



ENERGY INDUSTRIES OF OHIO

Purchase Order Number:

S005242-F

Part Number:

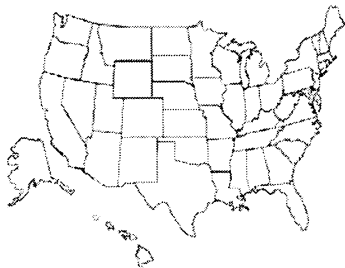
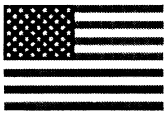
SE141-103-1

Part Name:

MCWF C-1

MTM Work Order Number:

65707/1.0



Major

Tool & Machine, Inc.



Customer: 8909 - ENERGY INDUSTRIES OF OHIO
Customer P.O.: S005242-F
Customer Part ID: SE141-116 - MCWF C-1

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

DS141-036 - STUD

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
2	4	10	30	Material Certification: TEST REPORTS / DS141-036 - STUD - mc108260.tif / 8969595

DS141-060 - NUT

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
3	4	10	50	Material Certification: / DS141-060 - NUT - mc108258.tif / 8977349

DS141-079 - FLAT WASHER

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
4	4	10	60	Material Certification: / DS141-079 - FLAT WASHER - mc108259.tif / 8990135

SE141-078 - POLOIDAL BREAK SHIM ASSEMBLY

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
5	2	10	10	Material Certification: TEST REPORTS / SE141-078-02-CSM - CSM SHIM CASTING TYPE C - / CFM / put in later
6	2	30	20	Certificate of Conformance: C OF C / LOCTITE 411 - LOCKING COMPOUND - mc106141.tif / CERTIFIED

SE141-078-03 - INSULATING SLEEVE

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
7	3	10	10	Certificate of Conformance: / G11CR_1 - ROUND, BAR, 1.75 DIA - mc108545.tif / CERTIFIED

SE141-103-1 - MOD COIL WINDING FORM ASSEMBLY TYPE-C

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
8	0	10	40	Material Certification: Trace ID: 113690 / ER316MNNF_093_GTAW - WELD WIRE,GTAW .093 DIA - mc106164.tif / W020132 / WO20132
9	0	10	40	Material Certification: Trace ID: 116255 / ER316MNNF_093_GTAW - WELD WIRE,GTAW .093 DIA - mc106579.tif / W020132 / WO20132

SE141-103-4 - INSULATING SHEET

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
10	7	10	10	Certificate of Conformance: G11CR / G11CR_3 - SHEET, FLAT - mc107081.tif / CERTIFIED

SE141-103-5 - INSULATING SLEEVE

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
11	5	10	10	Certificate of Conformance: / G11CR_1 - ROUND, BAR, 1.75 DIA - Same as Item #7 / CERTIFIED

SE141-116 - MODULAR COIL WINDING FORM C

Item#	Sub	Op	Pc	Document Description / Material Description / File Name / Heat Lot
12	1	10	10	Material Certification: METALTEK QA DATA PACKAGE / SE141-116-CSM - CSM MCWF TYPE C CASTING - / cfm / put in later
13	1	90		Inspection Data Checklist: 2 steps
14	1	100		Nondestructive Liquid Penetrant Test Certification #13726 - LPI CERTIFICATION
15	1	120		Inspection Data Checklist: 137 steps



Table of Contents
Quality Assurance Documents For
Workorder: 65707/1.0

Page: 2
Date: 12/05/05
User ID: BOWLINK#

Customer: 8909 - ENERGY INDUSTRIES OF OHIO
Customer P.O.: S005242-F
Customer Part ID: SE141-116 - MCWF C-1

16 1 140 Inspection Data Checklist: 2 steps



TO: ENERGY INDUSTRIES OF OHIO

DATE: 10/25/2004

ATTENTION: Receiving Department

Seller certifies that:

Part Number: SE141-103-1

Purchase Order: S005242-F

Part Name: MCWF C-1

Workorder: 65707/1.0

Part Serial Number: C1

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:

Signature: _____

Title: _____

Quality Manager

Date: _____

10/25/05

EASTWOOD MANUFACTURING
CERTIFICATION OF COMPLIANCE

CUSTOMER : MAJOR TOOL AND MACHINE
ORDER # : P05-01160

DATE : 5-16-05
OUR NUMBER 32984

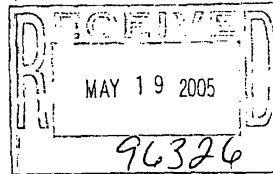
WE CERTIFY THAT THE MATERIALS SUPPLIED ON YOUR ORDER
LISTED ABOVE COMPLIES WITH THE REQUIREMENTS OF YOUR ORDER
AND OF THE SPECIFICATIONS LISTED BELOW

DESCRIPTION :

Lot No.:	Part :	Heat No.:	
32984-1 28 PIECES	DS141-036	8969595	1 7/16 Round, machined to size
	ASTM A286		Heat Treat: 36891
	Silver plated		Silver plate: IMF 00132583
	Per AMS2410		Post plate bake: SEI 37905
			Tensile test: WH 05-0420-01

TENSILE KSI	YIELD KSI	ELONGATION	REDUCTION	HARDNESS
150	120	14	35	
PASS	PASS	PASS	PASS	PASS

DALE STARK
EASTWOOD MANUFACTURING



1-4
B-1

MTM 09 5/19/05

studs



401 ROSE AVE S E
MASSILLON, OH 44646

FAX 330-837-7017

CERTIFICATE OF TESTS REPUBLIC ENGINEERED PRODUCTS

JANUARY 26, 2005
PAGE: 1 OF 3

PURCHASE ORDER: 42904-3
PART NUMBER : SN 47670
ORDER NUMBER: 12-528895-06 821
HEAT : 8869595

PURCHASE ORDER DATE: 05/24/04
ACCOUNT NUMBER : 27759001
SCHEDULE : 58828-

CHARGE ADDRESS

SHIP TO

5800075

FRY STEEL COMPANY
BUNNIE ISAKA
13325 MOLETTE ST
SANTA FE SPRINGS CA 90670

FRY STEEL COMPANY
BUNNIE ISAKA
C/O CMI
4201 W 35TH ST
CHICAGO IL 60623

MATERIAL DESCRIPTION

COLD FINISHED STEEL BARS ALLOY DOUGLAS SPEC DMS-1555H GRADE B DTD 07/02/91 EXC
MARK & PARA 3.4 OIL TEMP & 3.5 BOEING SPEC BMS 7-38G ASTM A 331-95 ASTM A
108-03 LEVEL 1 MIL S 5000E COND E-4 EXC MARK AMS 6415R EXC BHN AMS 6409B AMS
2310E AMS 2301J AMS 2304A AMS 6484B AMS -S- 5000 ISS 3/99 COND E-4 EXC MARK &
PARA 4.3 EF-ASIS-E-4340 AIRCRAFT Q DEL TRANSV MECH PROP COLD DRAWN NOR
M & SUBCRITICAL ANN BEFORE CD REST CHEM

SIZE: RDS 1.4375 X 11 /13FT

LADLE CHEMISTRY %

C	MN	P	S	SI	CU	NI	CR	MO	AL
0.42	00.75	.007	.002	0.22	0.10	01.70	00.84	0.21	00.028
V	N	CB	SN						
0.005	.0064	0.002	.007						

SEMI-FINISH RESULTS

AUSTENITIC GRAIN SIZE

AUST GRAIN SZ 7.

DEVELOPED TENS TRANS
NORMALIZE
DEG F
1650.

ASTM E8
AUSTENITIZE
DEG F
1550.

ASTM A370
QUENCHANT
OIL

TEMPER 1
DEG F
900.

TEMP 1 TIME
HOURS
2.0

PCE	H	T	TENSILE PSI
PCE	H	10102	185010.
PCE	H	10302	180280.
PCE	T	10503	185540.
PCE	H	30102	180570.
PCE	H	30302	193790.
PCE	T	30504	185240.

REDUCTION AREA PERCENT
45.5
55.6
55.7
53.4
53.0
46.3

DEVELOPED TRANS TENSILE
NORMALIZE
DEG F
1650.

ASTM E8
AUSTENITIZE
DEG F
1500.

ASTM A370
QUENCHANT
OIL

TEMPER 1
DEG F
475.

TEMPER 2/SR
DEG F
475.

TEMP 1 TIME
HOURS
2.0

TEMP 2 TIME
HOURS
2.0

PCE	H	T	TENSILE PSI
PCE	H	10102	262320.
PCE	H	10302	264250.
PCE	T	10503	262170.
PCE	H	30102	261840.
PCE	H	30302	261260.
PCE	T	30504	261050.

YIELD (.2%) PSI
223800.
222910.
225100.
218860.
222160.
225230.

REDUCTION AREA PERCENT
47.0
44.6
44.6
43.6
43.2
48.2

ELONGATION PERCENT
10.4
11.4
11.3
11.4
11.4
12.9

32984

191108

AMAN BHATIA
GEN MGR COLD FINISH OPERATIONS

Amman Bhatia

NTM
05
5/19/05



401 ROSE AVE S E
MASSILLON, OH 44646

FAX 330-837-7017

CERTIFICATE OF TESTS REPUBLIC ENGINEERED PRODUCTS

JANUARY 26, 2005

PAGE: 2 OF 3

PURCHASE ORDER: 42904-3 PURCHASE ORDER DATE: 05/24/04
PART NUMBER : SN 47670 ACCOUNT NUMBER : 27759001
ORDER NUMBER: 12-52585-06 821 SCHEDULE : 58828-
HEAT : 8969595

SEMI-FINISH RESULTS (CONTINUED)

DEVELOPED TRANS TENSILE	ASTM E8	ASTM A370	TEMPER 1
NORMALIZE	AUSTENITIZE	QUENCHANT	DEG F
DEG F	DEG F	OIL	475.
1650.	1500.		
TEMPER 2/SR	TEMP 1 TIME	TEMP 2 TIME	
DEG F	HOURS	HOURS	
475.	2.0	2.0	
TENSILE	YIELD (.2%)	REDUCTION AREA	ELONGATION
PSI	PSI	PERCENT	PERCENT
PCE H 10102 256220.	218900.	35.8	9.7
PCE H 10302 260560.	223410.	46.3	10.6
PCE H 10503 254270.	220610.	14.6	7.6
PCE H 30102 263550.	222210.	35.4	11.0
PCE H 30302 261190.	223640.	46.8	12.3
PCE T 30504 258710.	221100.	44.3	11.8

JOMINY STD	SAE J406	ASTM A255
58 58 57 57 56 56 56 56 56 56 55 55 55 54 53 52 51 51 50 49 49	10 11 12 13 14 15 16 18 20 22 24 26 28 30 32	

MACROETCH SRC SURFACE 1. RANDOM 1. CENTER 1. ASTM E381 MIL STD 430

MAG PARTICLE 2301 AMS 2301
AVG AVG FREQ 0.00 AVG SEV 0.00
MAG PARTICLE 2304 AMS 2304
AVG AVG FREQ 0.00 AVG SEV 0.00

FINISH SIZE RESULTS SCHEDULE: 58828
DECARBURIZATION TOTAL DEPTH SAE J419 ASTM E1077

PCE 01 INCHES .015

HBW SURFACE (LAB) ASTM E10 ASTM A370
PCE 01 HBW 217.
PCE 02 HBW 217.
PCE 03 HBW 217.
PCE 04 HBW 217.
PCE 05 HBW 223.

MATERIAL SOURCES RED. RATIO
TO 1
73.6

TENSILE HT TRTD ASTM E8 ASTM A370
NORMALIZE
PCE 01 DEG F 1625.

NOTES
THE MATERIAL WAS NOT EXPOSED TO MERCURY OR ANY METAL ALLOY THAT IS LIQUID AT AMBIENT TEMPERATURE DURING PROCESSING OR WHILE IN OUR POSSESSION.

CHEMICAL ANALYSIS CONFORMS TO APPLICABLE SPECS: ASTM E415, ASTM E1019, AND ASTM E1085.

AMAN BHATIA
GEN MGR COLD FINISH OPERATIONS
Amn Bhatia

MTM 09 5/19/05

32984



401 ROSE AVE S E
MASSILLON, OH 44646

FAX 330-837-7017

CERTIFICATE OF TESTS REPUBLIC ENGINEERED PRODUCTS

JANUARY 26, 2005
PAGE: 3 OF 3

PURCHASE ORDER: 42904-3
PART NUMBER : S# 47670
ORDER NUMBER: 12-52585-06 821
HEAT : 8969595

PURCHASE ORDER DATE: 05/24/04
ACCOUNT NUMBER : 27759001
SCHEDULE : 58828-

NOTES (CONTINUED)

NO WELDING OR WELD REPAIR WAS PERFORMED ON THIS MATERIAL.

RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENT OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FED STATUTES TITLE 18 CHAPTER 47.

I HEREBY CERTIFY THAT THE MATERIAL LISTED HEREIN HAS BEEN INSPECTED AND TESTED IN ACCORDANCE WITH THE METHODS PRESCRIBED IN THE GOVERNING SPECIFICATIONS AND BASED UPON THE RESULTS OF SUCH INSPECTION AND TESTING HAS BEEN APPROVED FOR CONFORMANCE TO THE SPECIFICATIONS.

CERTIFICATE OF TESTS SHALL NOT BE REPRODUCED EXCEPT IN FULL.

WHEN EVALUATED, MACRO ETCHES WERE VISUALLY RATED ON SAMPLES ETCHED USING HYDROCHLORIC ACID AT A TEMPERATURE 170 DEGREES (F) (+/- 10 DEGREES F)

ALL TESTING HAS BEEN PERFORMED USING THE CURRENT REVISION OF THE TESTING SPECIFICATIONS.

MFG IN THE U.S.A.

ALISON J. BLONDHEIM
NOTARY PUBLIC, STATE OF OHIO
MY COMMISSION EXPIRES MARCH 10, 2009

END OF DATA
FAX SHIP TO 1 COPY ATTENTION BUNNIE ISAKA
MAIL SOLD TO 1 COPY ATTENTION BUNNIE ISAKA
FILE 1 COPY
WITH SHIPMENT 1 COPY

END OF DATA
562-802-7481

SHIPPING AREA:

32984

PRY STEEL CO. CERTIFIES THAT THIS IS
A TRUE COPY OF THE ORIGINAL MILL TEST
REPORT NOW ON FILE.
RECEIVED AND INSPECTED

FEB 1 4 2005

BUNNIE ISAKA
BY BUNNIE ISAKA, P.C. ENGINEER

AMAN BHATIA
GEN MGR COLD FINISH OPERATIONS

Aman Bhatia

MTM
09 5/19/05

04/22/2005 12:14

7138958985

WH LABORATORIES

PAGE 02

Tensile Test Report

Company: Eastwood Mfg. Date: 4/22/2005
 Lab Report #: 05-0420-01
 Attention: Dale Stark P.O. #: 32984
 Identification: AISI 4340
 Procedure: _____ 1-3/8" O.D.
 Process: _____
 Filler: _____ Heat#8989595
 Qualification: _____
 Welder: _____

32984

32984

TENSILE TEST

Lab ID	Dimensions	Area	Yield Lbs	Ultimate Load Lbs	Yield P.S.I.	Tensile P.S.I.
C	.504 round	.1995	31,860	34,700	159,700	174,000

Elongation	Reduction of Area	Fracture	Comments
18.2%	52.3%	Ductile	

Tests performed in accordance with ASTM A370, E8, and WH Laboratories, LLC Quality Assurance Manual.
 2% Offset Yield - Gauge Length 2.000" for .800" and 1.400" for .350" tensile per ASTM A370.
 Test specimens retained for one (1) week maximum; unused material is retained for one (1) month.

Approved by: Robert French
 Robert French

MTM 09 5/19/05

From: Eastwood Manufacturing 281-447-0098 To: MAJOR TOOL & MACHINE

Date: 5/17/2005 Time: 1:48:22 PM

Page 7 of 22

MAY-13-2005 12:55 FROM:

TO: 2814470098

P:2/2

SEI HEAT TREAT

PO BOX 16339 HOUSTON, TX 77122
PHONE (713) 699-3892 FAX (713) 694-0891

CUSTOMER: EASTWOOD MANUFACTURING	CERTIFICATION DATE: MAY 11, 2005
CERTIFICATION/SO NUMBER: 37905	CUSTOMER ORDER NUMBER: 32984

MATERIAL: 4340	NUMBER OF PIECES: 28
DESCRIPTION: 1-3/8" X 8" STUDS SILVER PLATED	PART NUMBER(S): N/A
SPECIFICATION NUMBER: EASTWOOD MANUFACTURING	REFERENCE: N/A

32984

HEAT TREAT PROCESS	TIME AT HEAT	COOLANT
BAKE	950°	AIR

32984

HARDNESS TEST:	NUMBER OF PIECES TESTED:

WE HEREBY CERTIFY THAT THE SERVICE FURNISHED ON THE ABOVE PURCHASE ORDER IS PROVIDED IN ACCORDANCE WITH OUR QUALITY CONTROL MANUAL, REVISION B, DATED JANUARY 21, 2001	QUALITY CONTROL: <i>[Signature]</i>
---	---

MTM 09 5/19/05

INDUSTRIAL METAL FINISHING

CERTIFICATE OF COMPLIANCE

TO: EASTWOOD MFG. 5/86
P.O. BOX 41447
HOUSTON, TX 77241

THIS IS TO CERTIFY THAT THE METAL FINISHING SERVICE RENDERED ON ITEM(S)

126 EA. - 1.375 X 9 DE STUDS
252 EA. - 2.75 OD WASHERS
252 EA. - 1.375 12PT NUTS

ON PURCHASE ORDER 12984 LISTED ON OUR INVOICE #00132581

MEETS OR EXCEEDS THE REQUIREMENTS OF SPECIFICATION NUMBER

CERT: SILVER PLATE PER AMS 2410
NO BAKE REQUIRED

QUALITY PROGRAM DATED: 05/01/93 REVISION: 1 DATED: 04/01/94

Toni McElroy
NAME:

QC Manager 5/10/05
TITLE DATE

12984

MTM 03
5/19/05

EASTWOOD MANUFACTURING
CERTIFICATION OF COMPLIANCE

CUSTOMER : MAJOR TOOL AND MACHINE
ORDER # : P05-0116

DATE : 5-16-05
OUR NUMBER 32982

WE CERTIFY THAT THE MATERIALS SUPPLIED ON YOUR ORDER
LISTED ABOVE COMPLIES WITH THE REQUIREMENTS OF YOUR ORDER
AND OF THE SPECIFICATIONS LISTED BELOW

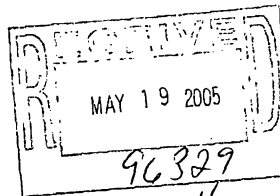
DESCRIPTION :

Lot No.:	Part :	Heat No.:	1 5/8 Round, forged and machined to size
32982-1	56 PIECES DS141-060	8977349	Heat Treat: 36891
	ASTM A286		Silver plate: IMF 00132583
	Silver plated		Post plate bake: none
	Per AMS2410		Tensile test: WH 05-0426-20

TENSILE KSI	YIELD KSI	ELONGATION	REDUCTION	HARDNESS
150	120	14	35	
PASS	PASS	PASS	PASS	PASS



DALE STARK
EASTWOOD MANUFACTURING



1-4
B.7



Washers
nuts



GARY COLD FINISHED BAR PLANTS
PHONE: 219-886-8129 FAX: 219-886-8123

CERTIFICATE OF TESTS REPUBLIC ENGINEERED PRODUCTS SEPTEMBER 27, 2004
PAGE: 1 OF 2

PURCHASE ORDER: 4271475 PURCHASE ORDER DATE: 03/11/04
PART NUMBER: 58-51250 ACCOUNT NUMBER: 27759001
ORDER NUMBER: 12-51689-04 823 SCHEDULE: 54199-
HEAT: 8377349
CHARGE ADDRESS SHIP TO

5/15/05

FRY STEEL COMPANY
BUNNIE ISAKA
13325 MOLETTE ST
SANTA FE SPRINGS CA 90670

FRY STEEL COMPANY
BUNNIE ISAKA
C/O CMI
4201 W 36TH ST
CHICAGO IL 60623

MATERIAL DESCRIPTION

COLD FINISHED STEEL BARS ALLOY ASTM A 331-95 ASTM A 108-03 LEVEL 2 MIL S 5626C
& 1AMD 1 COND C-4 EXC MARK & PARA 4.3.1 & 4.12.1 WAIVED AMS 6382M AMS 2304A AMS
6349C EXC THERMAL TREATMENT AMS 2301J AMS - S - 5626 ISS 12/98 EXC PARA 4.3.1 &
4.12.1 EF-AISI-4140 AIRCRAFT Q TURNED & POLISHED ANN BEFORE TURN

SIZE: RDS 1.6250 X 11.713FT

LADLE CHEMISTRY %

C	MN	P	S	SI	CU	NI	CR	MO	AL
0.42	00.90	.011	.020	0.24	0.18	00.16	00.97	0.21	00.027
V	N	CB	SN						
0.004	.0067	0.002	.009						

SEMI-FINISH RESULTS

AUSTENITIC GRAIN SIZE: AUST GRAIN SZ 7

JOMINY STD SAE J406 ASTM A255
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 18 20 22 24 26 28 30 32
58 57 57 56 56 56 55 55 53 52 50 48 47 45 44 43 40 39 38 38 38 37 38 37

MACROETCH SRC ASTM E381 MIL STD 430
AVG SURFACE 1 RANDOM 1 CENTER 1

MAG PARTICLE 2301 AMS 2301
AVG AVG FREQ 0.00 AVG SEV 0.00

MAG PARTICLE 2304 AMS 2304
AVG AVG FREQ 0.00 AVG SEV 0.00

FINISH SIZE RESULTS

SCHEDULE: 54199
ASTM E10 ASTM A370

BHN HT TRTD (LAB)
PCE 01 SURFACE 187
PCE 02 SURFACE 187
PCE 03 SURFACE 187
PCE 04 SURFACE 187
PCE 05 SURFACE 187

5/15/05

MATERIAL SOURCES
RED. RATIO
TC 1
58.2

NOTES

DECARB NIL

THE MATERIAL WAS NOT EXPOSED TO MERCURY OR ANY METAL ALLOY THAT IS LIQUID AT AMBIENT TEMPERATURE DURING PROCESSING OR WHILE IN OUR POSSESSION.

CHEMICAL ANALYSIS CONFORMS TO APPLICABLE SPECS:
ASTM E 327 ASTM E 1086 ASTM E 415 ASTM E 1019 ASTM E 1085 ASTM E572.

NO WELDING OR WELD REPAIR WAS PERFORMED ON THIS MATERIAL

AMAN BHATIA
GEN MGR COLD FINISH OPERATIONS

Aman Bhatia

5/15/05
MTM
09



GARY COLD FINISHED BAR PLANTS
PHONE: 219-886-8129 FAX: 219-886-8123

CERTIFICATE OF TESTS REPUBLIC ENGINEERED PRODUCTS

SEPTEMBER 27, 2004
PAGE: 2 OF 2

PURCHASE ORDER: 42714-5
PART NUMBER: 54 51250
ORDER NUMBER: 12-51689-04 823
HEAT: 8977349

PURCHASE ORDER DATE: 03/11/04
ACCOUNT NUMBER: 27759001
SCHEDULE: 54199-

NOTES (CONTINUED)

I HEREBY CERTIFY THAT THE MATERIAL HEREIN HAS BEEN INSPECTED AND TESTED IN ACCORDANCE WITH THE METHODS PRESCRIBED IN THE GOVERNING SPECIFICATIONS AND BASED UPON THE INSPECTION AND TESTING HAS BEEN APPROVED FOR CONFORMANCE TO THE SPECIFICATIONS

CERTIFICATE OF TESTS SHALL NOT BE REPRODUCED EXCEPT IN FULL.

ALL TESTING HAS BEEN PERFORMED USING THE CURRENT REVISION OF THE TESTING SPECIFICATION.

MFG IN THE U.S.A.

EVELYN GREENE
NOTARY PUBLIC, STATE OF INDIANA
MY COMMISSION EXPIRES OCTOBER 10, 2009

END OF DATA
FAX BY FAX PC 1 COPY ATTENTION BUNNIE ISAKA
MAIL SOLD TO 1 COPY ATTENTION BUNNIE ISAKA
FILE 1 COPY
WITH SHIPMENT 1 COPY PRINTED AT SHIPPING AREA

END OF DATA
562-802-7481

REPUBLIC CO CERTIFIES THAT THIS IS
A TRUE COPY OF THE ORIGINAL MILL TEST
REPORT NOW ON FILE
AT THE WORK AREA INSPECTED

OCT 05 2004

Bunnie K. Isaka
BY BUNNIE K. ISAKA - Q.C. MANAGER

AMAN BHATIA
GEN MGR, COLD FINISH OPERATIONS

Aman Bhatia

5/16/05
MTM
09

Tensile Test Report

Company: Eastwood Mfg. Date: 4/27/2005
 Attention: Dale Stark Lab Report #: 05-0428-20
 Identification: AISI 4140 P.O. #: 32882
 Procedure: _____ 1-5/8" Diameter Bar
 Process: _____
 Filler: _____
 Qualification: _____
 Welder: _____

TENSILE TEST

Lab ID	Dimensions	Area	Yield Lbs	Ultimate Load Lbs	Yield P.S.I.	Tensile P.S.I.
E	.252 round	.0489	7,140	8,000	143,100	160,400

Elongation	Reduction of Area	Fracture	Comments
18.8%	61.2%	Ductile	

Tests performed in accordance with ASTM A370, E8, and WH Laboratories, LLC Quality Assurance Manual.
 2% Offset Yield - Gage Length 2.000" for .500", and 1.400" for .350" tensile per ASTM A370.
 Test specimens retained for one (1) week maximum; unused material is retained for one (1) month.

Approved by: Robert French
 Robert French

5/19/05


INDUSTRIAL METAL FINISHING

CERTIFICATE OF COMPLIANCE

TO: EASTWOOD MFG. 5/86
P.O. BOX 41447
HOUSTON, TX 77241

THIS IS TO CERTIFY THAT THE METAL FINISHING SERVICE RENDERED ON ITEM(S)

126 EA. - 1.375 X 9 DE STUDS
252 EA. - 2.75 OD WASHERS
252 EA. - 1.375 12PT NUTS

ON PURCHASE ORDER 12984 LISTED ON OUR INVOICE #00132583

MEETS OR EXCEEDS THE REQUIREMENTS OF SPECIFICATION NUMBER

CERT: SILVER PLATE PER AMS 2410
NO BAKE REQUIRED

QUALITY PROGRAM DATED: 05/01/93 REVISION: 1 DATED: 04/01/94

Tair McArthur
NAME:

QC Manager 5/19/05
TITLE DATE

12984

5/19/05
MTM
05

EASTWOOD MANUFACTURING
CERTIFICATION OF COMPLIANCE

CUSTOMER : MAJOR TOOL AND MACHINE
ORDER # : P05-01162

DATE : 5-16-05
OUR NUMBER 32983

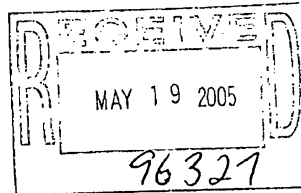
WE CERTIFY THAT THE MATERIALS SUPPLIED ON YOUR ORDER
LISTED ABOVE COMPLIES WITH THE REQUIREMENTS OF YOUR ORDER
AND OF THE SPECIFICATIONS LISTED BELOW

DESCRIPTION :

Lot No.:	Part :	Heat No.:	
32983-1	56 PIECES DS141-079	8990135	2 3/4 Round, machined to size
	ASTM A286		Heat Treat: 36891
	Silver plated		Silver plate: IMF 00132563
	Per AMS2411		Post plate bake: SEI 37904
			Tensile test: WH 05-0420-01

TENSILE KSI	YIELD KSI	ELONGATION	REDUCTION	HARDNESS
150	120	14	35	
PASS	PASS	PASS	PASS	PASS

DALE STARK
EASTWOOD MANUFACTURING



1-4
B.A

washers





401 ROSE AVE S E
MASSILLON, OH 44646

FAX 330-837-7017

CERTIFICATE OF TESTS REPUBLIC ENGINEERED PRODUCTS

FEBRUARY 14, 2005
PAGE: 1 OF 3

PURCHASE ORDER: 43004-8 PURCHASE ORDER DATE: 07/13/04
PART NUMBER : S# 48960 ACCOUNT NUMBER : 27759001
ORDER NUMBER: 12-52806-08 821 SCHEDULE : 60703-
HEAT : 8990135
CHARGE ADDRESS SHIP TO

541068

FRY STEEL COMPANY
BUNNIE ISAKA
13325 MOLETTE ST
SANTA FE SPRINGS CA 90670

FRY STEEL COMPANY
BUNNIE ISAKA
C/O CMI
4201 W 36TH ST
CHICAGO IL 60623

MATERIAL DESCRIPTION
COLD FINISHED STEEL BARS ALLOY DOUGLAS SPEC DMS-1555H GRADE B DTD 07/02/91 EXC
MARK & PARA 3.4 OIL TEMP & 3.5 BOEING SPEC BMS 7-28G LTV VOUGHT AERO SPEC CVA
1-585G & AMD 1 EXC RED/AREA ASTM A 331-95 ASTM A 108-03 LEVEL 1 MIL 8 5000E
COND E-3 EXC MARK AMS 6415R AMS 6409B AMS 2310E AMS 2301J AMS 2304A AMS 6484B
AMS - S - 5000 ISSUE DTD 3/99 COND E3 EXC MARK EF-AISI-E-4340 AIRCR
AFT Q DBL TRANSV MECH PROP ROUGH TURNED NORM & SUBCRITICAL ANN BEFORE TURN S
STRAIGHT REST CHEM FREE FROM DECARB

SIZE: RDS 2.7500/2.7734 X 11 /13FT
LADLE CHEMISTRY %
C MN P S SI CU NI CR MO AL
0.42 00.73 .007 .004 0.26 0.15 01.74 00.86 0.20 00.034
V N CB SN
0.003 .0057 0.002 .010

SEMI-FINISH RESULTS
AUSTENITIC GRAIN SIZE
AUST GRAIN SZ 7.

DEVELOPED TENS TRANS
NORMALIZE
DEG F
1650.
TEMP 1 TIME
HOURS
2.0
ASTM E8
AUSTENITIZE
DEG F
1550.
OIL
ASTM A370
QUENCHANT
TEMPER 1
DEG F
900.

TENSILE
PSI
REDUCTION AREA
PERCENT
PCE H 20102 187750. 42.6
PCE H 20302 190780. 50.8
PCE T 20503 189630. 49.5
PCE H 40102 190530. 49.0
PCE H 40302 190020. 48.4
PCE T 40503 187050. 51.2

32984

DEVELOPED TRANS TENSILE
NORMALIZE
DEG F
1650.
TEMPER 2/SR
DEG F
475.
TEMP 1 TIME
HOURS
2.0
TEMP 2 TIME
HOURS
2.0
ASTM E8
AUSTENITIZE
DEG F
1500.
OIL
ASTM A370
QUENCHANT
TEMPER 1
DEG F
475.

TENSILE
PSI
YIELD (.2%)
PSI
REDUCTION AREA
PERCENT
ELONGATION
PERCENT
PCE H 20102 269150. 229500. 33.4 8.7
PCE H 20302 265160. 228430. 36.0 11.6
PCE H 20503 264570. 227270. 39.5 10.6
PCE H 40102 267580. 228000. 39.2 9.6
PCE H 40302 268390. 228870. 42.0 11.4
PCE T 40503 266130. 220000. 40.3 13.0

27110

AMAN BHATIA
GEN MGR, COLD FINISH OPERATIONS

Aman Bhatia

5/19/05
MTM
09



401 ROSE AVE S E
MASSILLON, OH 44646

FAX 330-837-7017

CERTIFICATE OF TESTS REPUBLIC ENGINEERED PRODUCTS

FEBRUARY 14, 2005
PAGE: 2 OF 3

PURCHASE ORDER: 43004-8 PURCHASE ORDER DATE: 07/13/04
PART NUMBER : 9# 48960 ACCOUNT NUMBER : 27759001
ORDER NUMBER: 12-52806-08 821 SCHEDULE : 60703-
HEAT : 8990135

DEVELOPED TRANS TENSILE		SEMI-FINISH RESULTS (CONTINUED)		
NORMALIZE		ASTM E8	ASTM A370	TEMPER 1
DEG F		AUSTENITIZE	QUENCHANT	DEG F
1650.		DEG F	OIL	475.
TEMPER 2/SR		TEMP 1 TIME	TEMP 2 TIME	
DEG F		HOURS	HOURS	
475.		2.0	2.0	
TENSILE		YIELD (.2%)	REDUCTION AREA	ELONGATION
PSI		PSI	PERCENT	PERCENT
PCE H 20102	263440.	226720.	23.3	9.3
PCE H 20302	262050.	225300.	10.9	6.3
PCE T 20503	263070.	223390.	37.1	10.0
PCE H 40102	261610.	225430.	10.9	3.0
PCE H 40302	260030.	225620.	33.3	10.6
PCE T 40503	262620.	230000.	36.0	11.5

JOMINY STD		SAE J406	ASTM A255																				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18	20	22	24	26	28	30	32
59	59	58	58	58	57	57	57	57	57	57	56	56	56	56	56	56	55	55	54	54	53	52	52

MACROETCH SRC SURFACE 1. RANDOM 1. CENTER 1. ASTM E381 MIL STD 430

MAG PARTICLE 2301 AMS 2301
AVG AVG FREQ 0.00 AVG SEV 0.00
MAG PARTICLE 2304 AMS 2304
AVG AVG FREQ 0.00 AVG SEV 0.00

HBW HT TRTD (LAB)		FINISH SIZE RESULTS		SCHEDULE: 60703
SURFACE		ASTM E10	ASTM A370	
PCE 01	SURFACE 197.			
PCE 02	SURFACE 192.			
PCE 03	SURFACE 192.			
PCE 04	SURFACE 192.			
PCE 05	SURFACE 197.			

MATERIAL SOURCES
RED. RATIO
TO 1
20.9

TENSILE HT TRTD NORMALIZE ASTM E8 ASTM A370
DEG F
PCE 01 1625.

----- NOTES -----

DECARB NIL
THE MATERIAL WAS NOT EXPOSED TO MERCURY OR ANY METAL ALLOY THAT IS LIQUID AT AMBIENT TEMPERATURE DURING PROCESSING OR WHILE IN OUR POSSESSION.

CHEMICAL ANALYSIS CONFORMS TO APPLICABLE SPECS: ASTM E415, ASTM E1019, AND ASTM E1085.

NO WELDING OR WELD REPAIR WAS PERFORMED ON THIS MATERIAL.

RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENT OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FED STATUES TITLE 18 CHAPTER 47.

AMAN BHATIA
GEN MGR COLD FINISH OPERATIONS

Amn Bhatia

5/19/05
MTM 09

32984



401 ROSE AVE S E
MASSILLON, OH 44646

FAX 330-837-7017

CERTIFICATE OF TESTS REPUBLIC ENGINEERED PRODUCTS

FEBRUARY 14, 2005
PAGE: 3 OF 3

PURCHASE ORDER: 43004-8	PURCHASE ORDER DATE: 07/13/04
PART NUMBER : S# 48960	ACCOUNT NUMBER . . . : 27759001
ORDER NUMBER: 12-52806-08 821	SCHEDULE : 60703-
HEAT : 8990135	

NOTES (CONTINUED)

I HEREBY CERTIFY THAT THE MATERIAL LISTED HEREIN HAS BEEN INSPECTED AND TESTED IN ACCORDANCE WITH THE METHODS PRESCRIBED IN THE GOVERNING SPECIFICATIONS AND BASED UPON THE RESULTS OF SUCH INSPECTION AND TESTING HAS BEEN APPROVED FOR CONFORMANCE TO THE SPECIFICATIONS.

CERTIFICATE OF TESTS SHALL NOT BE REPRODUCED EXCEPT IN FULL.

WHEN EVALUATED, MACRO ETCHES WERE VISUALLY RATED ON SAMPLES ETCHED USING HYDROCHLORIC ACID AT A TEMPERATURE 170 DEGREES (F) (+/- 10 DEGREES F)

ALL TESTING HAS BEEN PERFORMED USING THE CURRENT REVISION OF THE TESTING SPECIFICATIONS.

MFG IN THE U.S.A.

ALISON J. BLONDHEIM
NOTARY PUBLIC, STATE OF OHIO
MY COMMISSION EXPIRES MARCH 10, 2009

END OF DATA	CC	END OF DATA
FAX SHIP TO 1 COPY	ATTENTION BUNNIE ISAKA	562-802-7481
MAIL SOLD TO 1 COPY	ATTENTION BUNNIE ISAKA	
FILE 1 COPY		
WITH SHIPMENT 1 COPY		SHIPPING AREA:

32984

FRY STEEL CO. CERTIFIES THAT THIS IS
A TRUE COPY OF THE ORIGINAL MILL TEST
REPORT NOW ON FILE.
RECEIVED AND INSPECTED

FEB 21 2005

Bunnie Isaka
BY: Bunnie Isaka

AMAN BHATIA
GEN MGR COLD FINISH OPERATIONS
Aman Bhatia



04/22/2005 12:14 7138958906

WH LABORATORIES

PAGE 01

Tensile Test Report

Company: Eastwood Mfg. Date: 4/22/2005
 Attention: Dale Stark Lab Report #: 05-0420-01
 Identification: AISI 4340 P.O. #: 32984
 Procedure: _____ 2-3/4" O.D. Washer
 Process: _____
 Filler: _____ Heat#8990135
 Qualification: _____
 Welder: _____

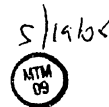
TENSILE TEST

Lab ID	Dimensions	Area	Yield Lbs	Ultimate Load Lbs	Yield P.S.I.	Tensile P.S.I.
C	.245 round	.0471	7,860	8,770	166,700	186,000

Elongation	Reduction of Area	Fracture	Comments
14.0%	41.7%	Ductile	Transverse

Tests performed in accordance with ASTM A370, E8, and WH Laboratories, LLC Quality Assurance Manual.
 2% Offset Yield - Gage Length 2.000" for .500", and 1.400" for .350" tensile per ASTM A370.
 Test specimens retained for one (1) week maximum; unused material is retained for one (1) month.

Approved by: Robert French
 Robert French



32984

32984

From: Eastwood Manufacturing 281-447-0098 To: MAJOR TOOL & MACHINE

Date: 5/17/2005 Time: 1:48:22 PM

Page 18 of 22

MAY-13-2005 12:53 FROM:

TO: 2814470098

P:1/2

SEI HEAT TREAT

PO BOX 16339 HOUSTON, TX 77222
PHONE (713) 699-3892 FAX (713) 694-0891

CUSTOMER: EASTWOOD MANUFACTURING	CERTIFICATION DATE: MAY 11, 2005
CERTIFICATION/SO NUMBER: 37904	CUSTOMER ORDER NUMBER: 32983

MATERIAL: 4340	NUMBER OF PIECES: 52
DESCRIPTION: 2-3/4" WASHERS SILVER PLATED	PART NUMBER(S): N/A
SPECIFICATION NUMBER: EASTWOOD MANUFACTURING	REFERENCE: N/A

HEAT TREAT PROCESS	TIME AT HEAT	COOLANT
<i>BAKE</i>	<i>900°</i>	<i>45 MIN</i>
		<i>AIR</i>

HARDNESS TEST:	NUMBER OF PIECES TESTED:

WE HEREBY CERTIFY THAT THE SERVICE FURNISHED ON THE ABOVE PURCHASE ORDER IS PROVIDED IN ACCORDANCE WITH OUR QUALITY CONTROL MANUAL, REVISION B, DATED JANUARY 21, 2001	QUALITY CONTROL: <i>Javi</i>
---	--

5/19/05
MTM 09

37904

32983

MAY-17-2005 12:25 FROM:

TO: 2814470098

P: 1/1

SEI HEAT TREAT

PO BOX 16329 HOUSTON, TX 77222
 PHONE (713) 699-3892 FAX (713) 694-0891

CUSTOMER: EASTWOOD MANUFACTURING	CERTIFICATION DATE: APRIL 13, 2005
CERTIFICATION/SO NUMBER: 36891	CUSTOMER ORDER NUMBER: 32984

MATERIAL: 4340	NUMBER OF PIECES: 378
DESCRIPTION: 128 PCS. 1-3/8" X 9" DE STUDS 252 PCS. 2.75" WASHERS	PART NUMBER(S): N/A
SPECIFICATION NUMBER: EASTWOOD MANUFACTURING	REFERENCE: N/A

HEAT TREAT PROCESS	TIME AT HEAT	COOLANT
<i>HARDEN</i>	<i>1575°</i>	<i>3hr</i>
<i>TEMPER</i>	<i>980°</i>	<i>oil Q</i>
		<i>AIR</i>

HARDNESS TEST: <i>37-38^R</i>	NUMBER OF PIECES TESTED: <i>10</i>
---	--

WE HEREBY CERTIFY THAT THE SERVICE FURNISHED ON THE ABOVE PURCHASE ORDER IS PROVIDED IN ACCORDANCE WITH OUR QUALITY CONTROL MANUAL, REVISION B, DATED JANUARY 21, 2001	QUALITY CONTROL: <i>Louis Fl</i>
---	--

INDUSTRIAL METAL FINISHING

CERTIFICATE OF COMPLIANCE

TO: EASTWOOD MFG. 5/86
P.O. BOX 41447
HOUSTON, TX 77241

THIS IS TO CERTIFY THAT THE METAL FINISHING SERVICE RENDERED ON ITEM(S)

126 EA. - 1.375 X 9 DE STUDS
252 EA. - 2.75 OD WASHERS
252 EA. - 1.375 12PT NUTS

ON PURCHASE ORDER 32984 LISTED ON OUR INVOICE #00132583

MEETS OR EXCEEDS THE REQUIREMENTS OF SPECIFICATION NUMBER

CERT: SILVER PLATE PER AMS 2410
NO BAKE REQUIRED

QUALITY PROGRAM DATED: 05/01/93 REVISION: 1 DATED: 04/01/94

Tina McPherson
NAME:

Q.C. Manager 5/10/05
TITLE DATE

32984

5/19/05
MTR
02

03/04/05 13:38 FAX 830 834 9427
 MAJOR TOOL & MACHINE INC
 1458 E 19TH ST
 INDIANAPOLIS IN 46218

McMASTER CARR SUPPLY #3
YOUR PURCHASE
ORDER NUMBER
 P05-01260
 Today's Date:

McMASTER-CARR
 600 COUNTY LINE ROAD
 ELMHURST IL 60126-2081
 IF THERE ARE ANY QUESTIONS ABOUT THIS
 SHIPMENT CONTACT OUR SALES DEPARTMENT
 (630)833-0300

002

PAGE
 1
MCM NUMBER
 6148181-01

Warehouse Location	McMaster Carr Part Number	FBI Quantity	Item Description	Your Line	Your Order	This Shipment
PACKING EXTRA LIST	74765 A86	1 EA	LOCTITE PRISM SUPER GLUE TOUGHENED, NUMBER 411, 1-POUND BOTTLE, CLEAR HZ-M 1	1	1 EA	1
	74765 A86	1 EA	LOCTITE PRISM SUPER GLUE TOUGHENED, NUMBER 411, 1-POUND BOTTLE, CLEAR HZ-M 1	2	1 EA	1
		XXXXXX	Information about the rest of your order		XXXXXX	
	74765 A86		LOCTITE PRISM SUPER GLUE Balance of 1 EA expected to ship by 3/7/2005	3	1 EA	
	74765 A86		LOCTITE PRISM SUPER GLUE Balance of 1 EA expected to ship by 3/7/2005	4	1 EA	
	74765 A86		LOCTITE PRISM SUPER GLUE Balance of 1 EA expected to ship by 3/7/2005	5	1 EA	
74765 A86		LOCTITE PRISM SUPER GLUE Balance of 1 EA expected to ship by 3/7/2005	6	1 EA		

Certificate of Compliance
 This is to certify that according to our records, the material furnished on this purchase order was supplied in compliance to the description listed, and as illustrated in our catalog.

Nancy Lancaster
 Quality Control

REFER TO: 6148181-01
 MAJOR TOOL & MACHINE INC

**TAG
 CCP**

PACKER	NUMBER OF CARTONS	FILLER
--------	-------------------	--------

LNS:
 2

CYCLE

WEIGHT 2

MAR - 4 2005

93966

1, 2 B-1

MTM 03

3/4/05

MCM NO. 6148181-01 04

PURCHASE ORDER
 P05-01260

FROM:
 McMASTER-CARR
 600 COUNTY LINE ROAD
 ELMHURST IL 60126-2081 USA

SHIP TO:

MAJOR TOOL & MACHINE INC
 1458 E 19TH ST
 INDIANAPOLIS IN 46218

T3CEO

CCP



Shipping List 072435
Customer No 101193
Sales Order Shipper

Sold to : STANDARD GRINDING & MFG CO
3721 W. CHASE AVENUE
SKOKIE, IL 60076
United States

Ship to : STANDARD GRINDING & MFG CO
3721 W. CHASE AVENUE
SKOKIE, IL 60076
United States

Ship Date	Customer PO	Sales Order	# of Boxes	Weight	Ship VIA	Bill of Lading	FOB
05/17/2005	60624	065171-00	1	0	YELLOW	072435	DE
Item	Part / Description / Details				Order Quantity	Ship Qty	
000001	39G1CNT73125NMWLF U/M SHT SO Item 4				1.00000		
	G-11-CR 48" untrimmed X 36" untrimmed Thickness: 3.125" +/- .110" PLEASE NOTE THAT THERE IS NO NEMA STANDARD FOR G-11 CR SHEET SPAULDING C OF C TO G-11 CR SHEET NO TESTING REQUIRED AT TIME OF ORDER <i>Sheet lead 3.850 TK</i>					1.00000	

CERTIFICATE of CONFORMANCE

WE HEREBY CERTIFY THAT THE MATERIAL SUPPLIED ON THIS ORDER WAS MADE IN ACCORDANCE WITH THE STANDARDS AND PROCESSES ESTABLISHED BY SPAULDING COMPOSITES COMPANY FOR THE REQUIREMENTS OF MATERIAL DESCRIBED ABOVE.

LOT # _____ DOM.
Authorized By: Mark L. Caudillo Date 05/17/2005



Spaulding
COMPOSITES

55 Nadeau Drive
Rochester, NH 03867
Ph: (603) 332-0555 Fax: (603) 332-5357
www.spauldingcom.com

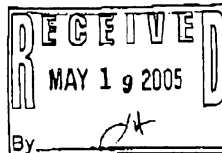
Shipping List 072434

Customer No 101193
Sales Order Shipper

Sold to : STANDARD GRINDING & MFG CO
3721 W. CHASE AVENUE
SKOKIE, IL 60076
United States

Ship to : STANDARD GRINDING & MFG CO
3721 W. CHASE AVENUE
SKOKIE, IL 60076
United States

Ship Date	Customer PO	Sales Order	# of Boxes	Weight	Ship VIA	Bill of Lading	F O B
05/17/2005	60624	065169-00	1	716	YELLOW	072434	DE
Item	Part / Description / Details				Order Quantity	Ship Qty	
000001	39G1CNT71850NMWLF U/M SHT SO Item 5 G-11 CR 48" UNTRIMMED X 36" UNTRIMMED THK: 1.850" +/- .070" PLEASE NOTE THAT THERE IS NO NEMA STANDARD FOR G-11 CR SHEET SPAULDING C OF C TO G-11 CR SHEET NO TESTING REQUIRED AT TIME OF ORDER				1.00000	1.00000	



5/31/05



CERTIFICATE of CONFORMANCE

WE HEREBY CERTIFY THAT THE MATERIAL SUPPLIED ON THIS ORDER WAS MADE IN ACCORDANCE WITH THE STANDARDS AND PROCESSES ESTABLISHED BY SPAULDING COMPOSITES COMPANY FOR THE REQUIREMENTS OF MATERIAL DESCRIBED ABOVE.

LOT #

DOM.

Authorized By:

Mark F. Caudillo

Date: 05/17/2005

Customer Copy

Page # 1

Form: SCSHIP Rev: 8/99

0003/003

ATLAS FIBRE CO.

847 674 1723

05/28/05 13:00

METRODE PRODUCTS LTD
 HANWORTH LANE
 CHERTSEY SURREY
 ENGLAND KT16 9LL
 Tel: +44 (0)1932 566721
 Fax: +44 (0)1932 565168
 Email: info@metrode.com
 Internet: http://www.metrode.com



TEST CERTIFICATE
 THIS PRODUCT HAS BEEN MANUFACTURED
 AND SUPPLIED THROUGH A SYSTEM APPROVED
 TO ISO 9001 & 2 OR EQUIVALENT

TEST CERTIFICATE NUMBER 194277



INVOICE TO
EUROWELD LTD 255 ROLLING HILLS ROAD MOORESVILLE NC 28117 USA

DESPATCHED TO:
EUROWELD LTD 255 ROLLING HILLS ROAD MOORESVILLE NC 28117 USA

BATCH No.	W020132
OUR ORDER REF.	S01788013 / 1
DATE	09/03/05
PRODUCT	ER9316MNNF TIG 2.4MM
FORM	TIG WIRE
SPECIFICATION	BS EN 12072:2000 W 20 16 3 Mn L

IMPORTANT: Any liability arising from either reliance on this certificate, or use of our products, is strictly limited and governed by our conditions of business.

CUSTOMER ORDER No.
N. 05--39

DELIVERY NOTE DOCUMENT No.
DN0106163

QUANTITY (Kg)
17.5000

CHEMICAL ANALYSIS (WEIGHT %)				TYPE		CERTIFIED MATERIAL TEST REPORT: BS EN 10204: 3.1.B							
C	Mn	Si	S	P	Cr	Ni	Mo	N	Cu				
0.015	7.43	0.42	0.006	0.014	19.9	15.4	2.62	0.14	0.20				

TYPICAL ALL-WELD METAL MECH. PROPERTIES, AS WELDED:-- TS: >600 N/mm ² ; 0.2%PS: >400 N/mm ² ; EL. ON AD: 40 %; CVN @ -196 DEG.C: 70 J.
--

Metrode Products Ltd. certifies that the above material conforms to the indicated specifications
<i>[Signature]</i>
B. KYIET QA MANAGER

NOTES: *Ni includes incidental Co unless otherwise specified.
 **Nb (Cb) includes incidental Ta unless otherwise specified.
 † ferrite is given as FN (Ferrite Number) and measured on all-weld pad using instrument calibrated against NBS-related secondary standards (See AWS A4 2-97) unless otherwise specified.

3/23/05
 44534
 Line 1
 B-2

All Test certificates issued by METRODE will contain this embossed seal.
 Any recipient of a copy of METRODE Test Certificate without the seal should ensure from the supplier that it is a true and accurate reproduction of the original.

mc106579.tif (1652x2103x2.tif)

METRODE PRODUCTS LIMITED
HANWORTH LANE, CHERTSEY
SURREY, UK, KT16 9LL
 Tel: +44 (0) 1832 586721
 Fax: +44 (0) 1832 585188
 Email: Info@metrode.com
 Website: www.metrode.com

**CERTIFIED MATERIAL
 TEST REPORT**

THIS PRODUCT HAS BEEN MANUFACTURED
 AND SUPPLIED THROUGH A SYSTEM
 APPROVED TO ISO 9001 & 2 OR EQUIVALENT



TEST CERTIFICATE NUMBER

193695

INVOICE TO
EUROWELD LTD
255 ROLLING HILLS ROAD
MOORESVILLE
NC 28117
USA

DESPATCHED TO
EUROWELD LTD
255 ROLLING HILLS ROAD
MOORESVILLE
NC 28117
USA

CUSTOMER ORDER NUMBER	N.05-34
DELIVERY NOTE DOCUMENT NUMBER	DN0105859
QUANTITY (KG)	15.0000
OUR ORDER REFERENCE	SO1787730 / 1
DATE	02/03/05

METRODE WELDING CONSUMABLE	ER316MNNF TIG 2.4mm
FORM	TIG WIRE
BATCH NUMBER	WO20132
SPECIFICATION	BS EN 12072:2000 W 20 18 3 Mn L

Chemical Analysis (Weight %)						Type: BS EN 10204: 3.1.B / ASME SFA-5.01: Sch. H					
C	Mn	Si	S	P	Cr	Ni	Mo	N	Cu		
0.015	7.43	0.42	0.008	0.014	19.9	15.4	2.62	0.14	0.20		

--	--	--	--	--	--	--	--	--	--	--	--

Mechanical Tests						Type: BS EN 10204: 2.2 / ASME SFA-5.01: Sch. G					
Tensile Tests						Impact Energies					
Condition	Test Temperature	Rp0.2% (MPa)	Rm (MPa)	A4 (%)	Z (%)	Temperature (°C)	Impact Energy (J)	Lateral Expansion (mm)			
AS-WELDED	ROOM	>400	>600	40	-	-196	70	-			

Metrode Products Limited certifies that the above material conforms to the included specifications.

This document is produced electronically and is valid without signature.

IMPORTANT: Any liability arising from either reliance on this certificate, or use of our products, is strictly limited and governed by our conditions of business.

Barrie Kyle - Q.A. Manager

ASME SFA-5.01: Lot classification: S4

3/3/05
93911
Line 1 B.2

Notes:
 % Ni includes incidental Co unless otherwise specified
 % Mn (Co) includes incidental Th unless otherwise specified
 Fatigue is given as FM (Fatigue Number) and measured on all-weld pad using instrument calibrated against NBS-related secondary standards (see AWS A4.1-07) unless otherwise specified

3/7/05



INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE141-116 - Item: 13

Workorder: 65707/1-0 Sub:1 Op:90

Part: SE141-116 - MODULAR COIL WINDING FORM TYPE-C - PRODUCTION MODULAR COIL WINDING FORM TYPE-C

Drawing ID: SE141-116 Rev: 6			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		RECORD RANGE UPPER AND LOWER LIMITS OF MAG PERMEABILITY READI (Mu) FOR THE AS CAST SURFACES	MASTER GAGE	QA		J-1270	LESS THAN 1.01 (LESS THAN RANGE OF GAGE)	212-J.LE			A
(10)								09-20-05			
*		RECORD RANGE UPPER AND LOWER LIMITS OF MAG PERMEABILITY READI (Mu) FOR THE MACHINED SURFACES	MASTER GAGE	QA		J-1270	LESS THAN 1.01 (LESS THAN RANGE OF GAGE)	212-J.LE			A
(20)								09-20-05			

Quality Assurance Documentation for Part ID: SE141-116 - Item: 15

Workorder: 65707/1-0 Sub:1 Op:120

Part: SE141-116 - MODULAR COIL WINDING FORM TYPE-C - PRODUCTION MODULAR COIL WINDING FORM TYPE-C

Drawing ID: SE141-116 Rev: 6			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY		
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT
1* (10)	E8	47.19 ± .03	CMM	QA		00064	47.17 - 47.18	339-E.R 09-29-05		A
1* (11)	G8	R17.00 +.25 -.00	CMM	QA		00064	17.09	339-E.R 09-29-05		A
1* (20)	B8	47.19 ± .03	CMM	QA		00064	47.18 - 47.19	339-E.R 09-29-05		A
1* (30)	D6	47.19 ± .03	CMM	QA		00064	47.18 - 47.19	339-E.R 09-29-05		A
1* (40)	C6	47.19 ± .03	CMM	QA		00064	47.20	339-E.R 09-29-05		A
1* (50)		∥.02 A	CMM	QA		00064	.0109	339-E.R 09-29-05		A
1* (60)	B6	∥.02 A	CMM	QA		00064	.0045	339-E.R 09-29-05		A
1* (70)	F3	∠.5 A B C	CMM	QA		00064	REFERENCE IGES INF RMATION	339-E.R 09-29-05		A
2* (80)	H6	2X R.187 +.025 -.005	INDICATOR	QA		J-651	.185 - .187	339-E.R 09-29-05		A
2* (90)	G8	2X .03 X 45°		QA		VISUAL	NOT PRESENT	339-E.R 09-29-05		R
2* (100)	G8	.40 ± .010	CALIPER	QA		J-707	.39 - .41	339-E.R 09-29-05		A
2* (110)	G8	2X .030 X 45°		QA		VISUAL	NOT PRESENT	339-E.R 09-29-05		R
2* (120)	F7	2X .32	CALIPER	QA		J-707	.31 - .33	339-E.R 09-29-05		A
2* (130)	F7	2X R.11	RADIUS GAGE	QA		R-25	.12	339-E.R 09-29-05		A
2* (140)	G6	∠.1 R S T P TO M	CMM	QA		00064	REFERENCE IGES INF RMATION	339-E.R 09-29-05		R
2*	G6	4.790 ± .005		QA		VISUAL	ACCEPT	339-E.R		A



INSPECTION DATA CHECKLIST

(150)								09-29-05		
2* (160)	G3		CMM	QA	00064	REFERENCE IGES INF RMATION	339-E.R	09-29-05		R
		Q TO N								
2* (170)	G3	4.790 ± .005 RECORD NUMBER USED TO IDENTIFY POINT Q		QA	VISUAL	ACCEPT	339-E.R	09-29-05		A
2* (180)	F5		CMM	QA	00064	REFERENCE IGES INF RMATION	339-E.R	09-29-05		R
		M TO N								
2* (190)	C5		CMM	QA	00064	.0043 - .1657 , .62 3 - .626	339-E.R	09-29-05		R
		96X Ø.375-16 UNC .188 DEEP C'BORE Ø.625 AS SHOWN	THREAD PLUG GA		A-46					
2* (200)	B4	2X .03 X 45°		QA	VISUAL	ACCEPT	339-E.R	09-29-05		A
3* (210)	G7		CMM	QA	00064	.010 - .043	339-E.R	09-29-05		R
		8X Ø1-8 UNC THRU								
3* (220)	H4	.25 ± .01	CMM	QA	00064	SET	339-E.R	09-29-05		A
3* (230)	H3		CMM	QA	00064	REFERENCE IGES INF RMATION	242-M.G	11-09-05		A
3* (240)	F3	.25 ± .01	CMM	QA	00064	SET	339-E.R	09-29-05		A
3* (250)	F3		CMM	QA	00064	REFERENCE IGES INF RMATION	242-M.G	11-09-05		A
3* (260)	F5	R76.00	CMM	QA	00064	REFERENCE IGES INF RMATION	339-E.R	09-29-05		R
3* (270)	E5	R73.70	CMM	QA	00064	REFERENCE IGES INF RMATION	339-E.R	09-29-05		R
3* (280)	E4		CMM	QA	00064	.010 - .031	339-E.R	09-29-05		R
		8X Ø1.13 THRU BACK SPOT FACE Ø2.38 MIN DEPTH FOR C'UP								
4* (290)	H8		CMM	QA	00064	.0304 - .0442 , >.3. 00 SPOT, 1.87 - 1.8 8 DIA.	339-E.R			R
		3X Ø1.88 THRU Ø3.00 BACK SPOTFACE								



Major

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INSPECTION DATA CHECKLIST

(290)		MIN TO CLEANUP	SCALE			J-922		09-29-05		
4*	H7	⊕ ∅.01 D A N	CMM	QA		00064	.019 - .020 , R .7	339-E.R		R
(300)		3X SPH R.75 TO .75 DEEP					4 - .745	09-29-05		
4*	H6	⊕ ∅.01 D A N	CMM	QA		00064	0.009 - 0.059, >3.0	295-C.W		R
(310)		17X Ø1.88 THRU Ø3.00 BACK SPOTFACE MIN TO CLEANUP	SCALE			J-922		10-01-05		
4*	H5	⊕ ∅.01 D A N	CMM	QA		00064	0.001 - 0.007. >2.3	295-C.W		A
(320)		3X Ø1.13 Ø2.38 BACK SPOTFACE MIN TO CLEANUP					8 SPOT	10-01-05		
4*	E6	⊕ ∅.01 D A N	CMM	QA		00064	.022 - .039	339-E.R		R
(340)		3X Ø1.375-6 UNC THRU						09-29-05		
4*	E6	⊕ ∅.01 D A N	CMM	QA		00064	.0019 - .0182, >3.	339-E.R		R
(350)		5X Ø1.88 THRU Ø3.00 BACK SPOTFACE MIN TO CLEANUP	SCALE			J-922		09-29-05		
4*	D4	⊕ ∅.01 D A N	CMM	QA		00064	.018, >3.00 SPOT, 1.879 DIA.	339-E.R		R
(360)		Ø1.88 THRU Ø3.00 BACK SPOTFACE MIN TO CLEANUP						09-29-05		
4*	B5	⊕ ∅.01 D A N	CMM	QA		00064	.047 - .054, 1.126	295-C.W		R
(370)		3X Ø1.13 Ø2.38 BACK SPOTFACE MIN TO CLEANUP	SCALE			J-922	- 1.127	10-01-05		
5*	E8	⊕ ∅.01 E A J	CMM	QA		00064	0.77. >3.00 SPOT.	339-E.R		R
(380)		Ø1.88 THRU Ø3.00 BACK SPOTFACE MIN TO CLEANUP	SCALE			J-922		09-29-05		
5*	F6	3X Ø1.375-6 UNC THRU	THREAD PLUG GA	QA		A-375	ACCEPT	339-E.R		A
(400)								09-29-05		
5*	F6	⊕ ∅.01 E A J	CMM	QA		00064	.020 - .021	339-E.R		R
(410)		3X SPH R.75 TO .75 DEEP						09-29-05		
5*	F7	7X .25-20 UNC -2B	THREAD PLUG GA	QA		A-67	ACCEPT	339-E.R		A
(420)								09-29-05		
5*	E7	⊕ ∅.01 E A J	CMM	QA		00064	.008 - .040, >3.00	339-E.R		R
		24X Ø1.88 THRU Ø3.00 BACK SPOTFACE					SPOT.			



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INSPECTION DATA CHECKLIST

(430)		MIN TO CLEANUP	SCALE			J-922		09-29-05		
5*	E7	Φ .01 E A J 3X Ø1.5 TO 2.00 DEEP Ø3.00 TO 1.00 DEEP	CMM	QA		00064	.013 - .037	339-E.R		R
(440)								09-29-05		
5*	D7	3X Ø1.88 THRU Ø3.00 BACK SPOTFACE MIN TO CLEANUP	CMM	QA		00064	1.87 - 1.88, >3.00	339-E.R		A
(450)			SCALE			J-922		09-29-05		
5*	G2	SPH R.75 TO .75 DEEP	CMM	QA		00064	.736 - .74	339-E.R		A
(460)								09-29-05		
6*	F2	\sphericalangle .02	05	QA			CANNOT CHECK DUE ASSY	295-C.W 10-01-05		A
(510)										
6*	F2	1.125 ± .010	05	QA			CANNOT CHECK DUE ASSY	295-C.W 10-01-05		A
(520)										
6*	F2	2.250 ± .010	05	QA			CANNOT CHECK DUE ASSY	295-C.W 10-01-05		A
(530)										
6*	E2	Φ .01 F P V 7X Ø1.625 THRU BOTH SIDES 14X Ø3.00 TO .500 BOTH SIDES	05	QA			CANNOT CHECK DUE ASSY	295-C.W 10-01-05		A
(540)										
7*	G2	R7.00	05	QA			REFERENCE IGES INF RMATION	339-E.R 09-29-05		R
(550)										
7*	F2	2X R1.50	05	QA			REFERENCE IGES INF RMATION	339-E.R 09-29-05		R
(560)										
7*	E2	2.52 ± .010	CMM	QA		00064	2.51	339-E.R 09-29-05		A
(570)										
7*	E2	90°	CMM	QA		00064	87.92	339-E.R 09-29-05		R
(580)										
7*	E1	2.0°	CMM	QA		00064	2.04	339-E.R 09-29-05		A
(590)										
7*	E2	2.64 ± .010	DEPTH MICROMET	QA		J-851	2.64	339-E.R 09-29-05		A
(600)										
7*	E2	6.50 ± .010	CMM	QA		00064	6.486	339-E.R 09-29-05		R
(610)										
7*	E2	3.06 ± .010	CMM	QA		00064	REFERENCE IGES INF RMATION	339-E.R 09-29-05		R
(620)										



Major

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INSPECTION DATA CHECKLIST

7* (630)	D2	R4.00 ± .010	CMM	QA		00064	REFERENCE IGES INFORMATION	339-E.R 09-29-05			R
7* (640)	D3	2.10 ± .010	CMM	QA		00064	REFERENCE IGES INFORMATION	339-E.R 09-29-05			R
8* (650)	G7	4.00 ± .010	CMM	QA		00064	3.98	339-E.R 09-29-05			R
8* (660)	G7	.25 ± .010	CMM	QA		00064	SET	339-E.R 09-29-05			A
8* (670)	G7	R4.00 ± .010	CMM	QA		00064	REFERENCE IGES INFORMATION	339-E.R 09-29-05			R
8* (680)	F7	2.00 ± .010	CMM	QA		00064	1.99	339-E.R 09-29-05			A
8* (690)	E3	9.38 ± .010	CMM	QA		00064	REFERENCE IGES INFORMATION	339-E.R 09-29-05			R
8* (700)	E2	6.0°	CMM	QA		00064	REFERENCE IGES INFORMATION	339-E.R 09-29-05			R
8* (710)	C2	Ø8.00 ± .010	CMM	QA		00064	REFERENCE IGES INFORMATION	339-E.R 09-29-05			R
8* (720)	B3	5.9°	CMM	QA		00064	REFERENCE IGES INFORMATION	339-E.R 09-29-05			R
8* (730)	B3	7.81 ± .010	CMM	QA		00064	REFERENCE IGES INFORMATION	339-E.R 09-29-05			R
8* (740)	C6	7.25 ± .010	CMM	QA		00064	REFERENCE IGES INFORMATION	339-E.R 09-29-05			R
8* (750)	D7	6X Ø.375-16 UNC TO .75 DEEP .03 X 45° CHAMFER	THREAD PLUG GA CALIPER	MFG		A-46 J-707	ACCEPT THREAD/CHAMFER, .53 - 1.32 DEPT H	339-E.R 09-29-05			R
8* (760)	D7	13.6 °	CMM	MFG		00064	13.16	339-E.R 09-29-05			A
8* (770)	D7	5.88 ± .010	CALIPER	QA		J-707	5.89	339-E.R 09-29-05			A
8* (780)	D7	2.19 ± .010	CMM	QA		00064	2.172 - 2.198	339-E.R 09-29-05			R
8* (790)	D7	2.19 ± .010	CMM	QA		00064	2.176 - 2.191	339-E.R 09-29-05			R
8* (800)	B7	4X R.50	RADIUS GAGE	QA		R-25	.50	339-E.R 09-29-05			A



INSPECTION DATA CHECKLIST

8* (810)	B7	3.50 ± .010	CALIPER	QA		J-707	3.60	339-E.R 09-29-05		A
8* (820)	B7	1.75 ± .010	SCALE	QA		J-922	1.75	339-E.R 09-29-05		A
8* (830)	C8	2X 1.56 ± .010 THRU	CMM	QA		00064	1.) 1.56 2.) 1.79	339-E.R 09-29-05		R
8* (840)	C8	3.75 ± .010	CMM	QA		00064	3.90	339-E.R 09-29-05		R
8* (850)	C8	2X 7.50 ± .010 THRU	CMM	QA		00064	1.) 7.53 2.) 7.63	339-E.R 09-29-05		R
8* (860)	C8	8X R.25	RADIUS GAGE	QA		R-25	.25 - .28	339-E.R 09-29-05		R
8* (870)	C8	2X 2.52 ± .010	CMM	QA		00064	2.04 - 2.08 . 2.65 - 2.66	339-E.R 09-29-05		R
8* (880)	E2	Ø8.00 ± .010	CMM	QA		00064	7.992	339-E.R 09-29-05		A
9* (890)	F7	4X Ø.63 ± .010 THRU	PIN GAGE	QA		J-652	.62	339-E.R 09-29-05		A
9* (900)	E7	2.54 ± .010	CMM	QA		00064	REFERENCE IGES INF RMATION	339-E.R 09-29-05		R
9* (910)	E7	5.08 ± .010	CMM	QA		00064	REFERENCE IGES INF RMATION	339-E.R 09-29-05		R
9* (920)	F3	4X Ø.63 ± .010 THRU	PIN GAGE	QA		J-652	SEE #890	339-E.R 09-29-05		A
9* (930)	F3	2X Ø .50 ± .010 THRU	PIN GAGE	MFG		J-652	.498	339-E.R 09-29-05		A
9* (940)	E3	2.44 ± .010	CMM	QA		00064	REFERENCE IGES INF RMATION	339-E.R 09-29-05		R
9* (950)	E3	1.22 ± .010	CMM	QA		00064	REFERENCE IGES INF RMATION	339-E.R 09-29-05		R
9* (960)	C7	4X Ø.63 ± .010 THRU	PIN GAGE	QA		J-652	.622 - .624	339-E.R 09-29-05		A
9* (970)	C6	2X Ø.25 T.C. HOLE TO 2.5 DEEP	PIN GAGE	QA		J-652	.24	339-E.R 09-29-05		A
10* (980)	C8		CMM	QA		00064	REFERENCE IGES INF RMATION	339-E.R 09-29-05		R
10*	C8		CMM	QA		00064	REFERENCE IGES INF	339-E.R		R



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INSPECTION DATA CHECKLIST

(990)							RMATION	09-29-05		
10*	C5	.02 R T S	CMM	QA		00064	REFERENCE IGES INF RMATION	339-E.R 09-29-05		R
(1000)										
10*	C4	.125 A B C	CMM	QA		00064	REFERENCE IGES INF RMATION	339-E.R 09-29-05		R
(1010)										
10*	G1	.02 R T S	CMM	QA		00064	REFERENCE IGES INF RMATION	339-E.R 09-29-05		R
(1020)										
10*	E1	.5 A B C	CMM	QA		00064	REFERENCE IGES INF RMATION	339-E.R 09-29-05		R
(1030)										
*			PROFILOMETER	QA		J-1152	31 - 500	339-E.R		R
(1040)		UOS ALL MACHINED SURFACES TO BE 250 RMS SURFACE FINISH RECORD RANGE						09-29-05		
1*				QA		SCALE	5080LBS	339-E.R		A
(1050)		RECORD THE WEIGHT OF THE PART 6000LBS MAX						09-29-05		
4*	H7	22.13 ± .010	CMM	QA		00064	TAP	339-E.R 09-29-05		R
(1060)										
4*	H7	47.79 ± .010	CMM	QA		00064	47.76	339-E.R 09-29-05		R
(1070)										
4*	H6	59.18 ± .010	CMM	QA		00064	59.16	339-E.R 09-29-05		R
(1080)										
4*	H6	73.27 ± .010	CMM	QA		00064	TAP	339-E.R 09-29-05		R
(1090)										
4*	H5	80.49	CMM	QA		00064	80.46	339-E.R 09-29-05		R
(1100)										
4*	H5	87.87 ± .010	CMM	QA		00064	87.84	339-E.R 09-29-05		R
(1110)										
4*	H5	89.64 ± .010	CMM	QA		00064	89.64	339-E.R 09-29-05		A
(1120)										
4*	G4	31.83 ± .010	CMM	QA		00064	TAP	339-E.R 09-29-05		R
(1130)										
4*	F4	24.10 ± .010	CMM	QA		00064	24.08	339-E.R 09-29-05		A
(1140)										
4*	F4	11.48 ± .010	CMM	QA		00064	11.46	339-E.R 09-29-05		R
(1150)										



INSPECTION DATA CHECKLIST

4* (1160)	E4	5.20 ± .010	CMM	QA		00064	5.19	339-E.R 09-29-05		A
4* (1170)	D4	18.31 ± .010	CMM	QA		00064	18.32	339-E.R 09-29-05		A
4* (1180)	D4	32.50 ± .010	CMM	QA		00064	32.50	339-E.R 09-29-05		A
4* (1190)	C5	77.13 ± .010	CMM	QA		00064	77.13	339-E.R 09-29-05		A
4* (1200)	C6	55.56 ± .010	CMM	QA		00064	55.55	339-E.R 09-29-05		A
4* (1210)	B7	23.74 ± .010	CMM	QA		00064	23.73	339-E.R 09-29-05		A
4* (1220)	C7	37.09 ± .010	CMM	QA		00064	37.08	339-E.R 09-29-05		A
4* (1230)	D8	17.22 ± .010	CMM	QA		00064	17.23	339-E.R 09-29-05		A
4* (1240)	F8	28.17 ± .010	CMM	QA		00064	TAP	339-E.R 09-29-05		R
4* (1250)	G8	12X .250-20 UNC-2B	THREAD PLUG GA	QA		A-517 VISUAL	ACCEPT	339-E.R 09-29-05		A
4* (1260)	G8	40.75 ± .010	CMM	QA		00064	40.74	339-E.R 09-29-05		A
4* (1270)	G8	43.42 ± .010	CMM	QA		00064	TAP	339-E.R 09-29-05		R
4* (1280)	D1	12X .25-20 UNC Ø.5 X 82° INCL. CHAMFER	THREAD PLUG GA	QA		A-517 VISUAL	ACCEPT	339-E.R 09-29-05		A
5* (1290)	H8	88.39 ± .010	CMM	QA		00064	88.39	339-E.R 09-29-05		A
5* (1300)	H7	86.42 ± .010	CMM	QA		00064	86.40	339-E.R 09-29-05		R
5* (1310)	H6	59.08 ± .010	CMM	QA		00064	59.06	339-E.R 09-29-05		A
5* (1320)	H5	28.71 ± .010	CMM	QA		00064	28.69	339-E.R 09-29-05		R
5* (1330)	G5	32.42 ± .010	CMM	QA		00064	32.41	339-E.R 09-29-05		A



Major

Tool & Machine, Inc.

INSPECTION DATA CHECKLIST

5* (1340)	D4	22.117 ± .005	CMM	QA		00064	22.118	339-E.R 09-29-05			A
5* (1350)	D4	38.14 ± .010	CMM	QA		00064	38.14	339-E.R 09-29-05			A
5* (1360)	D5	21.33 ± .010	CMM	QA		00064	21.32	339-E.R 09-29-05			A
5* (1370)	D7	87.62 ± .010	CMM	QA		00064	87.63	339-E.R 09-29-05			A
5* (1380)	E8	7.53 ± .010	CMM	QA		00064	7.53	339-E.R 09-29-05			A
5* (1390)	E8	4.91 ± .010	CMM	QA		00064	4.88	339-E.R 09-29-05			R
5* (1400)	G8	36.13 ± .010	CMM	QA		00064	36.12	339-E.R 09-29-05			A
7* (1410)	D4	2.1°	CMM	QA		00064	REFERENCE IGES INF RMATION	339-E.R 09-29-05			R
8* (1420)	D8	2.63 ± .010	CMM	QA		00064	2.63 - 2.65	339-E.R 09-29-05			R



INSPECTION DATA CHECKLIST

Quality Assurance Documentation for Part ID: SE141-116 - Item: 16

Workorder: 65707/1-0 Sub:1 Op:140

Part: SE141-116 - MODULAR COIL WINDING FORM TYPE-C - PRODUCTION MODULAR COIL WINDING FORM TYPE-C

Drawing ID: SE141-103 Rev: 2			INSPECTION INSTRUCTIONS			RESULTS		INSPECTED BY			
SHEET	ZONE	CHARACTERISTIC	GAGE/EQUIP	BY	SAMPLE	SER#	DATA/REMARKS	INSP	VERFD	AUDIT	
*		INSPECT AND RECORD RESISTANCE ACROSS BOLT INSUL. VALUE TO BE >500 KOHM'S		QA			35,000 K-OHMS	242-M.G			A
(10)								10-26-05			
*		INSPECT AND RECORD RANGE OF RESISTANCE ACROSS POLOIDAL BREAK MIDPLANE AND BOLTS VALUE TO BE >500 KOHM'S		QA			HOLE 2 > 100,000 K-OHMS; ALL OTHERS A P. INFINITY	295-C.W			A
(20)								10-01-05			

Employees: 212-J.Lehr / 242-M.Griffith / 295-C.Weaver / 339-E.Root

PRINCETON UNIVERSITY

PLASMA PHYSIC LABORATORY—PPPL

PRODUCT QUALITY CERTIFICATION AND SHIPPING RELEASE

PROJECT PPPL-NCSX Modular Coil Winding Form	ITEM DESCRIPTION C-1 Modular Coil Winding Form	SHIPMENT NUMBER 1
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PPPL SUBCONTRACT/ ORDER NO. S005242-F	REV. Amend to 6	ITEM NO. C-1	SUPPLIER REFERENCE NO. PPPL-FP-LTS-3 w/ Major Tool & Machine	REV. 4	QUANTITY SHIPPED 1
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SUPPLIER'S CERTIFICATION
 In accordance with verbal instructions from PPPL on 9/30/05 @ 5:50pm
 This is to certify that the products and services identified herein have been produced under a controlled quality assurance program and are in conformance with the procurement requirements including applicable codes, standards and specifications as identified in the above-referenced documents unless noted below. Any supporting documentation will be retained in accordance with the procurement requirements.

SIGNED: N Horton DATE: 9/30/05
 TITLE: E10 Program Manager for NCSX COMPANY: Energy Industries Ohio

PPPL (AUTHORIZED REPRESENTATIVE) SHIPPING RELEASE

This is to certify that evidence supporting the above Supplier's Certification statement has been audited and no product/service nonconformances from procurement requirements have been found unless noted below. This product/service is hereby released for shipment.

This section serves as the Quality Assurance release for the above described product for shipment. It does not constitute an acceptance thereof and does not relieve the Vendor, Manufacturer or Contractor of any and all responsibility or obligation imposed by the purchase contract. It does not waive any rights the Purchaser may have under the purchase contract, including the Purchaser's right to reject the above described material upon discovery of any deviations from requirements of the purchase contract, drawings and specifications.

NONCONFORMANCES FROM PROCUREMENT QUALITY REQUIREMENTS: As documented on Metal Tek and Major Tool & Machine nonconformance reports including MTM NC 48918297, which has not yet been dispositioned. fl

REMARKS/PRODUCT SERIAL NUMBERS: Shipped, in accordance with NCSX Project decision, prior to completion of the documentation package and with outstanding item as listed on the attachment. fl

BY PPPL QA REPRESENTATIVE (OR DESIGNEE) <u>Paul Malin</u>	DATE <u>9/30/05</u>
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Attachment to Product Quality Certification and Shipping Release
for the NCSX MCWF s/n C-1, dated 9/30/05

Note: The C-1 MCWF is released for shipment with several outstanding items. MTM Nonconformance Report NC18297 documents the dimensional items found nonconforming. MTM is still completing the attachment to this NCR with detailed discrepancy information. However project personnel have reviewed the items listed as rejected on the inspection reports (IDC's) and determined that all have low risk of requiring rework.

Some additional inspection information is needed. Spherical features that are out of tolerance require follow-up inspection, for which a Go/No-Go gage was discussed. The IDC needs revision to show actual electrical test results. Actual inspection results are needed for IDC features 720 & 730. Verification of the "bleed holes" shown on SE141-116, Rev. 6, Sheet 9 of 11, must be documented. Blank IDC results slots need explanatory entries.

Documentation review will take place at a later date as the documentation package is not yet complete. This review may identify additional outstanding items.

Customer: ENERGY INDUSTRIES OF OHIO

Contact: NANCY HORTON
E-Mail: NKHFlowen@aol.com

Telephone: 216-496-2314
Fax: 216-328-2001

Part: SE141-116 / MODULAR COIL WINDING FORM TYPE
Drawing ID: SE141-116 Revision: 5

Customer P.O.: S005242-F/Ln:1
Serial No./Qty: C-1

Reported By: KEVIN BOWLING
E-Mail: kBowling@MajorTool.com

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

Problem: Part has multiple gouges from tools and one dent. See attached sketches describing the non-conformances.

Proposed Disposition:

SUBMIT TO CUSTOMER FOR DISPOSITION.

Number of additional pages: 1

Customer Disposition: Use As Is Rework Repair Scrap Replace

NCSX reviewed the descriptions of the three tool gouges and one dent shown in the attached sketches. The gouges need to be blended to avoid sharp edges. The dent defect needs to be worked as necessary so the tapped hole can be used.

Technical Representative: Phil Heitzenroeder
2005.08.25 16:13:48 -04'00'

RLM: Brad Nelson
Digitally signed by Brad Nelson
DN: cn=Brad Nelson, ou=US, ou=ORNL,
ou=FED, email=nelsonb@ornl.gov
Date: 2005.08.25 17:22:21 -04'00'

Major Tool Implemented By: Kevin Bowling

Title: PROGRAM MANAGER Date: 25-OCT-05

Major Tool &
Machine, Inc.
1458 East 19th Street
Indianapolis, IN
46218-4289

Page: 1

MTM N/C: 17399
User ID: BOWLINK

Date: 05/24/05

ENERGY INDUSTRIES OF OHIO Customer:

Contact: NANCY HORTON Telephone: 216-496-2314
NKHFlowen@aol.com E-Mail: 216-328-2001 Fax:

SE141-116 / MODULAR COIL WINDING FORM TYPE Part:

S005242-F/Ln:1 Customer P.O.: SE141-116 Drawing ID: 3 Revision: C1 Serial
No./Qty: Links: 1-Type:W: 65707/1.0 Sub: 1 Op: 20

KEVIN BOWLING Reported By: 317-636-6433 Telephone: E-Mail:
kBowling@MajorTool.com Fax: 317-634-9420

Problem: Part was gouged by an errant tool path.
Gouge is approximately 2" wide by 10" long and at worst case 1/2" deep.

Proposed Disposition:

SUBMIT TO CUSTOMER REQUESTING WELD
REPAIR.

Number of additional pages:

Customer Disposition: [Use As Is [Rework X Repair [Scrap [Replace

PPPL
Princeton PA
MTM is authorized to proceed with repair as soon as MTM's weld repair procedure which was submitted by e-mail on 5/12/05 is formally approved by PPPL. Weld repair procedures are currently being reviewed at PPPL.

Submitted weld qualification procedures which lack some of the test results required in ASTM A488. Full qualification and re-submittal are required before ASAP and prior to weld repair on any subsequent castings. *B.N. Concerns*

Technical Contact Approval: 2005/05.25.08:10:42 -04'00'

PPPL Tech. Rep.

Buyer Approval: *Jerry J. Satter*

Title: *SA* *SA Admin*

Date: *5/26/05*

Major Tool Implemented By: *Kevin Bowling*

Title: *PROGRAM MANAGER*

Date: *27-MAY-2005*

816-PROGRAMMING ERROR Root Cause 1:

Major Tool & Machine, Inc.
1458 East 19th Street
Indianapolis, IN 46218-4289

MTM N/C: 18236

Page: 1
Date: 09/21/05
User ID: BOWLINK

Customer: ENERGY INDUSTRIES OF OHIO

Contact: NANCY HORTON
E-Mail: NKHFlowen@aol.com

Telephone: 216-496-2314
Fax: 216-328-2001

Part: SE141-116 / MODULAR COIL WINDING FORM TYPE
Drawing ID: SE141-116 Revision: 6

Customer P.O.: S005242-F/Ln:1
Serial No./Qty: C1

Reported By: KEVIN BOWLING
E-Mail: kBowling@MajorTool.com

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

Problem: AFTER MACHINING SEVERAL MACHINING DEFECTS WERE DETECTED UPON VISUAL EXAMINATION. SEE ADDITIONAL DOCUMENTS FOR MAPS AND LISTS OF (16) SEPARATE NON-CONFORMING FEATURES.

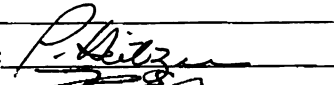
Proposed Disposition:

SUBMIT TO CUSTOMER CONTINUE PROCESSING THE PART.

Customer Disposition: Use As Is Rework Repair Scrap Replace

PAPL WILL PATCH IMPERFECTIONS WITH
FILLED EPOXY MIXTURE

Technical Contact Approval:



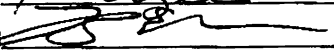
Title:

Tech Rep.

Date:

9/22/05

RLM ~~Buyer~~ Approval:



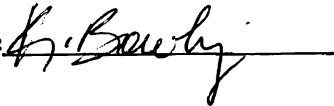
Title:

RLM

Date:

9/22/05

Major Tool Implemented By:



Title:

PROG. MGR

Date:

23-SEP-05

Customer: ENERGY INDUSTRIES OF OHIO

Contact: NANCY HORTON
E-Mail: NKHFlowen@aol.com

Telephone: 216-496-2314
Fax: 216-328-2001

Part: SE141-116 / MODULAR COIL WINDING FORM TYPE
Drawing ID: SE141-116 Revision: 6

Customer P.O.: S005242-F/Ln:1
Serial No./Qty: C1

Reported By: KEVIN BOWLING
E-Mail: kBowling@MajorTool.com

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

Problem: AFTER MACHINING SEVERAL MACHINING DEFECTS ON THE OUTSIDE OF THE PART WERE DETECTED UPON VISUAL EXAMINATION. SEE ADDITIONAL DOCUMENTS FOR MAPS AND LISTS OF (9) SEPARATE NON-CONFORMING FEATURES.

Proposed Disposition:

SUBMIT TO CUSTOMER CONTINUE MANUFACTURING.

Customer Disposition: Use As Is Rework Repair Scrap Replace

ITEM 3 - BLEND TROUGH SMOOTHLY
ITEMS 1, 2, 4, 5, 6, 7, 8, 9 - REMOVE SHARP EDGES, GRIND FLUSH

Technical Contact Approval: Paul Hutzman
RLM Buyer Approval: [Signature]

Title: Tech. Rep Date: 9/22/05
Title: RLM Date: 9/22/05

Major Tool Implemented By: K. Bowling

Title: PROG. MGR. Date: 26 SEP-05

Customer: ENERGY INDUSTRIES OF OHIO

Contact: NANCY HORTON
E-Mail: NKHFlowen@aol.com

Telephone: 216-496-2314
Fax: 216-328-2001

Part: SE141-116 / MODULAR COIL WINDING FORM TYPE
Drawing ID: SE141-116 Revision: 6

Customer P.O.: S005242-F/Ln:1
Serial No./Qty: C1

Reported By: KEVIN BOWLING
E-Mail: kBowling@MajorTool.com

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

Problem: VIEWING PART FROM THE OUTSIDE LOOKING TOWARD THE POLOIDAL BREAK WITH DATUM E
SIDE FACING UP THE (2) LEADBLOCK POCKETS ARE MACHINED OVERSIZE.

THE LEFT POCKET CHECKS 1.754
THE RIGHT POCKET CHECKS 1.625

PRINT DIMENSION IS 1.56" +/- .01

Proposed Disposition:
SUBMIT TO CUSTOMER CONTINUE MANUFACTURING.

Customer Disposition: Use As Is Rework Repair Scrap Replace

PPPL WILL FIT APPROPRIATE G-11 CR STIMS
TO FILL GAPS WITH LEAD BLOCKS

Technical Contact Approval: [Signature]
RLM Buyer Approval: [Signature]

Title: Tech. Rep. Date: 9/22/05
Title: RLM Date: 9/22/05

Major Tool Implemented By: [Signature]

Title: PROG. MGR. Date: 23-SEP-05

Request for Deviation

MCWF Type C

Serial Number: C1 only

Number: MTM-RFD-002

RFD Description:

1. PPPL with MTM's agreement requests deviation to add additional G11CR shim pieces to allow the material to slip during the tightening of the nuts for the Poloidal break. This request is made because the G11CR material on the outside of the Poloidal break cracked during the tightening of the nuts.
2. PPPL with MTM's agreement requests to torque the nuts to 1000 ft-lbs for inspection and shipment. PPPL will evaluate the torque requirement and may decide to torque the nuts to a different torque value at the PPPL site.
3. PPPL to advise MTM on assembly hardware configuration changes and final torque values for remaining upcoming parts.

Initiator: Kevin Bowling, Phil Heitzenroeder

Organization: Major Tool and Machine, Inc. and PPPL

List of Impacted Documents:

NCSX-CSPEC-141-03, MTM MIT/QA Plan, SE141-116, SE141-103.

Quality Impact: Corrects problem with G11CR cracking behind the washers and nuts.

Initiator Signature: *P. Heitzenroeder* Date: 9/22/05

Initiator Signature: *Kevin Bowling* Date: 9/22/05

Major Tool & Machine, Inc.
1458 East 19th Street
Indianapolis, IN 46218-4289

MTM N/C: 18315

Page: 1
Date: 10/03/05
User ID: BOWLINK

Customer: ENERGY INDUSTRIES OF OHIO

Contact: NANCY HORTON
E-Mail: NKHFlowen@aol.com

Telephone: 216-496-2314
Fax: 216-328-2001

Part: SE141-116 / MODULAR COIL WINDING FORM TYPE
Drawing ID: SE141-116 Revision: 6

Customer P.O.: S005242-F/Ln:1
Serial No./Qty: C1

Reported By: KEVIN BOWLING
E-Mail: kBowling@MajorTool.com

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

Problem: THE FOLLOWING INSPECTION STEPS PER MTM SUBMITTED IDC REPORT DID NOT HAVE
SUPPORTING DIMENSIONAL DATA FROM THE CMM:

510, 520, 530, 540, 620, 630, 640, 670, 690, 700, 710, 720, 730, 740, 900, 910, 940, 950,

ALSO ONE OF THE FLANGE FACES DID NOT HAVE THE 2" X 2" GRID POINTS IN THE IGES FILE AS
REQUIRED BY THE PRODUCT SPECIFICATION.

Proposed Disposition:

SUBMIT TO CUSTOMER CONTINUE MANUFACTURING.

Customer Disposition: Use As Is Rework Repair Scrap Replace

MTM is to take corrective actions to provide all supporting data from the CMM on subsequent winding forms. To address the situation in the flanges which resulted in inadequate dimensional information, Rev. 10 of NCSX-CSPEC-141-03 has been revised as indicated below:

4.2.5 Verification of Dimensions and Tolerances

All cast surfaces, machined surfaces and features such as holes, ports, supports, etc. shall be dimensionally checked to assure compliance with Section 3.2.2. Cast surfaces shall be checked with measurements taken to approximate 4" x 4" grid; machined surfaces shall be checked with measurements taken to approximate a 2" x 2" grid; features such as holes, ports, supports, etc. shall be verified per standard machine shop practices. On the winding tee flange, where a 2" x 2" grid would result in a single line of measurements, a minimum of 2 readings (two lines of measurements) shall be recorded.

Phil
Heitzenroeder

Digitally signed by Phil Heitzenroeder
DN: CN = Phil Heitzenroeder, C = US, O
= PPPL, OU = Mech. Eng. Division
Reason: I agree to 'specified' portions of
this document
Date: 2005.11.28 20:11:23 -05'00'

Brad Nelson

Digitally signed by Brad Nelson
DN: cn=Brad Nelson, c=US,
o=ORNL, ou=FED,
email=nelsonbe@ornl.gov
Date: 2005.11.29 08:22:00 -05'00'

Major Tool Implemented By K. Bowler

Title: PRG. MGR

Date: 5-DEC-05

Microsoft Word 14.07

Major Tool and Machine, Inc. 1458 East 19th Street, Indianapolis, IN 46218-4289 Tel: 317-636-6433 Fax: 317-634-9420

Customer: ENERGY INDUSTRIES OF OHIO

Contact: NANCY HORTON
E-Mail: NKHFlowen@aol.com

Telephone: 216-496-2314
Fax: 216-328-2001

Part: SE141-116 / MODULAR COIL WINDING FORM TYPE

Drawing ID: SE141-116

Revision: 6

Customer P.O.: S005242-F/Ln:1
Serial No./Qty: C1

Reported By: KEVIN BOWLING
E-Mail: kBowling@MajorTool.com

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

Problem: Workorder: 65707/1.0 Sub:1 Op:120

Inspection Test #: 70 rejected: : {g|.5|A|B|C}: REFERENCE IGES INFORMATION
Inspection Test #: 140 rejected: P TO M: {g|.1|R|S|T}: REFERENCE IGES INFORMATION
Inspection Test #: 160 rejected: Q TO N: {g|.1|R|S|T}: REFERENCE IGES INFORMATION
Inspection Test #: 180 rejected: M TO N: {g|.02|R|S|T}: REFERENCE IGES INFORMATION
Inspection Test #: 250 rejected: : {f|.01}: .032
Inspection Test #: 260 rejected: : R76.00: REFERENCE IGES INFORMATION
Inspection Test #: 270 rejected: : R73.70: REFERENCE IGES INFORMATION
Inspection Test #: 280 rejected: 8X

Ø1.13 THRU

BACK SPOT FACE Ø2.38

MIN DEPTH FOR C'UP: {#|.01|A|B|C}: .010 - .031

Inspection Test #: 290 rejected: 3X Ø1.88 THRU Ø3.00 BACK SPOTFACE MIN TO CLEANUP:
{#|.010|D|A|N}: .0304 - .0442, >3.00 SPOT, 1.87 - 1.88 DIA.

Inspection Test #: 300 rejected: 3X SPH R.75 TO .75 DEEP: {#|d.01|D|A|N}: .019 - .020, R .74 - .745

Inspection Test #: 310 rejected: 17X Ø1.88 THRU Ø3.00 BACK SPOTFACE MIN TO CLEANUP:
{#|d.01|D|A|N}: .009 - .059, >3.00 SPOT, 1.87 - 1.88

Inspection Test #: 320 rejected: 3X Ø1.13

Ø2.38 BACK SPOTFACE

MIN TO CLEANUP: {#|d.01|D|A|N}: .047 - .054, 1.126 - 1.127

Inspection Test #: 340 rejected: 3X Ø1.375-6 UNC THRU: {#|d.01|D|A|N}: .022 - .039

Inspection Test #: 350 rejected: 5X Ø1.88 THRU Ø3.00 BACK SPOTFACE MIN TO CLEANUP:
{#|d.01|D|A|N}: .0019 - .0182, >3.00 SPOT

Inspection Test #: 360 rejected: Ø1.88 THRU Ø3.00 BACK SPOTFACE MIN TO CLEANUP: {#|d.01|D|A|N}:
.018, >3.00 SPOT, 1.879 DIA.

Inspection Test #: 380 rejected: Ø1.88 THRU Ø3.00 BACK SPOTFACE MIN TO CLEANUP: {#|d.01|E|A|J}:
0.77, >3.00 SPOT.

Inspection Test #: 410 rejected: 3X SPH R.75 TO .75 DEEP
{#|d.01|E|A|J}: .020 - .021

Inspection Test #: 430 rejected: 24X Ø1.88 THRU Ø3.00 BACK SPOTFACE MIN TO CLEANUP:
{#|d.01|E|A|J}: .008 - .040, >3.00 SPOT.

Inspection Test #: 440 rejected: 3X Ø1.5 TO 2.00 DEEP Ø3.00 TO 1.00 DEEP: {#|d.01|E|A|J}: .013 - .037

Inspection Test #: 550 rejected: : R7.00: REFERENCE IGES INFORMATION

Inspection Test #: 560 rejected: : 2X R1.50: REFERENCE IGES INFORMATION

Inspection Test #: 580 rejected: : 90°: 87.92

Inspection Test #: 610 rejected: : 6.50 ~ .010: 6.486

Inspection Test #: 620 rejected: : 3.06 ~ .010: REFERENCE IGES INFORMATION

Inspection Test #: 630 rejected: : R4.00 ~ .010: REFERENCE IGES INFORMATION

Inspection Test #: 640 rejected: : 2.10 ~ .010: REFERENCE IGES INFORMATION

Inspection Test #: 650 rejected: : 4.00 ~ .010: 3.98

Inspection Test #: 670 rejected: : R4.00 ~ .010: REFERENCE IGES INFORMATION

Inspection Test #: 690 rejected: : 9.38 ~ .010: REFERENCE IGES INFORMATION

Inspection Test #: 700 rejected: : 6.0°: REFERENCE IGES INFORMATION

Inspection Test #: 710 rejected: : d8.00 ~ .010: REFERENCE IGES INFORMATION

Inspection Test #: 720 rejected: : 5.9°: REFERENCE IGES INFORMATION

Inspection Test #: 730 rejected: : 7.81 ~ .010: REFERENCE IGES INFORMATION

Inspection Test #: 740 rejected: : 7.25 ~ .010: REFERENCE IGES INFORMATION
Inspection Test #: 750 rejected: : 6X d..375-16 UNC TO .75 DEEP
.03 X 45° CHAMFER: ACCEPT THREAD/CHAMFER, .53 - 1.32 DEPTH
Inspection Test #: 780 rejected: : 2.19 ~ .010: 2.172 - 2.198
Inspection Test #: 790 rejected: : 2.19 ~ .010: 2.176 - 2.191
Inspection Test #: 830 rejected: : 2X 1.56 ~ .010 THRU: 1.) 1.56 2.) 1.79
Inspection Test #: 840 rejected: : 3.75 ~ .010: 3.90
Inspection Test #: 850 rejected: : 2X 7.50 ~ .010 THRU: 1.) 7.53 2.) 7.63
Inspection Test #: 860 rejected: : 8X R.25: .25 - .28
Inspection Test #: 870 rejected: : 2X 2.52 ~ .010: 2.04 - 2.08 . 2.65 - 2.66
Inspection Test #: 900 rejected: : 2.54 ~ .010: REFERENCE IGES INFORMATION
Inspection Test #: 910 rejected: : 5.08 ~ .010: REFERENCE IGES INFORMATION
Inspection Test #: 940 rejected: : 2.44 ~ .010: REFERENCE IGES INFORMATION
Inspection Test #: 950 rejected: : 1.22 ~ .010: REFERENCE IGES INFORMATION
Inspection Test #: 980 rejected: : {g|.125|A|B|C}: REFERENCE IGES INFORMATION
Inspection Test #: 990 rejected: : {g|.5|A|B|C}: REFERENCE IGES INFORMATION
Inspection Test #: 1000 rejected: : {g|.02|R|T|S}: REFERENCE IGES INFORMATION
Inspection Test #: 1010 rejected: : {g|.125|A|B|C}: REFERENCE IGES INFORMATION
Inspection Test #: 1020 rejected: : {g|.02|R|T|S}: REFERENCE IGES INFORMATION
Inspection Test #: 1030 rejected: : {g|.5|A|B|C}: REFERENCE IGES INFORMATION
Inspection Test #: 1040 rejected: UOS ALL MACHINED SURFACES TO BE 250 RMS SURFACE FINISH
RECORD RANGE: : 31 - 500
Inspection Test #: 1060 rejected: : 22.13 ~ .010: TAP
Inspection Test #: 1070 rejected: : 47.79 ~ .010: 47.76
Inspection Test #: 1080 rejected: : 59.18 ~ .010: 59.16
Inspection Test #: 1090 rejected: : 73.27 ~ .010: TAP
Inspection Test #: 1100 rejected: : 80.49: 80.46
Inspection Test #: 1110 rejected: : 87.87 ~ .010: 87.84
Inspection Test #: 1130 rejected: : 31.83 ~ .010: TAP
Inspection Test #: 1150 rejected: : 11.48 ~ .010: 11.46
Inspection Test #: 1240 rejected: : 28.17 ~ .010: TAP
Inspection Test #: 1270 rejected: : 43.42 ~ .010: TAP
Inspection Test #: 1300 rejected: : 86.42 ~ .010: 86.40
Inspection Test #: 1320 rejected: : 28.71 ~ .010: 28.69
Inspection Test #: 1390 rejected: : 4.91 ~ .010: 4.88
Inspection Test #: 1410 rejected: : 2.1: REFERENCE IGES INFORMATION
Inspection Test #: 1420 rejected: : 2.63 ~ .010: 2.63 - 2.65

Proposed Disposition:

SUBMIT TO CUSTOMER CONTINUE MANUFACTURING AND QA ACTIVITY.

Number of additional pages: _____

Customer Disposition: Use As Is Rework Repair Scrap Replace

Major Tool & Machine, Inc.
1458 East 19th Street
Indianapolis, IN 46218-4289

MTM N/C: 18297

Page: 3
Date: 09/30/05
User ID: BOWLINK

Technical Contact Approval: _____

Title: _____

Date: _____

Buyer Approval: _____

Title: _____

Date: _____

Major Tool Implemented By: Kym Bowles

Title: PGR. MGR.

Date: 5-DEC-05

Nonconformance Report: 18297

Project Disposition:

MCWF C-1 has been accepted "as is". However, this does not relieve EIO from any of the requirements of NCSX-CSPEC-141-03 (latest revision) on future castings, for which full compliance with the Specification is expected unless otherwise agreed to in writing.

Approvals: Phil Heitzenroeder
Digitally signed by Phil Heitzenroeder
DN: CN = Phil Heitzenroeder, C = US, O
= PPPL, OU = Mech. Eng. Division
Reason: I am approving this document
Date: 2005.11.07 11:47:52 -05'00'

Procurement Technical Representative
Brad Nelson
Digitally signed by Brad Nelson
DN: cn=Brad Nelson, c=US, o=ORNL,
ou=FED, email=nelsonbe@ornl.gov
Date: 2005.11.07 13:20:40 -05'00'

Responsible Line Manager: