release
1A	LAK	8/11/05	added flanges and trimmed films



Item No.	Film Number	Center Point	Location	Comment
1	P9-P10	(35.25, 47.79, -14.21)		
2	P10-P6	(24.78, 33.40, -10.21)		
3	P4-P7	(11.54, 38.16, 10.21)		
4	P7-P8	(23.77, 54.42, 14.21)		

**CDCP, Inc.**

**Spacer X-Ray Film Layout**

Scale: 1:6 Weight: 1A

REV: 1A

SEI 20-002-1-SXMM

Scale: 1:6 Weight: 1A

Sheet 1 of 1

65678/1.0/193/25/818  
 SEI21-014  
 Page 2 of 2  
 1/5/06

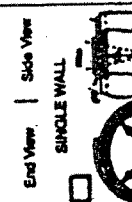
4959  
10520 Cheater Road  
Woodlawn, Ohio 45215



CLIENT: Major Tool & Machine  
 ISOTOPE-RAY: BR192  
 WELD PROCESS: GTAW  
 DIAL X-RAY: .18" x .079"  
 CURIES: 59  
 MATERIAL SPEC: C20 Inconel  
 INTERPRETER LEVEL: Robert Weaver / II  
 RADIOGRAPHER: Robert Weaver / II  
 JOB NO: 13850291  
 P.O. NO: MA  
 DATE: 11/28/05  
 FOCUS: .142"  
 FOCAL SPOT SIZE: .142"  
 SFD: 15"  
 MATERIAL DIAMETER: N/A  
 MATERIAL THICKNESS: .5"  
 PENETRATOR: ASTM 1B  
 TIME: 1:45  
 FILM PROCESSING: AUTO  
 FILM TYPE: Kodak M40 Double  
 FILM TECHNIQUE: M40 Double  
 PS SCREENS: .010"

DESCRIPTION: 65678/8.0/3/70/818  
 SE120-004 part 12B  
 REMARKS: Densitometer - 12105 cal. due 9/2/06  
 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	BURM-THROUGH	CRATER-PIT	OXIDATION	INTERNAL UNDERCUT	EXTERNAL UNDERCUT	ALIGNED INDICATIONS	WELD CONTOUR	MIS-MATCH	FILM ARTIFACT	VISUAL CONCERNS	FILM DENSITY	SEE REMARKS	ACCEPT	REFLECT			
			SIZE	QUALITY LEVEL																											
1	0-10	NA	1B	.016"	✓																										
2																															



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

Robert Weaver 655512/II  
Cooperheat-MGS Signature

11/28/05  
Date

Customer Representative Signature







**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE121-014 - Item: 196

Workorder: 65678/1-0 Sub:199 Op:10

Part: SE121-014 - - SPACER MACHINING

SHEET		ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY	
Drawing ID: SE121-014 Rev: 0				GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD
1*	(10)	D6	<input type="checkbox"/> 0.010	INDICATOR	MFG	P-4482	.007	315-C.L		A
1*	(20)	D8	<input type="checkbox"/> 0.010	INDICATOR	MFG	P-4482	.004	315-C.L		A
1*	(30)	D7	(6.50) INTERPRET AS MINIMUM	CALIPER	MFG	P-4483	6.95	591-C.P		A



Major  
Tool & Machine, Inc.

### INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE121-014 - Item: 197

Workorder: 65678/1-0 Sub:199 Op:30

Part: SE121-014 - - SPACER MACHINING

Drawing ID: SE120-002 Rev: 0

SHEET ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY		
		GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*	$\square$ 0.375   A   B   C FINAL SPACER PROFILE (WALL AND FLANGE PROFILES)	LASER	QA	J-1280	-0.163 / +0.174	522-R.D		
(10)						03-30-06		A



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE121-014-1 - Item: 198

Workorder: 65678/1-0 Sub:194 Op:60

Part: SE121-014-1 - - SPACER 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
*	(10)	VWI ROOT PASS WELD S7-S8		MFG CWI		VISUAL	GOOD	358-D.M	12-13-05	933-D.L
*	(20)	VWI ROOT PASS WELD S9-S10		MFG CWI		VISUAL	GOOD	358-D.M	12-13-05	933-D.L



**Major**  
Tool & Machine, Inc.

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE121-014-1 - Item: 199

Workorder: 65678/1-0 Sub:194 Op:160

Part: SE121-014-1 - - SPACER WALL

Drawing ID: SE120-004 Rev: 2

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*	(20)	VWI EXTERIOR COVER PASS WELD S7-		MFG CWI		VISUAL	GOOD	358-D.M	12-13-05	933-D.L	A
*	(20)	VWI EXTERIOR COVER PASS WELD S9-		MFG CWI		VISUAL	GOOD	358-D.M	12-13-05	933-D.L	A



**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE121-014-1 - Item: 194

Workorder: 65678/1-0 Sub:194 Op:180

Part: SE121-014-1 - - SPACER WALL

SHEET ZONE		Drawing ID: SE120-004 Rev: 2D	INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY		
CHARACTERISTIC		GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*	(20)	VWI INTERIOR COVER PASS WELD S7-S	MFG			VISUALLY INSPECTED	840-G.M	840-G.M	A
*	(20)	VWI INTERIOR COVER PASS WELD S9-S	CWI			VISUALLY INSPECTED	05-02-06	05-02-06	A
			MFG				854-R.U		
			CWI				05-02-06		



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

Inventa Nr. No. Di. Facture 411635001-0	Datum Erzeugn. Date De Commande 05/11/04	Kunden-Referenz Customer Reference 1297	Report Nr. Rapport No. 20050104062	Pages of Pages Pages de Pages 2 Of 4
Shop To • Cliente • Beneficiario <b>HIGH TEMP METALS INC</b> 12910 SAN FERNANDO RD SYLMAR CA 91342 USA				
Ship To • Destinataire • Recipiente <b>HIGH TEMP METALS INC</b> 14101 ROSECRANS AVE UNIT A LA MIRADA CA 906383551 USA				
Specifications • Spécifications • Especificaciones AMS 5599, F; AMS 5666, E; ASME-SB-443, 01; UNSF N06625, Gr. 1; ASMB-SB-446, 98; UNSF N06625, Gr. 1; ASTM-A-443, 00a1; UNSF N06625, Gr. 1; ASTM-B-446, 03, UNSF N06625, Gr. 1;				
Quantity Ordered Quantité Commandée Justification 1 PC		Quantity Shipped Quantité Expédiée Justification 1 PC		
Product Description • Description Produit • Materialbeschreibung <b>1.520 x 60 x 1.20/144</b> <b>NSP 5252</b> <b>HAYNES(R) 625 ALLOY PLATE</b> <b>Nadcap CERTIFICATE NUMBER 0089</b> <b>S400E,S1000E, EN 10204 3.1.B</b> <b>REVISED REPORT 3-31-05 JATW</b>				
Heat Treatment • Traitement Thermique • Wärmebehandlung Tempering • Recuit • Temperen 147005				
Tensile Test at Room Temperature • Essai De Traction A Temp. Ambiante • Zugversuch at Room Temp. • A Temp. Ambiente • Zugversuch UTS Yield 134000 PSI (L) 134000 PSI (C)				
Tensile Test at Elevated Temperature • Essai De Traction A Hts. Temp. at Elevated Temp. • A Hts. Temp. • Zugversuch UTS Yield 72500 PSI 62500 PSI				
Stress Rupture Temperature • Essai A Charge De Rupture Zeitschwerkdruck at Room Temp. • A Temp. Ambiente • Zugversuch UTS Yield 72500 PSI 62500 PSI				

Certified By • Certifié Par • Bescheinigt Durch: Penny Powell  
 Certification Technician  
*Penny E. Powell*

THE HAYNES COMPANY IS NOT RESPONSIBLE FOR THE RESULTS OF TESTS PERFORMED BY OTHER LABORATORIES. THE MATERIAL NOTED IN THE CERTIFICATE IS THE PROPERTY OF HAYNES INTERNATIONAL, INC. ALL RIGHTS RESERVED. HAYNES INTERNATIONAL, INC. IS NOT RESPONSIBLE FOR THE RESULTS OF TESTS PERFORMED BY OTHER LABORATORIES. THE MATERIAL NOTED IN THE CERTIFICATE IS THE PROPERTY OF HAYNES INTERNATIONAL, INC. ALL RIGHTS RESERVED.



ORIGINAL  
**HAYNES**  
International

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

Product Description • Description  
1.520 x 60 x 120/144

NSP 5252

HAYNES(R) 675 ALLOY PLATE  
Nadcap CERTIFICATE NUMBER 0089  
S400E, S1000E, EN 10204 3.1.B

REVISED REPORT 3-31-05 JKW

<b>CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS</b>	
Customer Reference Référence Client Kundenbest.Nr. 1297	Report No. Rapport No. Zugschl.Nr. 20030104062
Date of Certificate Date de Certificat Bescheinigungsdatum 03/11/04	Page of Pages Page de Pages Anzahl der Seiten 4 OF 4
Sold To • Client • Bestimmungsort <b>HIGH TEMP METALS INC</b> <b>12910 SAN FERNANDO RD</b> <b>SYLMAR</b> <b>CA 91342 USA</b>	Ship To • Destinataire • Bestimmungsort <b>HIGH TEMP METALS INC</b> <b>14101 ROSECRANS AVE UNIT A</b> <b>LA MIRADA</b> <b>CA 906383551 USA</b>
Specifications • Spécifications • Spezifikationen AMS 5599, F; AMS 5666, E; ASME-SB-443, 01; UNSF N06625, Gr. 1; ASME-SB-446, 98; UNSF N06625, Gr. 1; ASTM-B-443, 00e1; UNSF N06625, Gr. 1; ASTM-B-446, 03; UNSF N06625, Gr. 1;	Quantity Shipped Quantité Expédiée Liefermenge 1 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.  
Mill Order Used: 2741163592 (1 PC) REVISED REPORT 3-31-05 JKW  
(A) 1750 °F to 1900 °F

Certified By • Certifié Par • Bescheinigt Durch: Penny Powell  
Certification Technician

*Penny E. Powell*

THE HAYNES CERTIFICATE IS VALID ONLY WHEN USED WITH THE SPECIFICATIONS AND TEST METHODS LISTED THEREIN. THIS MATERIAL MUST BE INSPECTED BY AN AUTHORIZED PERSONNEL BEFORE USE. THE HAYNES CERTIFICATE IS NOT VALID FOR ANY OTHER APPLICATIONS. THE HAYNES CERTIFICATE IS NOT VALID FOR ANY OTHER APPLICATIONS. THE HAYNES CERTIFICATE IS NOT VALID FOR ANY OTHER APPLICATIONS. THE HAYNES CERTIFICATE IS NOT VALID FOR ANY OTHER APPLICATIONS.









Major

Tool & Machine, Inc.

INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE121-091 - Item: 203

Workorder: 65678/1-0 Sub:217 Op:25

Part: SE121-091 - - END COVER ASSEMBLY

Drawing ID: SE121-091 Rev: 0

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
1*	E6	1.00 +/- 0.01"	CALIPER	QA		P-4943	1.004	137-G.F			A
(10)		⊂ 0.03" A   B   C	CMM	QA		00064	-0.0033 TO 0.0100	137-G.F			A
(50)		⊂ 0.03" A   B   C	CMM	QA		00064	-0.0034 TO 0.0105	137-G.F			A
(60)											



Major  
Tool & Machine, Inc.

### INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE121-091 - Item: 204

Workorder: 65678/1-0 Sub:217 Op:30

Part: SE121-091 - - END COVER ASSEMBLY

Drawing ID: SE121-102 Rev: 0		INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY	
SHEET / ZONE	CHARACTERISTIC	GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD / AUDIT
*		SCALE	CWI	P-4279	GOODWELDS ACCEPT E PER CUSTOMER DR ING / SPECIFICATION REQUIREMENTS.	933-D.L	
(10)	VWI VESSEL BLANK OFF COVER WELD					03-31-06	A



INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE121-091 - Item: 205

Workorder: 65678/1-0 Sub:218 Op:25

Part: SE121-091 - - END COVER ASSEMBLY

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
I*	E6		CALIPER	QA		P-4943	1.004	137-G.F			A
(10)		1.00 +/- 0.01"						03-03-06			
*		<input type="checkbox"/> 0.03" A   B   C	CMM	QA		00064	-0.0065 TO 0.0122	137-G.F			A
(50)								03-03-06			
*		<input type="checkbox"/> 0.03" A   B   C	CMM	QA		00064	-0.0060 TO 0.0127	137-G.F			A
(60)								03-03-06			



**Major**  
Tool & Machine, Inc.

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE121-091 - Item: 206

Workorder: 65678/1-0 Sub:218 Op:30

Part: SE121-091 - - END COVER ASSEMBLY

Drawing ID: SE121-102 Rev: 0		INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY				
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*			SCALE	CWI		P-4279	WELDS ACCEPTABLE R CUSTOMER DRAWING / SPECIFICATION REQUIREMENTS.	933-D.L		A
(10)		VWI VESSEL BLANK OFF COVER WELD						03-31-06		



30516-1 198



**Allegheny Ludlum** Joseph Plate Products Division  
An Allegheny Technologies Company

Page

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: RU4910400  
Your Order No: M E M O  
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

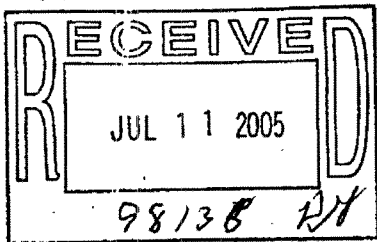
Heat      Slip      Lot No      Size      Pcs      Weight  
818102    34967 A    143182    1.5000 x 83.0000 x 260.0000    1    9488 GV-STOCK

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 Size  
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



lines ~~13-18~~  
13-18

98142  
lines 25-30



TRACER\* 109293

ROLLED AN ISO9001 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

0516-1 198



**Allegheny Ludlum** Jessop Plate Products Division  
An Allegheny Technologies Company

1201 Valley Road  
Coatesville, Pennsylvania 19320

CERTIFICATE OF CONFORMANCE

Our Order no: GV-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

Shipto:  
ROLLED ALLOYS INC  
9818 EAST HARDY ROAD  
HOUSTON TX

48182

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
					LBS		
001	316L			1.5000 79.0000 WID 235.0000 LEN	1		
				PH1530034299001			
		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

FILE COPY 2

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

**HAYNES**  
International

Product Description • Description Produit • Material Beschreibung

0.188 x 0/0 x 0/0  
SE121-095-IMTM  
HAYNES(R) 625 ALLOY PLATE  
Nadcap CERTIFICATE NUMBER 0089  
S400 4/29/2004, S1000 1/3/2005, EN 10204 3.1, AS9100

CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS	
Sales Order No Reference Commande Bestellungs Nr 455676001-0	Date Entered Date De Commande Bestelldatum 12/01/05
Customer Reference Reference Client Kundenbestelldaten P05-06722	Report No. Rapport No. Zeugnis Nr 20051205027
Pages of Pages Page de Pages Anzahl der Seiten 1 Of 4	

Sold To • Client • Bestellausschrift MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA	Ship To • Destinaire • Bestelldatze MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA
--	---

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

ASTM-B-443, 00e1, UNS# N06625, Gr. 1; ASTM-B-443, 00e1, UNS# N06625, Gr. 1

Specification • Specification • Spezifikation

Heat Number Numero De Coque Charge Nr	Al	B	C	Co	Cr	Cu	Fe	Mn	Mo	Ni	P	S	Si	Ti	V	W	
2650 5 6805	0.2		0.031	0.2063	21.92		4.7049	0.2688	8.65	59.41	0.007	0.005	0.2	0.3161			BUTT END *01
2650 5 6805		Ta	Zr	Bi	La	Pb	Ag	Mg	Y		N	Ca	(Al+Ti)	Ni+Co	Ni+Mo		BUTT END *01

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

*Amanda Aguirre*  
DEC 08 2005



12.7.05  
103249 wx  
line 1-3

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, MANUFACTURED BY ANY EXCEPTIONS OR PURCHASE ORDER REQUIREMENTS. THE RECORDING OF FALSE, FICTITIOUS OR FAULTIVE 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.

FILE COPY 2

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

**HAYNES**  
**International**

Product Description • Description Produit • Material Beschreibung

0.188 x 0/0 x 0/0  
SE121-095-1MTM  
HAYNES(R) 625 ALLOY PLATE -  
Nadcap CERTIFICATE NUMBER 0089  
S400 4/29/2004; S1000 1/3/2005, EN 10204 3.1, AS9100

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

Sales Order No. Reference Commande Bestellungs Nr. 455676001-0	Date Entered Date De Commande Bestelldatum 12/01/05	Customer Reference Reference Client Kundenbestellnr. P05-06722	Report No. Rapport No. Zeugnis Nr. 20051205027	Pages of Pages Page de Pages Anzahl der Seiten 2 Of 4
---	--	---	---	--

Sold To • Client • Bestellanrschrift  
**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 • Spécification • Spezifikation  
ASTM-B-443, 00e1, UNS# N06625, Gr. 1; ASTM-B-443, 00e1, UNS# N06625, Gr. 1

Tensile Test at Room Temperature • Essai De Traction A Temp. Ambiante • Zugversuch		Tensile Test at Elevated Temperature • Essai De Traction A Hte.Temp.	
Ultimate Zugfestigkeit	63000 PSI	Ultimate Zugfestigkeit	6 PC
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	% Elong In % Allong EN % Dehnung	% Elong In % Allong EN % Dehnung	% Elong In % Allong EN % Dehnung
63000 PSI	49.5 %	(1)(A)	(1)(A)

Quantity Ordered  
Quantite Commandee  
Bestellmenge  
6 PC

Quantity Shipped  
Quantite Expédite  
Liefermenge  
6 PC

Stress Rupture Temperature • Essai A Charge De Rupture Zeilstandversuch

Test  
Essai  
Versuch

Stress  
Contrainte  
Spannung

Hours  
Heures  
Stunden

% Elong In  
% Allong EN  
% Dehnung

% RA

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

12/5/2005  
(1) 2944652551

*Amanda Aguirre*  
DEC 08 2005  
MTA 016

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 PROSECUTED AS A VIOLATION OF FEDERAL LAWS. ALL INFORMATION IS SUBJECT TO THE PRIVACY POLICY OF HAYNES INTERNATIONAL, INC. SPECIFICATIONS AND REQUIREMENTS MAY BE SUBJECT TO CHANGE WITHOUT NOTICE. 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 Bezeichnung

0.188 x 0/0 x 0/0  
SE121-095-1MTM  
HAYNES(R) 625 ALLOY PLATE -  
Nadcap CERTIFICATE NUMBER 0089  
S400 4/29/2004, S1000 1/3/2005, EN 10204 3.1, AS9100

CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS	
Sales Order No. Reference Commande Bestellungs Nr. 455676001-0	Date Entered Date De Commande Bestelltdatum 12/01/05
Customer Reference Reference Client Kundenbestelltdaten P05-06722	Report No. Rapport Nr. Zeugnis Nr. 20051205027
Pages of Pages Page de Pages Anzahl der Seiten 3 Of 4	

Sold To • Client • Bestellaufschrift 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
--	---

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

ASTM-B-443, 00e1, UNS# N06625, Gr. 1; ASTM-B-443, 00e1, UNS# N06625, Gr. 1	Specification • Spzifikation																																															
<table border="1"> <tr> <th rowspan="2">Annealed Hardness Durete Recuit Geghieht Haerte</th> <th rowspan="2">Grain Size Grossueur De Grain Korngrosse</th> <th colspan="2">Grain Size</th> <th rowspan="2">Unrecy. Grain %</th> <th rowspan="2">ALA</th> <th rowspan="2">P &amp; W Figure Number</th> <th rowspan="2">Attack Depth</th> <th rowspan="2">Corrosion</th> <th rowspan="2">Test Method</th> <th colspan="3">Oxidation Rate</th> </tr> <tr> <th>Predominant Grain Size</th> <th>Roxy Grain</th> <th>Uniformity</th> <th>Corrosion Rate</th> <th>Toughness Avg</th> <th>Toughness 1</th> <th>Toughness 2</th> <th>Toughness 3</th> <th>Test Eval Versch</th> <th>Temp</th> <th>Stress Concentrate Spinning</th> <th>Hours Hours Stunden</th> <th>% Elong In % Allong EN % Dehnung</th> <th>% Elong @ 15 Hrs</th> </tr> </table>	Annealed Hardness Durete Recuit Geghieht Haerte	Grain Size Grossueur De Grain Korngrosse	Grain Size		Unrecy. Grain %	ALA	P & W Figure Number	Attack Depth	Corrosion	Test Method	Oxidation Rate			Predominant Grain Size	Roxy Grain	Uniformity	Corrosion Rate	Toughness Avg	Toughness 1	Toughness 2	Toughness 3	Test Eval Versch	Temp	Stress Concentrate Spinning	Hours Hours Stunden	% Elong In % Allong EN % Dehnung	% Elong @ 15 Hrs	<table border="1"> <tr> <td>93 HRB</td> <td>(1)(A)</td> <td>6</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>MPY</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	93 HRB	(1)(A)	6						MPY											
Annealed Hardness Durete Recuit Geghieht Haerte			Grain Size Grossueur De Grain Korngrosse	Grain Size							Unrecy. Grain %	ALA	P & W Figure Number	Attack Depth	Corrosion	Test Method	Oxidation Rate																															
	Predominant Grain Size	Roxy Grain		Uniformity	Corrosion Rate	Toughness Avg	Toughness 1	Toughness 2	Toughness 3	Test Eval Versch							Temp	Stress Concentrate Spinning	Hours Hours Stunden	% Elong In % Allong EN % Dehnung	% Elong @ 15 Hrs																											
93 HRB	(1)(A)	6						MPY																																								

Certified By • Certifie Par • Bescheinigt Durch: Amanda Aguirre  
Certification Technician  
12/5/2005  
(1) 2944652551

*Amanda Aguirre*  
DEC 08 2005  
MHA 016

THE DATA CONTAINED HEREIN WAS OBTAINED FROM SAMPLES THAT ARE REPRESENTATIVE OF THE PRODUCTS IN THE SUBJECT EQUIPMENT. THIS MATERIAL MEETS THE REQUIREMENTS OF THE LISTED SPECIFICATIONS MODIFIED BY ANY EXCEPTIONS OR PURCHASE ORDER REQUIREMENTS. THE RECORDING OF FALSE, FICTITIOUS OR MISLEADING STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PENALIZED 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. REPRODUCTION VIOLATING THESE REQUIREMENTS MAY BE PENALIZED UNDER FEDERAL STATUTES INCLUDING FEDERAL LAW, TITLE 18, CHAPTER 47.

FILE COPY 2

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

**HAYNES**  
International

Product Description • Description Produit • Material Beschreibung

0.188 x 0/0 x 0/0  
SE121-095-1MTM  
HAYNES(R) 625 ALLOY PLATE  
Nadcap CERTIFICATE NUMBER 0089  
S400 4/29/2004; S1000 1/3/2005, EN 10204 3.1, AS9100

CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS			
Sales Order No Reference Commande Bestellungs Nr 455676001-0	Date Entered Date De Commande Bestelldatum 12/01/05	Customer Reference Reference Client Kundenbestelldaten P05-06722	Report No. Rapport No Zeugnis Nr 20051205027
Sold To • Client • Bestelltranschrift 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 • Spécification • Spezifikation ASTM-B-443, 00e1, UNS# N06625, Gr. 1; ASTM-B-443, 00e1, UNS# N06625, Gr. 1		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.  
THIS MATERIAL WAS MELTED AND MANUFACTURED IN THE UNITED STATES.  
Mill Orders Used: 2944652551 (6 PC)  
(A) 1750 °F to 1950 °F

12/5/2005

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

*Amanda Aguirre*



DEC 08 2005

FILE COPY 2

**HAYNES**  
**International**

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

Product Description • Description Produits • Material Beschreibung

0.188 x 0/0 x 0/0  
SE121-095-1MTM  
HAYNES(R) 625 ALLOY PLATE  
Nadcap CERTIFICATE NUMBER 0089  
S400 4/29/2004, S1000 1/3/2005, EN 10204 3.1, AS9100

CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIE • WERKSZEUGNIS	
Sales Order No. Reference Commande Bestellungs Nr. 456788001-0	Customer Reference Reference Client Kundenreferenznummer P05-06722
Date Entered Date de Commande Bestelldatum 12/19/05	Report No. Rapport No. Zertifikat Nr. 20051221016
Pages of Pages Page de Pages Anzahl der Seiten 1 Of 4	

Sold To • Client • Bestelldirektionsziel 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 ASTM-B-443, 00a1, UNS# N06625, Gr. 1; ASTM-B-443, 00c1, UNS# N06625, Gr. 1	Quantity Ordered Quantité Commandée Bestellmenge 6 PC	Quantity Shipped Quantité Expédiée Liefermenge 6 PC
---	--	--

Heat Number Numero de Charge Nr.	Chemical Analysis • Analyse Chimique • Chemische Analyse																
	Al	B	C	Cr	Co	Cu	Fe	Mn	Mo	Ni	N	P	S	Si	Ti	V	W
2650 5 6834	0.18		0.031	22.29	0.2154	4.2836	0.2766	8.59	59.94	0.007	0.007	0.0034	0.18	0.285			
2650 5 6805	0.2		0.031	21.92	0.2063	4.7049	0.2688	8.65	59.41	0.007	0.005	0.005	0.2	0.3161			
2650 5 6834																	
2650 5 6805																	

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

*Annada Aguirre*

DEC 30 2005



DEC 28 2005  
103801JA  
lines 1-3

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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 Bezeichnung

0.188 x 0/0 x 0/0  
SE121-095-IMTM  
HAYNES(R) 625 ALLOY PLATE  
Nadcap CERTIFICATE NUMBER 0089  
S400 4/29/2004, S1000 1/3/2005, EN 10204 3.1, AS9100

CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS			
Sales Order No. Reference Commande Bestellungs Nr.	Date Entered Date de Commande Bestellungsdatum	Customer Reference Reference Client Kundenspezififikation	Report No. Rapport No. Zeugnis Nr.
456788001-0	12/19/05	P05-06722	20051221016 2 Of 4
Sold To • Client • Bestellanwerber MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA		Ship To • Destinataire • Bestellee MAJOR TOOL AND MACHINE INC 1458 E 19TH ST INDIANAPOLIS IN 46218 USA	
Specification • Spécification • Spezifikation ASTM-B-443, 00c1, UNS# N06625, Gr. 1; ASTM-B-443, 00c1, UNS# N06625, Gr. 1	Quantity Ordered Quantité Commandée Bestellmenge 6 PC	Quantity Shipped Quantité Expédiée Liefermenge 6 PC	Pages of Pages Page de Pages Anzahl der Seiten 2 Of 4
Tensile Test at Room Temperature • Essai De Traction A Temp. Ambiante • Zugversuch Bei Raum Temp.			
Ultimate Zugfestigkeit	15% Yield Lim. Elast. A 1% 1% Streckgrenze	0.2% Yield Lim. Elast. A 0.2% 0.2% Streckgrenze	% Elong In % Allong EN % Dehnung
135000 PSI 126000 PSI	61500 PSI 63000 PSI	(X)(A) (2)(A)	51 % 49.5 %
Tensile Test at Elevated Temperature • Essai De Traction A Hic.Temp. Warm Zugversuch			
Ultimate Zugfestigkeit	15% Yield Lim. Elast. A 1% 1% Streckgrenze	0.2% Yield Lim. Elast. A 0.2% 0.2% Streckgrenze	% Elong In % Allong EN % Dehnung
Stress Rupture Temperature • Essai A Charge De Rupture Zeilstandversuch			
Test Essai Versuch	Stress Contraite Spannung	Time Heure Stunden	% Rupture % RA

(1) 2942995301 (2) 2944652551

12/21/2005

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

*Amanda Aguirre*

ATM 016  
DEC 30 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 • Materialbeschreibung

0.188 x 0/0 x 0/0  
SE121-095-IMTM  
HAYNES(R) 625 ALLOY PLATE -  
Nadcap CERTIFICATE NUMBER 0089  
S400 4/29/2004, S1000 1/3/2005, EN 10204 3.1, AS9100

Sales Order No Reference Commande Bestellungs Nr 456788001-0	Date Entered Date de Commande Bestellungsdatum 12/19/05	Customer Reference Reference Client Kundenbestellungsnummer P05-06722	Report No. Rapport No. Zeugnis Nr 20051221016	Pages of Pages Page de Pages Anzahl der Seiten 3 Of 4
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Ship To • Destinataire • Bestimmungsort  
**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

ASTM-B-443, 00c1, UNS# N06625, Gr. 1	ASTM-B-443, 00c1, UNS# N06625, Gr. 1	ASTM-B-443, 00c1, UNS# N06625, Gr. 1	ASTM-B-443, 00c1, UNS# N06625, Gr. 1
--------------------------------------	--------------------------------------	--------------------------------------	--------------------------------------

Aged Hardness Durete Vieilli Gealtert Haerte	Grain Size Grossueur du Grain Korngrösse	IGA	Corrosion Rate Taux de Corrosion	Oxidation Rate Taux d'Oxydation	Creep Rupture					
					Toughness Avg Fl. Lbs.	Toughness 2 Fl. Lbs.	Toughness 3 Fl. Lbs.	PSI	Hours Heures	% Elongation
94 HRB 93 HRB	(D)(A) (2)(A) 6		MPY							

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

*Amanda Aguirre*

DEC 30 2005

ATH 016

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FILE COPY 2

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

**HAYNES**  
**International**

Product Description • Description • Beschreibnng • Material Beschreibung

0.188 x 0/0 x 0/0  
SE121-095-1MTM  
HAYNES(R) 625 ALLOY PLATE -  
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CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS			
Sales Order No Reference Commande Bestellungs Nr	Date Entered Date De Commande Bestellungsdatum	Customer Reference Reference Client Kundenbestellungsnummer	Report No. Rapport No Zeugnis Nr
456788001-0	12/19/05	P05-06722	20051221016
Sold To • Client • Bestellanrsciffr <b>MAJOR TOOL AND MACHINE INC</b> <b>1458 E 19TH ST</b> <b>INDIANAPOLIS</b> <b>IN 46218 USA</b>		Ship To • Destinataire • Bestelleunge <b>MAJOR TOOL AND MACHINE INC</b> <b>1458 E 19TH ST</b> <b>INDIANAPOLIS</b> <b>IN 46218 USA</b>	
Specification • Spécification • Spezifikation ASTM-B-443, 00e1, UNS# N10625, Gr. 1; ASTM-B-443, 00e1, UNS# N06625, Gr. 1		Quantity Ordered Quantité Commandée Bestellmenge 6 PC	Quantity Shipped Quantité Expédiée Liefmengen 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.  
THIS MATERIAL WAS MELTED AND MANUFACTURED IN THE UNITED STATES.  
Mill Orders Used: 2942995301 (3 PC), 2944652551 (3 PC)  
(A) 1750 °F to 1950 °F

Certified By • Certifié Par • Bescheinigt Durch: **Amanda Aguirre** 12/21/2005  
Certification Technician

*Amanda Aguirre*

MTM 016  
DEC 30 2005



Major  
Tool & Machine, Inc.

# INSPECTION DATA CHECKLIST

Page: 154  
Date: 05/02/06  
User ID: UPCHURC#

Quality Assurance Documentation for Part ID: SE121-095 - Item: 205

Workorder: 65678/1-0 Sub:224 Op:40

Part: SE121-095 - - VF SEALS

SHEET ZONE	DRAWING ID: SE121-095 Rev: 0	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY	
			GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (10)		⊖ 0.03" A B C		QA	142	W/IN .030	854-R.U		A
* (20)		⊖ 0.03" A B C		QA	142	W/IN .030	05-02-06 854-R.U		A

FILE COPY 2

**HAYNES**  
**International**

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

Product Description • Description Produit • Material Beschreibung

0.188 x 0/0 x 0/0  
SE121-095-1MTM  
HAYNES(R) 625 ALLOY PLATE  
Nadcap CERTIFICATE NUMBER 0089  
S400 4/29/2004, S1000 1/3/2005, EN 10204 3.1, AS9100

<b>CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS</b>	
Sales Order No Référence Commande Bestellungs Nr 463912001-0	Report No. Rapport No Zeugnis Nr 20060321014
Date Entered Date De Commande Bestelldatum 03/20/06	Customer Reference Référence Client Kundenbestelldaten P06-01320
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

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

Specification • Spécification • Spezifikation  
ASTM-B-443, 00e1, UNS# N06625, Gr. 1

Heat Number Numéro De Coque Charge Nr	Chemical Analysis • Analyse Chimique • Chemische Analyse										W	BUTT END *02					
	Al	B	C	Ca	Co	Cr	Cu	Fe	Mn	Mo			Ni	P	S	Si	Ti
2650 5 6834	0.18		0.031	3.5	0.2154	22.29		4.2836	0.2766	8.59	59.94	0.007	0.003	0.18	0.285		
2650 5 6834																	

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

**RECEIVED**  
MAR 27 2006  
1062602A  
Lines 1-3

*Amanda Aguirre*  
MAR 27 2006  
MIM 016

THE DATA CONTAINED HEREIN WAS OBTAINED FROM ANALYSIS PERFORMED BY HAYNES INTERNATIONAL. THIS MATERIAL MEETS THE REQUIREMENTS OF THE LISTED SPECIFICATIONS, AS REQUIRED BY ALL APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS. THE BUYER'S CONTRACT SHALL NOT BE DEEMED EXCEPT IN FULL, WITHOUT THE MATTER'S CONTENT 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 Bezeichnung

0.188 x 0/0 x 0/0  
SE121-095-1MTM  
HAYNES(R) 625 ALLOY PLATE  
Nadcap CERTIFICATE NUMBER 0089  
S400 4/29/2004, S1000 1/3/2005, EN 10204 3.1, AS9100

CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS	
Sales Order No. Bestellungs Nr. 463912001-0	Date Entered Date De Commande Bestelldatum 03/20/06
Customer Reference Référence Client Kundenbestelldaten P06-01320	Report No. Rapport No. Zeugnis Nr. 20060321014
Pages of Pages Page de Pages Anzahl der Seiten 2 Of 4	

Sold To • Client • Bestelanzuschrift 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
--	--

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

Tensile Test at Room Temperature • Essai De Traction A Temp. Ambiante • Zugversuch Bei Raum Temp.		Tensile Test at Elevated Temperature • Essai De Traction A Hts. Temp. Warm Zugversuch		Stress Rupture Temperature • Essai A Charge De Rupture Zelstandversuch	
Ultimate Zugfestigkeit	% Yield Lim. Elast. A 1% 1% Streckgrenze	0.2% Yield Lim. Elast. A 0.2% 0.2% Streckgrenze	% Elong In % Allong EN % Dehnung	Test Essai Versuch	Temp.
131000 PSI	66500 PSI	46 %	(1)(A)		

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

*Amanda Aguirre*  
MAR 27 2006

3/21/2006 (1) 2942812701

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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

0.188 x 0/0 x 0/0  
SE121-095-1MTM  
HAYNES(R) 625 ALLOY PLATE  
Nadcap CERTIFICATE NUMBER 0089  
S400 4/29/2004, S1000 1/3/2005, EN 10204 3.1, AS9100

<b>CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS</b>	
Sales Order No Référence Commande Bestelungs Nr. 463912001-0	Customer Reference Référence Client Kundenbestellnr. P06-01320
Date Entered Date De Commande Bestelldatum 03/20/06	Report No. Rapport No. Zeugnis Nr. 20060321014
Pages of Pages Page de Pages Anzahl der Seiten 3 Of 4	

Sold To • Client • Bestellantrag 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 ASTM-B-443, 00e1, UNS# N06625, Gr. 1	Quantity Ordered Quantité Commandée Bestelmenge 6 PC	Quantity Shipped Quantité Expédiée Liefermenge 6 PC
---	---	--

Annealed Hardness Dureté Vieille Gealterte Härte	Grain Size Grosceur De Grain Korngrösse	Grain Size Grosceur De Grain Korngrösse		IGA Attack Depth	Corrosion Test Method MPY	Corrosion Rate Oxidation Rate	Charpy Impact Test			Creep Rupture										
		Grain Size Grosceur De Grain Korngrösse	Duration Durée Grain %				P&W Figure Number	Toughness Résistance Verformungs Temp.	Toughness Résistance Verformungs Temp.	Toughness Résistance Verformungs Temp.	Stress Contrainte Spannung PSI	Hours Heures Stunden	% Elong In % Allong En % Dehnung	% Elong @ 15 hrs						
96 HRB	(1)(A)	6																		

Certified By • Certifié Par • Bescheinigt Durch: Amanda Aguirre  
 Certification Technician (1) 2942812701 3/21/2006

*Amanda Aguirre*  
 MAR 27 2006



THE DATA CONTAINED HEREIN WAS OBTAINED FROM SAMPLES THAT ARE REPRESENTATIVE OF THE PRODUCTS IN THIS SUBJECT CATEGORY. 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.

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



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

Sales Order No Reference Commande Bestellungs Nr 463912001-0	Date Entered Date De Commande Bestelldatum 03/20/06	Customer Reference Reference Client Kundenbestelldaten P06-01320	Report No. Rapport No Zeugnis Nr 20060321014	Pages of Pages Page de Pages Anzahl der Seiten 4 Of 4
Sold To • Client • Bestellausrichtung <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		
Specification • Spécification • Spezifikation ASTM-B-443, 00c1, UNS# N06625, Gr. 1				
		Quantity Ordered Quantité Commandée Bestellmenge 6 PC	Quantity Shipped Quantité Expédiée Liefermenge 6 PC	

Product Description • Description Produit • Material Beschreibung  
 0.188 x 0/0 x 0/0  
 SE121-095-1MTM  
 HAYNES(R) 625 ALLOY PLATE -  
 Nadcap CERTIFICATE NUMBER 0089  
 S400 4/29/2004, S1000 1/3/2005, EN 10204 3.1, 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.  
 THIS MATERIAL WAS MELTED AND MANUFACTURED IN THE UNITED STATES.  
 Mill Orders Used: 2942812701 (6 PC)  
 (A) 1750 °F to 1950 °F

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

*Amanda Aguirre*

MAR 27 2006



THE DATA CONTAINED HEREIN WAS OBTAINED FROM SAMPLES THAT WERE REPRESENTATIVE OF THE PRODUCTS IN THE SUBJECT SHIPMENT. THIS MATERIAL MEETS THE REQUIREMENTS OF THE LISTED SPECIFICATIONS, ASSURED 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 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.



Major  
Tool & Machine, Inc.

### INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE121-095 - Item: 208

Workorder: 65678/1-0 Sub:244 Op:40

Part: SE121-095 - - LOOSE SEALS SE120-002-25

Drawing ID: SE121-095 Rev: 0

SHEET / ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY	
		GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
* (10)	0.03" A B C		QA	142	W/IN .030	854-R.U		A
* (20)	0.03" A B C		QA	142	W/IN .030	854-R.U		A



JS0206A-1 200



Ship ROCKET TECHNOLOGIES  
TO 125 W STERNS RD  
TEMPERANCE MI

Jessop Specialty Products  
500 Green Street  
Washington, PA 15301

ROLLED ALLOYS INC  
125 W STERNS RD  
P O BOX 310  
TEMPERANCE MI

48182

48182

OUR ORDER NO.  
YOUR ORDER NO.  
MEMO NO.  
DATE  
SALESMAN NO.

LF5090610  
T52162  
272971-00 DUAL CERT  
04/27/2005  
584

CERTIFIED MATERIAL  
TEST REPORT

*P.M. Claitor*  
P. M. Claitor - Product Quality Engineer

ALC 316/316L STAINLESS HRAP  
ASTM A240-04a ASME SA-240-04 AMS 5507F UNS S31603  
AMS 5524K (316) UNS S31600

Heat	Slip	Lot No	Size	Fcs	Weight						
819882	16122 A	153423	.1875 x 96.0000 x 240.0000	1	1372						
Heat	C	MN	P	S	SI	NI	CR	MO	CO	CU	N
819882	.018	1.42	.024	.0004	.42	10.05	16.27	2.08	.31	.36	.065

Lot No	Gauge	Yield Strength	Tensile Strength	Elong	Red. of Area	Hardness	Bend	Corrosion	Grain Size
153423	.1875	45.7 KSI	84.0 KSI	59.0	72.0	BHN149	OK	OK	

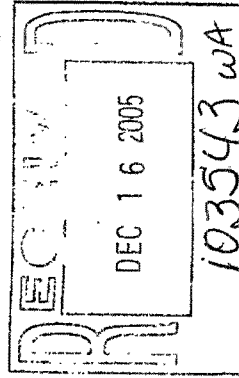
MATERIAL WAS SOLUTION ANNEALED (HEAT TREATED) ABOVE 1900F AND WATER QUENCHED  
MATERIAL WAS PRODUCED WITHOUT KNOWN CONTACT WITH MERCURY  
MATERIAL IS OF USA MELT AND MANUFACTURE  
MATERIAL WAS NOT WELD REPAIRED  
DIN 50049 3.1.B AND EN 10204 3.1.B CERTIFICATE



TRACER# 117581



DEC 19 2005



CUSTOMER: MAJOR TOOL & MACHINE  
P.O. # 805-06721 TN  
3/16" PLATE 316L  
Tracer No. [117581]  
Shpr-#55002  
47-39/64 X 106-55/64 2 PC  
Heat No. [819882]



Certification of Conformance: We certify that the above material meets all requirements of the purchase order and material specifications.  
125 W. Sterns Rd  
Temperance, MI 48182

ROLLED ALLOYS QUALITY ASSURANCE  
APPROVED *[Signature]*  
DATE 5-4-05



**Major**  
Tool & Machine, Inc.

**INSPECTION DATA CHECKLIST**

Page: 156  
Date: 04/30/06  
User ID: UPCHURC#

Quality Assurance Documentation for Part ID: SE121-099 - Item: 210

Workorder: 65678/1-0 Sub:225 Op:40

Part: SE121-099 - - END COVER SEALS

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS	INSPECTED BY		
			GAGE/EQUIP	BY	SAMPLE		INSP	VERFD	AUDIT
*		⊖ 0.03" A   B   C	CMM	QA		OD-0.007-0.034 (ACC) EPT PER NC 19372)	854-R.U		A
(10)							04-30-06		
*		⊖ 0.03" A   B   C	CMM	QA		ID-0.003-0.032 (ACC) EPT PER NC 19372)	854-R.U		A
(20)							04-30-06		



**Major**  
Tool & Machine, Inc.

**INSPECTION DATA CHECKLIST**

Page: 157  
Date: 04/30/06  
User ID: UPCHURC#

Quality Assurance Documentation for Part ID: SE121-099 - Item: 212

Workorder: 65678/1-0 Sub:229 Op:40

Part: SE121-099 - - END COVER SEALS

Drawing ID: SE121-095 Rev: 0

SHEET	ZONE	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
			GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*	(10)	0.03" A B C	CMM	QA		00064	ID -0.004-0.027 (AC CEPT PER NC 19374)	854-R.U			A
*	(20)	0.03" A B C	CMM	QA		00064	-0.008-0.034 (ACCEP T PER NC 19374)	854-R.U			A



INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE121-099-1 - Item: 219

Workorder: 65678/1-0 Sub:224 Op:10

Part: SE121-099-1 - - VF SEALS

Drawing ID: SE121-095 Rev: 0		INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY			
SHEET	ZONE	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*		OD MICROMETER	QA		P-4808	.188/.189	503-B.H		
(20)		0.188 +0.045 / - 0.010" MATERIAL THICK					12-28-05		A



INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE121-099-1 - Item: 220

Workorder: 65678/1-0 Sub:225 Op:10

Part: SE121-099-1 - - END COVER SEALS

Drawing ID: SE121-099 Rev: 0		INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY	
SHEET ZONE	CHARACTERISTIC	GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD / AUDIT
* (20)	0.188 +0.045 / - 0.010" MATERIAL THICK	OD MICROMETER	QA	P-4808	.198/.203	503-B.H 12-19-05	A



**Major**  
Tool & Machine, Inc.

**INSPECTION DATA CHECKLIST**

Page: 160  
Date: 04/29/06  
User ID: UPCHURC#

Quality Assurance Documentation for Part ID: SE121-099-1 - Item: 221

Workorder: 65678/1-0 Sub:229 Op:10

Part: SE121-099-1 - - END COVER SEALS

Drawing ID: SE121-099 Rev: 0		INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY	
SHEET ZONE	CHARACTERISTIC	GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD / AUDIT
* (20)	0.188 +0.045 / - 0.010" MATERIAL THICK	OD MICROMETER	QA	P-4808	.198/.203	503-B.H 12-19-05	A



**Major**  
Tool & Machine, Inc.

**INSPECTION DATA CHECKLIST**

Page: 161  
Date: 04/29/06  
User ID: UPCHURC#

Quality Assurance Documentation for Part ID: SE121-099-1 - Item: 222

Workorder: 65678/1-0 Sub:244 Op:10

Part: SE121-099-1 - LOOSE SEALS SE120-002-25

Drawing ID: SE121-095 Rev: 0		INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY	
SHEET	ZONE	GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD / AUDIT
*		OD MICROMETER	QA	P-4808	.186/.187	503-B.H	
(20)		0.188 +0.045 / - 0.010" MATERIAL THICK				04-03-06	A



**Major**  
Tool & Machine, Inc.

**INSPECTION DATA CHECKLIST**

Page: 162  
Date: 04/29/06  
User ID: UPCHURC#

Quality Assurance Documentation for Part ID: SE122-007-3 - Item: 223

Workorder: 65678/1-0 Sub:153 Op:10

Part: SE122-007-3 - - PORT DOME BACKING STRIP

Drawing ID: Rev:		INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*	(20)	MASTER GAGE	QA		J-1165	LESS THAN 1.02	854-R.U		
		MAGNETIC PERMEABILITY 1.02 MAX					08-21-05		A





**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE122-072 - Item: 224

Workorder: 65678/1-0 Sub:2 Op:80

Part: SE122-072 - - VACUUM TESTING / PORT REMOVAL / VESSEL FLANGE MACHINING / FINAL INSPECTION ACTIVITIES SE120-003-1 120 DEGREE

SHEET	ZONE	DRAWING ID: SE122-072 Rev: 1	CHARACTERISTIC	INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY	
				GAGE/EQUIP	BY SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
1*	G6		32 MICRO-INCH RA PORT NB FLANGE FACE SURFACE FINISH AFTER REWORK (NCR 19115) NOTE 1.5" LIMIT OF TOLERANCE	PROFILOMETER	MFG	J-1308	ACCEPTED	299-M.G		A
(10)					QA			03-11-06		



**Major**  
Tool & Machine, Inc.

**INSPECTION DATA CHECKLIST**

Quality Assurance Documentation for Part ID: SE124-047 - Item: 225

Workorder: 65678/1-0 Sub:232 Op:10

Part: SE124-047 - - WELD BOSSES

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 - ROOT PASS WELD HALF -A- BOSS A		MFG	VISUAL	ACCEPT	709-K.A	933-D.L	A
(20)			CWI			12-12-05	12-13-05	
*	VWI - COVER PASS WELD HALF -A- BOSS A		MFG	VISUAL	ACCEPT	709-K.A	933-D.L	A
(40)			CWI			12-14-05	12-14-05	
*	VWI - ROOT PASS WELD HALF -A- BOSS B		MFG	VISUAL	ACCEPT	709-K.A	933-D.L	A
(60)			CWI			12-12-05	12-13-05	
*	VWI - COVER PASS WELD HALF -A- BOSS B		MFG	VISUAL	ACCEPT	709-K.A	933-D.L	A
(80)			CWI			12-14-05	12-14-05	
*	VWI - ROOT PASS WELD HALF -A- BOSS C		MFG	VISUAL	ACCEPT	683-K.M	933-D.L	A
(100)			CWI			12-15-05	12-15-05	
*	VWI - COVER PASS WELD HALF -A- BOSS C		MFG	VISUAL	O.K. PER CUSTOMER REQUIREMENTS	R771-B.S	053-M.D	A
(120)			CWI			12-17-05	02-23-06	
*	VWI - ROOT PASS WELD HALF -A- BOSS D		MFG	VISUAL	ACCEPT	933-D.L	933-D.L	A
(140)			CWI			12-16-05	12-16-05	
*	VWI - COVER PASS WELD HALF -A- BOSS D		MFG	VISUAL	O.K. PER CUSTOMER REQUIREMENTS	R771-B.S	053-M.D	A
(160)			CWI			12-17-05	02-23-06	
*	VWI - ROOT PASS WELD HALF -B- BOSS A		MFG	VISUAL	ACCEPT	709-K.A	933-D.L	A
(180)			CWI			12-12-05	12-13-05	
*	VWI - COVER PASS WELD HALF -B- BOSS A		MFG	VISUAL	ACCEPT	709-K.A	933-D.L	A
(200)			CWI			12-14-05	12-14-05	
*	VWI - ROOT PASS WELD		MFG	VISUAL	ACCEPT	709-K.A	933-D.L	A



**Major**  
Tool & Machine, Inc.

**INSPECTION DATA CHECKLIST**

Page: 165  
Date: 04/29/06  
User ID: UPCHURC#

(220)	HALF -B- BOSS B	CWI				12-12-05	12-13-05		
*	VWI - COVER PASS WELD HALF -B- BOSS B	MFG		VISUAL	ACCEPT	709-K.A	933-D.L		A
(240)		CWI				12-14-05	12-14-05		
*	VWI - ROOT PASS WELD HALF -B- BOSS C	MFG		VISUAL	ACCEPT	933-D.L	933-D.L		A
(260)		CWI				12-16-05	12-16-05		
*	VWI - COVER PASS WELD HALF -B- BOSS C	MFG		VISUAL	O.K. PER CUSTOMER REQUIREMENTS	R771-B.S	933-D.L		A
(280)		CWI				12-17-05	03-03-06		
*	VWI - ROOT PASS WELD HALF -B- BOSS D	MFG		VISUAL	ACCEPT	683-K.M	933-D.L		A
(300)		CWI				12-15-05	12-15-05		
*	VWI - COVER PASS WELD HALF -B- BOSS D	MFG		VISUAL	ACCEPT	837-J.DE	933-D.L		A
(320)		CWI				12-16-05	12-15-05		



**Major**  
Tool & Machine, Inc.

**INSPECTION DATA CHECKLIST**

Page: 166  
Date: 04/30/06  
User ID: UPCHURC#

Quality Assurance Documentation for Part ID: SE124-047 - Item: 220

Workorder: 65678/1-0 Sub:232 Op:20

Part: SE124-047 - - WELD BOSSES

Drawing ID: SE120-004 Rev: 2		INSPECTION INSTRUCTIONS		RESULTS		INSPECTED BY				
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
*		Φ .25 A B C	LASER	QA		1444	0.275 (ACCEPT PER N C 18888) [N/C:18888 -Doc:18888]	854-R.U		A
(20)		HALF -A- BOSS A FINAL								
*		Φ .25 A B C	LASER	QA		1444	0.135	04-30-06		A
(40)		HALF -A- BOSS B FINAL								
*		Φ .25 A B C	LASER	QA		1444	0.451 (ACCEPT PER N C 18888) [N/C:18888 -Doc:18888]	854-R.U		A
(60)		HALF -A- BOSS C FINAL								
*		Φ .25 A B C	LASER	QA		1444	0.177	04-30-06		A
(80)		HALF -A- BOSS D FINAL								
*		Φ .25 A B C	LASER	QA		1444	0.245	12-19-05		A
(100)		HALF -B- BOSS A FINAL								
*		Φ .25 A B C	LASER	QA		1444	0.067	12-17-05		A
(120)		HALF -B- BOSS B FINAL								
*		Φ .25 A B C	LASER	QA		1444	0.361 (ACCEPT PER N C 18888) [N/C:18888 -Doc:18888]	854-R.U		A
(140)		HALF -B- BOSS C FINAL								
*		Φ .25 A B C	LASER	QA		1444	0.238	04-30-06		A
(160)		HALF -B- BOSS D FINAL								

Employees: 053-M.Dunn / 093-M.Stewart / 137-G.Ford / 197-T.Fischer / 261-T.Dunn / 295-C.Weaver / 299-M.Gregory / 315-C.Land / 321-C.Lonaker / 358-D.Mcnew / 492-R.Elkins / 503-B.Houk / 509-S.Roberts / 522-R.Durham / 533-B.Cleveland / 576-J.Geisinger / 581-D.Edwards / 591-C.Pritchett / 683-K.Mcnew / 709-K.Appleby / 728-R.Dalton / 763-R.Miethe / 771-B.Schultz / 791-D.Weidner / 837-J.Deverter / 840-G.Masood / 854-R.Upchurch / 933-D.Leachley