

Certificate of Inspection



TTT-TECHNICAL
MANUFACTURING, INC.
ISO 9001:2000
CERTIFIED

This certificate is presented to

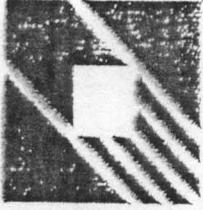
Argonne National Laboratory

Per PO # 7A-08189, part # #
L1430401-100103 (PF-381-000-15) quantity of 136 pcs
L1430401-100303 (PF-381-002-15) quantity of 34 pcs
Have been inspected and met all drawing requirements.

Q.C. Supervisor

W. W. W. W.

09-07-07
Date



Argonne National Laboratory
Manufacturing Services
ISO 9001:2008
CERTIFIED

Certificate of Inspection

This certificate is presented to

Argonne National Laboratory

Per PO # 7A-08189, part # #
L1430401-100101 (PF-381-000-13) quantity of 114 pcs
L1430401-100201 (PF-381-000-23) quantity of 38 pcs
Have been inspected and met all drawing requirements.

Mueloz

Q.C. Supervisor

09-07-07
Date

Certificate of Inspections

This certificate is presented to

Argonne National Laboratory

Per PO # 7A-08189, part #
L1430401-100103 (PF-381-000-15) quantity of 136pcs
L1430401-100303 (PF-381-002-15) quantity of 34pcs
Have been inspected and met all drawing requirements.



HT-THORNE

MANUFACTURING, INC.
ISO 9001:2000
CERTIFIED

Q.C. Supervisor

Mueloy

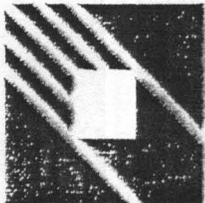
09-07-07
Date

Certificates of Inspection

This certificate is presented to

Argonne National Laboratory

Per PO # 74-08189, part # #
L1430401-100101 (PF-381-000-13) quantity of 114 pcs
L1430401-100201 (PF-381-000-23) quantity of 38 pcs
Have been inspected and met all drawing requirements.



H. J. BROWN

Manufacturing, Inc.
ISO 9001:2000
certified

Q.C. Supervisor

M. Lopez

09-07-07
Date

LCLS UNDULATOR SUPPORT CAM TEST DATA
ADVANCED PHOTON SOURCE
ARGONNE NATIONAL LAB

10-1

TIME OF TEST: 10/2/2007 11:28:08 AM

POS#1 FWD

CAM ECCEN R (MICRONS) = 2178.52
ROTARY POT GAIN = 348.15
POT OFFSET (DEG) = 61.21
DEVIATION RMS (MICRONS) = 7.86
DEVIATION MAX (MICRONS) = 27.63
DEVIATION MIN (MICRONS) = -18.47

POS#1 BWD

CAM ECCEN R (MICRONS) = 2179.10
ROTARY POT GAIN = 348.15
POT OFFSET (DEG) = 61.21
DEVIATION RMS (MICRONS) = 7.27
DEVIATION MAX (MICRONS) = 18.74
DEVIATION MIN (MICRONS) = -18.98

POS#2 FWD

CAM ECCEN R (MICRONS) = 2177.25
ROTARY POT GAIN = 348.15
POT OFFSET (DEG) = 61.21
DEVIATION RMS (MICRONS) = 7.01
DEVIATION MAX (MICRONS) = 15.92
DEVIATION MIN (MICRONS) = -19.70

POS#2 BWD

CAM ECCEN R (MICRONS) = 2180.04
ROTARY POT GAIN = 348.15
POT OFFSET (DEG) = 61.21
DEVIATION RMS (MICRONS) = 6.84
DEVIATION MAX (MICRONS) = 14.88
DEVIATION MIN (MICRONS) = -18.38

POS#3 FWD

CAM ECCEN R (MICRONS) = 2178.44
ROTARY POT GAIN = 348.15
POT OFFSET (DEG) = 61.21
DEVIATION RMS (MICRONS) = 7.07
DEVIATION MAX (MICRONS) = 18.13
DEVIATION MIN (MICRONS) = -19.75

POS#3 BWD

CAM ECCEN R (MICRONS) = 2180.38
ROTARY POT GAIN = 348.15
POT OFFSET (DEG) = 61.21
DEVIATION RMS (MICRONS) = 6.86
DEVIATION MAX (MICRONS) = 15.93
DEVIATION MIN (MICRONS) = -18.69

=== TEST PASS! ===

--- END OF TEST ---

LCLS UNDULATOR SUPPORT CAM TEST DATA
ADVANCED PHOTON SOURCE
ARGONNE NATIONAL LAB

10-2

TIME OF TEST: 10/2/2007 2:15:09 PM

POS#1 FWD

CAM ECCEN R (MICRONS) = 1550.84
ROTARY POT GAIN = 345.96
POT OFFSET (DEG) = 60.87
DEVIATION RMS (MICRONS) = 5.86
DEVIATION MAX (MICRONS) = 22.26
DEVIATION MIN (MICRONS) = -16.93

POS#1 BWD

CAM ECCEN R (MICRONS) = 1552.25
ROTARY POT GAIN = 345.96
POT OFFSET (DEG) = 60.87
DEVIATION RMS (MICRONS) = 5.61
DEVIATION MAX (MICRONS) = 21.19
DEVIATION MIN (MICRONS) = -13.42

POS#2 FWD

CAM ECCEN R (MICRONS) = 1550.89
ROTARY POT GAIN = 345.96
POT OFFSET (DEG) = 60.87
DEVIATION RMS (MICRONS) = 5.48
DEVIATION MAX (MICRONS) = 19.64
DEVIATION MIN (MICRONS) = -16.69

POS#2 BWD

CAM ECCEN R (MICRONS) = 1553.13
ROTARY POT GAIN = 345.96
POT OFFSET (DEG) = 60.87
DEVIATION RMS (MICRONS) = 5.54
DEVIATION MAX (MICRONS) = 20.87
DEVIATION MIN (MICRONS) = -14.23

POS#3 FWD

CAM ECCEN R (MICRONS) = 1550.27
ROTARY POT GAIN = 345.96
POT OFFSET (DEG) = 60.87
DEVIATION RMS (MICRONS) = 5.47
DEVIATION MAX (MICRONS) = 21.74
DEVIATION MIN (MICRONS) = -17.70

POS#3 BWD

CAM ECCEN R (MICRONS) = 1552.40
ROTARY POT GAIN = 345.96
POT OFFSET (DEG) = 60.87
DEVIATION RMS (MICRONS) = 5.60
DEVIATION MAX (MICRONS) = 17.05
DEVIATION MIN (MICRONS) = -15.72

=== TEST PASS! ===

--- END OF TEST ---

LCLS UNDULATOR SUPPORT CAM TEST DATA
ADVANCED PHOTON SOURCE
ARGONNE NATIONAL LAB

10-3

TIME OF TEST: 10/2/2007 1:58:57 PM

POS#1 FWD

CAM ECCEN R (MICRONS) = 1572.45
ROTARY POT GAIN = 348.29
POT OFFSET (DEG) = 59.65
DEVIATION RMS (MICRONS) = 12.30
DEVIATION MAX (MICRONS) = 29.46
DEVIATION MIN (MICRONS) = -29.83

POS#1 BWD

CAM ECCEN R (MICRONS) = 1570.81
ROTARY POT GAIN = 348.29
POT OFFSET (DEG) = 59.66
DEVIATION RMS (MICRONS) = 12.11
DEVIATION MAX (MICRONS) = 29.88
DEVIATION MIN (MICRONS) = -33.00

POS#2 FWD

CAM ECCEN R (MICRONS) = 1573.02
ROTARY POT GAIN = 348.29
POT OFFSET (DEG) = 59.65
DEVIATION RMS (MICRONS) = 12.53
DEVIATION MAX (MICRONS) = 31.05
DEVIATION MIN (MICRONS) = -31.27

POS#2 BWD

CAM ECCEN R (MICRONS) = 1570.72
ROTARY POT GAIN = 348.29
POT OFFSET (DEG) = 59.66
DEVIATION RMS (MICRONS) = 11.78
DEVIATION MAX (MICRONS) = 30.42
DEVIATION MIN (MICRONS) = -32.08

POS#3 FWD

CAM ECCEN R (MICRONS) = 1572.69
ROTARY POT GAIN = 348.29
POT OFFSET (DEG) = 59.65
DEVIATION RMS (MICRONS) = 12.51
DEVIATION MAX (MICRONS) = 30.68
DEVIATION MIN (MICRONS) = -29.71

POS#3 BWD

CAM ECCEN R (MICRONS) = 1569.94
ROTARY POT GAIN = 348.29
POT OFFSET (DEG) = 59.66
DEVIATION RMS (MICRONS) = 11.86
DEVIATION MAX (MICRONS) = 30.77
DEVIATION MIN (MICRONS) = -31.31

=== TEST PASS! ===

--- END OF TEST ---

LCLS UNDULATOR SUPPORT CAM TEST DATA
ADVANCED PHOTON SOURCE
ARGONNE NATIONAL LAB

10-4

TIME OF TEST: 10/2/2007 11:45:20 AM

POS#1 FWD

CAM ECCEN R (MICRONS) = 1592.93
ROTARY POT GAIN = 344.93
POT OFFSET (DEG) = 58.94
DEVIATION RMS (MICRONS) = 6.67
DEVIATION MAX (MICRONS) = 17.23
DEVIATION MIN (MICRONS) = -18.35

POS#1 BWD

CAM ECCEN R (MICRONS) = 1595.88
ROTARY POT GAIN = 344.93
POT OFFSET (DEG) = 58.94
DEVIATION RMS (MICRONS) = 6.77
DEVIATION MAX (MICRONS) = 18.37
DEVIATION MIN (MICRONS) = -17.98

POS#2 FWD

CAM ECCEN R (MICRONS) = 1595.11
ROTARY POT GAIN = 344.93
POT OFFSET (DEG) = 58.94
DEVIATION RMS (MICRONS) = 6.39
DEVIATION MAX (MICRONS) = 13.79
DEVIATION MIN (MICRONS) = -18.32

POS#2 BWD

CAM ECCEN R (MICRONS) = 1596.18
ROTARY POT GAIN = 344.93
POT OFFSET (DEG) = 58.94
DEVIATION RMS (MICRONS) = 6.79
DEVIATION MAX (MICRONS) = 17.78
DEVIATION MIN (MICRONS) = -17.39

POS#3 FWD

CAM ECCEN R (MICRONS) = 1593.96
ROTARY POT GAIN = 344.93
POT OFFSET (DEG) = 58.94
DEVIATION RMS (MICRONS) = 6.77
DEVIATION MAX (MICRONS) = 17.07
DEVIATION MIN (MICRONS) = -22.71

POS#3 BWD

CAM ECCEN R (MICRONS) = 1595.51
ROTARY POT GAIN = 344.93
POT OFFSET (DEG) = 58.94
DEVIATION RMS (MICRONS) = 7.12
DEVIATION MAX (MICRONS) = 17.86
DEVIATION MIN (MICRONS) = -18.81

=== TEST PASS! ===

--- END OF TEST ---

LCLS UNDULATOR SUPPORT CAM TEST DATA
ADVANCED PHOTON SOURCE
ARGONNE NATIONAL LAB

10-5

TIME OF TEST: 10/2/2007 12:32:31 PM

POS#1 FWD

CAM ECCEN R (MICRONS) = 1569.36

ROTARY POT GAIN = 345.15

POT OFFSET (DEG) = 59.68

DEVIATION RMS (MICRONS) = 9.37

DEVIATION MAX (MICRONS) = 22.24

DEVIATION MIN (MICRONS) = -22.75

POS#1 BWD

CAM ECCEN R (MICRONS) = 1572.86

ROTARY POT GAIN = 345.15

POT OFFSET (DEG) = 59.68

DEVIATION RMS (MICRONS) = 8.97

DEVIATION MAX (MICRONS) = 20.23

DEVIATION MIN (MICRONS) = -24.28

POS#2 FWD

CAM ECCEN R (MICRONS) = 1572.72

ROTARY POT GAIN = 345.15

POT OFFSET (DEG) = 59.68

DEVIATION RMS (MICRONS) = 9.06

DEVIATION MAX (MICRONS) = 22.45

DEVIATION MIN (MICRONS) = -21.82

POS#2 BWD

CAM ECCEN R (MICRONS) = 1574.15

ROTARY POT GAIN = 345.15

POT OFFSET (DEG) = 59.68

DEVIATION RMS (MICRONS) = 8.74

DEVIATION MAX (MICRONS) = 19.69

DEVIATION MIN (MICRONS) = -21.64

POS#3 FWD

CAM ECCEN R (MICRONS) = 1570.47

ROTARY POT GAIN = 345.15

POT OFFSET (DEG) = 59.68

DEVIATION RMS (MICRONS) = 8.66

DEVIATION MAX (MICRONS) = 20.71

DEVIATION MIN (MICRONS) = -20.87

POS#3 BWD

CAM ECCEN R (MICRONS) = 1573.72

ROTARY POT GAIN = 345.15

POT OFFSET (DEG) = 59.68

DEVIATION RMS (MICRONS) = 9.27

DEVIATION MAX (MICRONS) = 20.61

DEVIATION MIN (MICRONS) = -24.50

=== TEST PASS! ===

--- END OF TEST ---



SHERWIN-WILLIAMS.

SHERWIN-WILLIAMS
3143 E KEMPER RD
SHARONVILLE OH 45241

Visit www.sherwin-williams.com
Store 1246 KEVIN
(513) 771-8572
Fax - (513) 771-8590

PACKING
SLIP
No. 7233-5

ACCOUNT: 6538-0111-8 JOB 01 METALEX MFG

METALEX MFG
5750 CORNELL RD
CINCINNATI OH 45242 2010

PO: 71829-BL-7553
ORDER: OE0025007Q1246
DATE: 07/16/07
TIME: 8:08 AM

METALEX
Q. A. DEPT
ACCEPTED
DATE 7/16/07
BY TC

E16/13651 11

SALES NUMBER	SIZE	PRODUCT	DESCRIPTION	QUANTITY
6405-18999	GALLON	B62WZ111	TC HS EX WHT A	5
Color: SW4026 SLATE GRAY				
<u>BAC Blend-a-Color</u> OZ 32 64 128				
B1	Black	2	16 1 1	
G2	New Green	-	3 - -	
Y3	Deep Gold	-	2 - -	
Sher-Color Formula				
TOTAL LINES				1
				5

OE1637C

RECEIVED
JUL 16 2007
METALEX MFG.
BY CD

MERCHANDISE RECEIVED IN GOOD ORDER BY:

BILLY BLANTON

DATE (CENTRALIZED INVOICE)



GAM Inspection Form

Record No. QRO-005-02

Revised: 09/29/05

Order #: 206059

Customer: IMAC Motion Cont

Serial #'s G45630-G45655

Part Number: 701058

Type Code: EPL-N34-490G-[N23-B01]

Qty: 26

Verify mounting dimensions

Motor Mfg: NEMA Standard Model: N23 - 3/8"

- Check Pilot Diameter = 1.5
** Check for EVERY adapter **
- Check pilot height > 0.06
- Check bolt circle = 2.625
- Check hole size fits for: .205
- Check hole depth for flange thickness: 0.25
- Check shaft diameter = 0.375
** Check for EVERY gearbox **
- Check shaft engagement > 0.82
- Verify ratio and "smoothness" of gearbox by spinning input
- Verify mounting bolts are correct qty and type of for all applicable adapters.
- Verify access hole plug is present and clamping ring bolt is accessible.
- Place bolts, plugs, and loose gears in a bag and wire to each individual gearbox.
- Verify key and keyways, if applicable
- Verify output coupling bore size, if applicable
- Verify shrink disc is present, if applicable
- Verify order is complete.

Shipping Special Instruction

Packaged By: _____

Date: _____

Assemble gearbox / verify appearance and label

- Clean gearbox and paint if necessary
- Mount input coupling to gearbox if applicable.
- Mount input adapter / lantern to gearbox if applicable.
- Verify label is correct to order
- Apply label to gearbox on a flat surface on gearbox.
- Apply clear plastic overlay label to top of original label.

Customer Specific Notes (Inspection)

None

Verify special options

Notes:

Give copy of Inspection sheet to shipping for IMAC orders.

Inspected By: 

Date: 8/31/07



GAM Inspection Form

Record No. QRO-005-02

Revised: 09/29/05

Order #: 206059

Customer: IMAC Motion Cont

Serial #'s G46012-G46026

Part Number: 701058

Type Code: EPL-N34-490G-[N23-B01]

Qty: 15

Verify mounting dimensions

Motor Mfg: NEMA Standard Model: N23 - 3/8"

- Check Pilot Diameter = 1.5
** Check for EVERY adapter **
- Check pilot height > 0.06
- Check bolt circle = 2.625
- Check hole size fits for: .205
- Check hole depth for flange thickness: 0.25
- Check shaft diameter = 0.375
** Check for EVERY gearbox **
- Check shaft engagement > 0.82
- Verify ratio and "smoothness" of gearbox by spinning input
- Verify mounting bolts are correct qty and type of for all applicable adapters.
- Verify access hole plug is present and clamping ring bolt is accessible.
- Place bolts, plugs, and loose gears in a bag and wire to each individual gearbox.
- Verify key and keyways, if applicable
- Verify output coupling bore size, if applicable
- Verify shrink disc is present, if applicable
- Verify order is complete.

Assemble gearbox / verify appearance and label

- Clean gearbox and paint if necessary
- Mount input coupling to gearbox if applicable.
- Mount input adapter / lantern to gearbox if applicable.
- Verify label is correct to order
- Apply label to gearbox on a flat surface on gearbox.
- Apply clear plastic overlay label to top of original label.

Customer Specific Notes (Inspection)

None

Verify special options

Notes:

If order is for IMAC, make a copy of the inspection sheet and send in box for customer.

Shipping Special Instruction

Packaged By: _____

Date: _____

Inspected By: BJK

Date: 7.24.07

LINTECH

1845 Enterprise Way
Monrovia, CA 91016-4272
Phone: 626.358.0110 - Fax: 626.303.2035

CERTIFICATION

Date: 08/15/2007
Sales Order No.: 42873
Pick List No.: 52559

Sold To:
IMAC
1301-A Bowes Road
Elgin, IL 30123

Ship To:
Hi-Tech Manufacturing
4637 No. 25th Ave.
Schiller Park, IL 60176

Order No.: 7396

Order No.: None

Seller hereby certifies as follows - that all materials, parts and processes furnished against the above referenced purchase order were produced in conformance with all applicable specifications as referenced therein, and are on file subject to examination.

Quantity Shipped

(10)

Part Number/Description

206821 Rev."F"
Single Axis Table

Serial Number

AA00733003
AA00733004
AA00733005
AA00733006
AA00733007
AA00733008
AA00733009
AA00733010
AA00733011
AA00733012

By: 
Q.C. Manager

LINTECH

1845 Enterprise Way
Monrovia, CA 91016-4272
Phone: 626.358.0110 – Fax: 626.303.2035

CERTIFICATION

Date: 08/22/2007
Sales Order No.: 42873
Pick List No.: 52621

Sold To:
IMAC
1301-A Bowes Road
Elgin, IL 30123

Ship To:
Hi-Tech Manufacturing
4637 No. 25th Ave.
Schiller Park, IL 60176

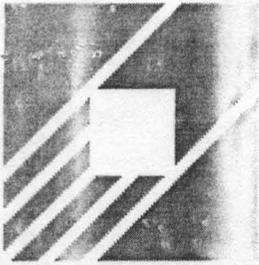
Order No.: 7396

Order No.: None

Seller hereby certifies as follows - that all materials, parts and processes furnished against the above referenced purchase order were produced in conformance with all applicable specifications as referenced therein, and are on file subject to examination.

<u>Quantity Shipped</u>	<u>Part Number/Description</u>	<u>Serial Number</u>
(10)	206821 Rev."F" Single Axis Table	AA00734009 AA00734010 AA00734011 AA00734012 AA00734013 AA00734014 AA00734015 AA00734016 AA00734017 AA00734018

By: 
Q.C. Manager



**HI-TECH
Manufacturing, Inc.**

CNC Milling & Turning
 Prototypes & Special Machinery
 4637 N. 25th Ave.
 Schiller Park, IL 60176

Hi-Tech Manufacturing, Inc.
 4637 N. 25th Ave.
 Schiller Park, IL 60176
 USA

Ph: (847) 678-1616
 Fax: (847) 678-1617

Purchase Order

Number: 17338

Date: 20-Aug-07

To

American Grinding & Machine Co
 2000 N. Madison Ave.
 Chicago, IL 60639-2899
 USA

Ship To

Aamro Corp.
 3110 S. 26th Ave.
 Broadview, IL 60155
 USA

Ph: (773) 889-4343

Fax: (773) 889-3781

Ph: (708) 343-5543

Fax: (708) 343-5547

Terms		Ship Via	FOB	Issued By
		Deliver	Destination	JOE
Quantity	Description		Unit Price	Amount
	1. Please enter this order in accordance with prices, delivery and specifications shown below. 2. Please notify us immediately if you are unable to ship as specified. 3. Reshipment of product will not be accepted without prior approval from Hi-Tech. 4. All Ground shipments must be shipped COLLECT. Use account # 6E1-000. 5. All declared value charges will be accepted without prior approval by Hi-Tech.			
-1 12 11 Line: 001 3	L1: 802-200030 PE: STAL WELDMENT Vibratory Stress Relieve Co: Date required	Rev: 01 Due: 24-Aug-07 Job: 55420B030	\$0.00 ea	\$0.00
			Total:	\$0.00



AMERICAN GRINDING & MACHINE CO.

2000 N. MANGO AVE. CHICAGO, IL 60639
773-889-4343 toll free: 877-988-4343
FAX 773-889-3781

CERTIFICATE OF COMPLIANCE

Customer: Hi-Tech Mfg PHONE: (847) 678-1616
4637 N. 25th Ave. FAX: (847) 678-1716
Schiller Park, IL
60176

RE: PURCHASE ORDER 17338

PRINT NUMBER(S) (if applicable) L143 0802-200030
8 pgs.

This is to certify that the services and /or material furnished by American Grinding & Machine Company on this order meets the requirements of listed purchase order and any prints furnished to us for that purchase order.

Signature of American Grinding Representative

08/31/07
Date



AMERICAN GRINDING & MACHINE CO.

2000 N. MANGO AVE. CHICAGO, IL 60639
773-889-4343 toll free: 877-988-4343
FAX 773-889-3781

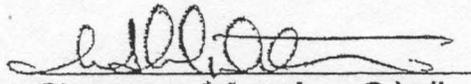
CERTIFICATE OF COMPLIANCE

Customer: Hi-Tech Mfg PHONE: (847) 678-1616
4637 N. 25th Ave. FAX: (847) 678-1716
Schiller Park, IL
60176

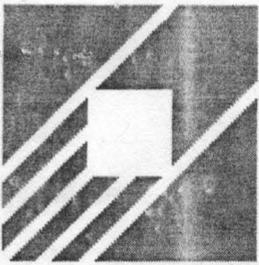
RE: PURCHASE ORDER 17213/17309

PRINT NUMBER(S) (if applicable) L1430802-200021 - 4 Pcs.
4 Pcs / 4 Pcs. L1430802-200011 - 4 Pcs.

This is to certify that the services and /or material furnished by American Grinding & Machine Company on this order meets the requirements of listed purchase order and any prints furnished to us for that purchase order.


Signature of American Grinding Representative

08131107
Date



**HI-TECH
Manufacturing, Inc.**

CNC Milling & Turning
 Prototypes & Special Machinery
 4637 N. 25th Ave.
 Schiller Park, IL 60176

Hi-Tech Manufacturing, Inc.
 4637 N. 25th Ave.
 Schiller Park, IL 60176
 USA

Ph: (847) 678-1616
 Fax: (847) 678-1617

Purchase Order

Number: 17213

Date: 09-Aug-07

To

American Grinding & Machine Co
 2000 N. Mango Ave.
 Chicago, IL 60639-2899
 USA

Ship To

Hi-Tech Manufacturing, Inc.
 4637 N. 25th Ave.
 Schiller Park, IL 60176
 USA

Ph: (773) 889-4343

Fax: (773) 889-3781

Ph: (847) 678-1616

Fax: (847) 678-1617

Terms		Ship Via	FOB	Issued By
		Deliver	Destination	JOE
Quantity	Description		Unit Price	Amount
1. Please enter this order in accordance with prices, delivery and specifications shown below. 2. Please notify us immediately if you are unable to ship as specified. 3. Overshipment of product will not be accepted without prior approval from Hi-Tech. 4. UPS Ground shipments must be shipped COLLECT. Use account # 6E1-000. 5. No declared value charges will be accepted without prior approval by Hi-Tech.				
18 -8 10 Line	L1430802-200011 INTERFACE PLATE (DOUBLE CAM) Vibratory Stress Relieve Certificate required	Rev: 03 Due: 09-Aug-07 Job: 55420B011	\$0.00 ea	\$0.00
Line: 002	L1430802-200021 INTERFACE PLATE (SINGLE CAM) Vibratory Stress Relieve Certificate required	Rev: 03 Due: 16-Aug-07 Job: 55420B021	\$0.00 ea	\$0.00
			Total:	\$0.00

The Cincinnati Steel Treating Co
5701 Mariemont Ave.
Cincinnati, Ohio 45227 (513) 271-3173

Certification ID
36508

Order ID
96899

CERTIFICATION OF COMPLIANCE

CUSTOMER

Metalex Mfg., Inc.
5750 Cornell Road

Cincinnati OH
Bkt Ord # 45242

Purchase Order 71673 Customer Cust

Qty	Part No / Description	Material
4	L1430401-100400 SUPPORT GIRDER	A36

REV. # 05, S/N 7A-08198-09, 7A-08198-10, 7A-08198-11,
7A-08198-12

STRESS RELIEVE PER AWS D1.1 REV. 2004.
NOTE: SUPPORT TO PREVENT DISTORTION.
HEAT TREAT CHARTS REQUIRED.
CERTIFICATIONS REQUIRED.

RESULTS

THE ABOVE PARTS HAVE BEEN HEAT TREATED TO THE FOLLOWING:

HEAT TREATMENT STRESS RELIEVED PER AWS D1.1 REV 2004

WE HEREBY CERTIFY THAT THE ABOVE PARTS WERE PROCESSED IN ACCORDANCE WITH THE SPECIFICATIONS AND INSTRUCTIONS SPECIFIED ON THE ABOVE PURCHASE ORDER AND THAT THE RESULTS AND REPORT THEREOF ARE AS STATED. ALL TESTING AND INSPECTION PROCEDURES EMPLOYED WERE IN ACCORDANCE WITH THE APPLICABLE SPECIFICATIONS AND THE RESULTS THEREOF ARE ON FILE.


NAME JAMES M. HUNT
TITLE QA MANAGER
DATE 7/26/2007

METALEX
Q. A. DEPT
ACCEPTED
DATE 7/27/07
BY TC

LM 7558

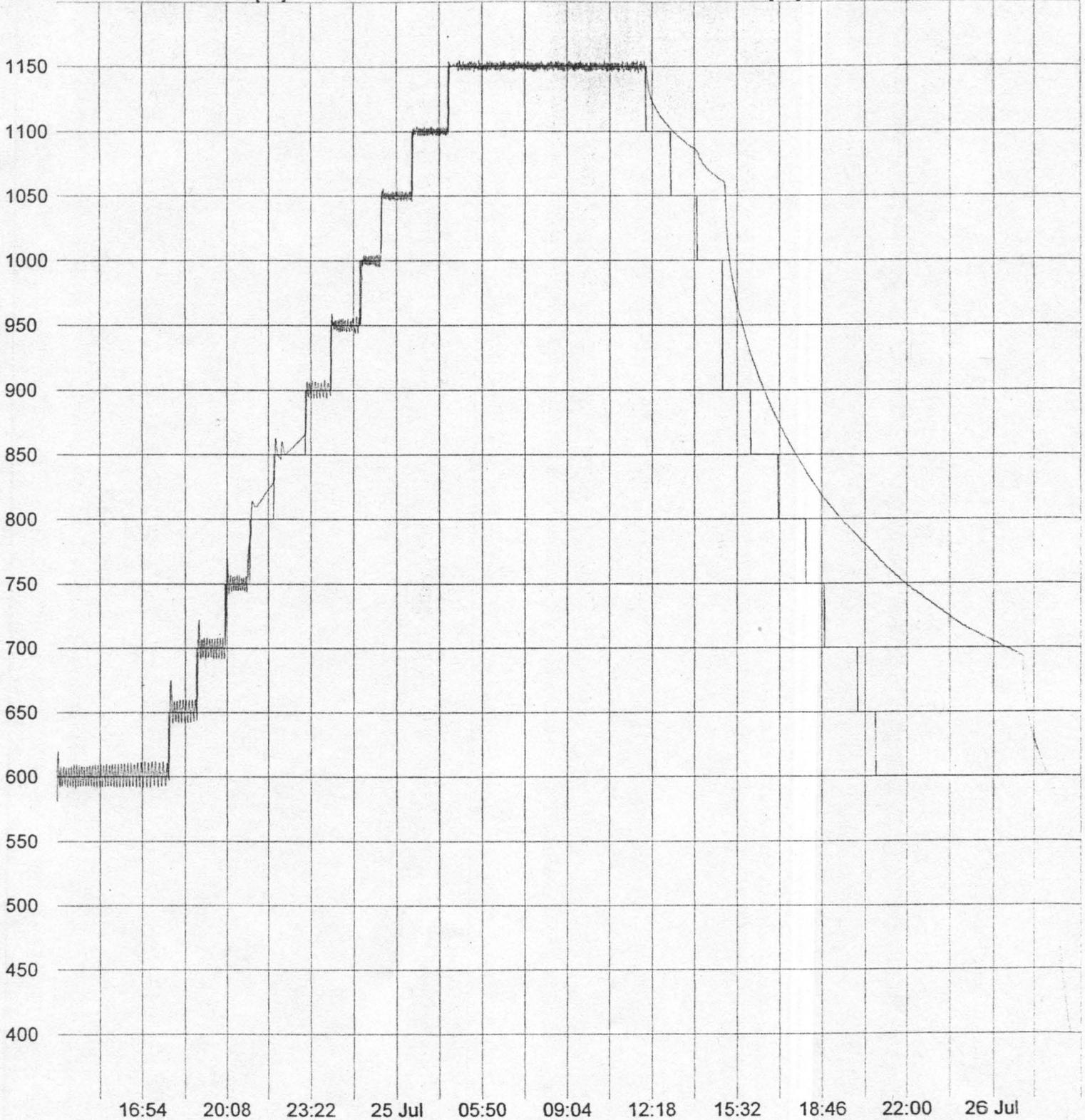
Datalog Report

Start: 7/24/2007 1:40:00 PM
End: 7/26/2007 4:05:00 AM
Sample every 1 minute(s)
Printed 7/26/2007 8:58:29 AM

METALEX Mfg. Inc. STRESS RELIEVE
L1430401-100400 REV#05
SN# 7A-08198-09,10,11,12
PO# 71673
CST ORDER# 96899

CB 451 - 0 - TEMP ACTUAL [00]

CB 451 - 1 - TEMP SET [01]



INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-TECH MANUFACTURING, INC.

PART NAME: INTERFACE PLATE (SINGLE CAM)

DRAWING #: L1430802-200021 (03)

SERIAL #: 10

P.O. #: 7A-08189

DATE: 08-15-07

ACCEPTANCE CRITERIA

1. Visually inspect for damage.	<u>Accept</u> / Reject
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CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Flatness of Datum A	$\leq .02$	$\leq .02$	$\angle = .01$	<u>Accept</u> / Reject
Perpendicularity of Datum B to A	$\leq .02$	$\leq .02$	$\angle = .01$	<u>Accept</u> / Reject
Parallelism of upper edge on lower Cam Block C to B	$\leq .02$	$\leq .02$	$\angle = .01$	<u>Accept</u> / Reject
Parallelism of lower edge on upper Cam Block C to B	$\leq .02$	$\leq .02$	$\angle = .01$	<u>Accept</u> / Reject
Parallelism of upper edge on upper Cam Block C to B	$\leq .02$	$\leq .02$	$\angle = .01$	<u>Accept</u> / Reject
Width of mounting surface on lower Cam Block	142.01	+0.02/-0	142.02	<u>Accept</u> / Reject
Width of mounting surface on upper Cam Block	142.01	+0.02/-0	142.02	<u>Accept</u> / Reject
Separation of inner edges of Cam Blocks	457.43	+0.08/-0.08	457.46	<u>Accept</u> / Reject

INSPECTOR:

Simon

QA Supervisor:

Murtagh

TEST EQUIPMENT USED: CMM, gage blocks, dial indicator.

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-TECH MANUFACTURING, INC.

PART NAME: INTERFACE PLATE (DOUBLE CAM)

DRAWING #: L1430802-200011 (03)

SERIAL #: 10

P.O. #: 7A-08189

DATE: 08-16-07

ACCEPTANCE CRITERIA

1. Visually inspect for damage.	<u>Accept</u> /Reject
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CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Flatness of Datum A	≤ 0.02	≤ 0.02	≤ 0.01	<u>Accept</u> /Reject
Perpendicularity of Datum B to A	≤ 0.02	≤ 0.02	≤ 0.01	<u>Accept</u> /Reject
Parallelism of inner edge on Cam Block A to B	≤ 0.02	≤ 0.02	≤ 0.01	<u>Accept</u> /Reject
Parallelism of inner edge on Cam Block B to B	≤ 0.02	≤ 0.02	≤ 0.01	<u>Accept</u> /Reject
Parallelism of outer edge on Cam Block B to B	≤ 0.02	≤ 0.02	≤ 0.01	<u>Accept</u> /Reject
Width of mounting surface on Cam Block B	142.01	+0.02/-0	142.02	<u>Accept</u> /Reject
Width of mounting surface on Cam Block A	254.00	+0.02/-0	254.01	<u>Accept</u> /Reject
Separation of outer edges of Cam Blocks	685.42	+0.08/-0.08	685.45	<u>Accept</u> /Reject

INSPECTOR: Smob

QA Supervisor: MwLaza

TEST EQUIPMENT USED: CMM, gage blocks, dial indicator.

COMMENTS:



INSPECTION PLANNING & REPORT FORM
Metalex Mfg.
5750 Cornell Rd ! Cincinnati, OH 45242 ! (513) 489-0507

Job No.
2007-7558

Qty
1

Inspection Origin		Vendor (Sub-Tier Source) Identification		Customer Identification		
<input type="checkbox"/> Receiving	Vendor Name N/A	Part No. L1430401-100400		REV 6	P.O. Number 16185	
<input type="checkbox"/> In-Process		Date Rec'd N/A	P.O. No. N/A	Part Name Undulator Support Girder		
<input checked="" type="checkbox"/> Final	Serial Numbers: 10			Customer Name Hi-Tech Manufacturing		
<input type="checkbox"/> Rework/Repair						
<input type="checkbox"/> First Article						
At Oper. 170						
SPECIFICATION	B/P ZONE	INSPECTION METHOD / GAGE NO.	ACTUAL DIMENSION / GAGE VERIFICATION (Range of Readings or Accept Status)	QTY ACC	QTY REJ	

**** ALL DIMENSIONS TO BE RECORDED IN MILLIMETERS ****
**** ALL TEMPERATURES TO BE RECORDED IN CELSIUS ****

ALL DIMENSIONS APPLY AT A TEMPERATURE OF 20 DEGREES CELSIUS. PART MUST BE IN THERMAL EQUILIBRIUM DURING MEASUREMENTS AND AT THE SAME TEMPERATURE AT THE BEGINNING AND CONCLUSION OF THE MEASUREMENTS WITHIN +/-2 DEG. CELSIUS.

PART TEMPERATURE BEFORE INSPECTION (Record in Celsius)	SOW 4.5.4	CONTACT THERMOMETER MX1794	20.32° C	MTX QC 8
PART TEMPERATURE DURING INSPECTION (Record in Celsius)	SOW 4.5.4	CONTACT THERMOMETER MX1794	20.33° C	MTX QC 8
PART TEMPERATURE AFTER INSPECTION (Record in Celsius)	SOW 4.5.4	CONTACT THERMOMETER MX1794	20.35° C	MTX QC 8

CRITICAL DIMENSIONS PER SECTION 4.5.2.2 OF DOC. # L143-00093

SHEET 2 - TOP VIEW

A) Flatness of Datum B of .030 [.001]	N/A	CMM MX1269	.010	MTX QC 8
B) Perpendicularity of Datum B to Datum C .25 [.010] A C	E8	CMM MX1269	.011	MTX QC 8
C) Flatness of datum A of .030 [.001]	N/A	CMM MX1269	.019	MTX QC 8
D) Perpendicularity of Datum A to Datum C .25 [.010] C	D8	CMM MX1269	.019	MTX QC 8
E) 9X Ø 6.338 - 6.350 marked "D1", "D2" & "D3"	E7 E6 E3	CMM MX1269	6.339 - 6.350	MTX QC 8
F) True position of "D3" holes 2X ⊕ .1 [.004] A B C ⊕ .03 [.0012] B C	E3	CMM MX1269	.023 AND .100 .022	MTX QC 8
F) True position of "D2" holes 2X ⊕ .1 [.004] A B C ⊕ .03 [.0012] B C	E6	CMM MX1269	.021 AND .027 .009	MTX QC 8
F) Locations of "D1" holes 444.50 [17.500]	E7	CMM MX1269	444.561	MTX QC 8

STAMP MTX QC 8	INSPECTED BY THOMAS G COOK	DATE 10/17/07	PAGE 1 OF 2	QTY ACC 1	QTY REJ 0
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INSPECTION PLANNING & REPORT FORM
Metalex Mfg.
5750 Cornell Rd ! Cincinnati, OH 45242 ! (513) 489-0507

Job No.
2007-7558

Qty
1

Inspection Origin		Vendor (Sub-Tier Source) Identification		Customer Identification		
<input type="checkbox"/> Receiving	Serial Numbers: 10	Vendor Name	Part No.	REV	P.O. Number	
<input type="checkbox"/> In-Process		N/A	L1430401-100400	6	16185	
<input checked="" type="checkbox"/> Final		Date Rec'd	P.O. No.	Part Name		
<input type="checkbox"/> Rework/Repair		N/A	N/A	Undulator Support Girder		
<input type="checkbox"/> First Article				Customer Name		
At Oper. 170				Hi-Tech Manufacturing		
SPECIFICATION	B/P ZONE	INSPECTION METHOD / GAGE NO.	ACTUAL DIMENSION / GAGE VERIFICATION (Range of Readings or Accept Status)		QTY ACC	QTY REJ

1968.50 [77.500]	E4	CMM MX1269	1968.477		MTX QC 8
3492.50 [137.500]	E2	CMM MX1269	3492.433		MTX QC 8
2X 523.6 [20.61]	E1	CMM MX1269	523.600 523.617 523.608		MTX QC 8
3185.26 [125.404]	D2	CMM MX1269	3185.192		MTX QC 8
845.29 [33.179]	D6	CMM MX1269	845.280		MTX QC 8
2X 95.10 [3.744]	D8	CMM MX1269	95.111 95.113		MTX QC 8

SHEET 2 - SIDE VIEW

A) <input type="checkbox"/> C <input checked="" type="checkbox"/> / / .030 [.0012] 2X Surface "J"	C8	CMM MX1269	.027		MTX QC 8
B) <input type="checkbox"/> C <input checked="" type="checkbox"/> / / .05 [.002]	C8	CMM MX1269	.044		MTX QC 8

SHEET 2 - BOTTOM VIEW

A) 2X 749.78 ± .15	C7	CMM MX1269	749.710 749.723		MTX QC 8
B) 2X 2340.00 ± .15	C5	CMM MX1269	2340.039 2340.032		MTX QC 8
C) 4X <input checked="" type="checkbox"/> / / .05 [.002] B	B2	CMM MX1269	.006 .004 .002 .002		MTX QC 8
D) 4X <input checked="" type="checkbox"/> / / .030 [.0012] A	B7	CMM MX1269	.003 .002 .003 .000		MTX QC 8

SHEET 3 - SECTION B-B

E) <input checked="" type="checkbox"/> / / .07 [.003] C	C2	CMM MX1269	.025		MTX QC 8
F) 4X 109.47 ± .08	C2	CMM MX1269	109.487 109.512		MTX QC 8

ALL OTHER FEATURES ARE ACCEPTED PER METALEX OPERATOR ACCEPTANCE PROGRAM (OAP) MXW117001 & OPERATOR SIGNOFF OF ROUTER OPERATIONS FOR COMPLIANCE TO ALL DRAWING FEATURES GENERATED WITHIN THAT DEFINED OPERATION.	ROUTER SIGNOFF MX5009	CONFORMS	MTX QC 8
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STAMP 	INSPECTED BY THOMAS G COOK	DATE 10/17/07	PAGE 2 OF 2	QTY ACC 1	QTY REJ 0
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CERTIFICATE OF CONFORMANCE

Date:	<u>10/26/2007</u>	Metalex Job#	<u>2007-7558</u>
Customer:	<u>Hi-Tech Manufacturing, Inc.</u>	Purchase Order #	<u>16185</u>
	<u>4637 N. 25th Ave.</u>	MX Packing List #	<u>41293</u>
	<u>Schiller Park, IL 60176</u>		
Attention:	<u>Simon Sorsher</u>		

Metalex certifies that all material, processes, procedures, and dimensions are as called for on the purchase order, drawings, and/or amendments supplied by you.
 All information concerning this part or parts, units and/or assemblies are on file at Metalex Manufacturing, Inc.

<u>ITEM</u>	<u>QTY</u>	<u>PART NUMBER</u>	<u>REV</u>	<u>PART NAME</u>	<u>ID # *</u>
001	7	L1430401-100400	6	Support Girder	See Below

*IDENTIFICATION NUMBER INCLUDES SERIAL #, HEAT #, AND/OR LOT #.

COMMENTS: "FIRST ARTICLE" submitted on Metalex Shipper # 408586, dated 08/13/07 (S/N: 7A-08198-01).
 Applicable serial numbers of this shipment are 7A-08198-10 thru 7A-08198-13, 7A-08198-14, and 7A-08198-15.
 Some internal documents in this quality package may contain documents certifying to revision level "5" or "5V". Metalex certifies these documents and processes conform to the rev 6 revision level and the parts conform to revision level "6".
 Metalex is in compliance with Statement of Workscope Document No. L143-00093, Revision New, dated 12/12/06.
 Manufactured from Metalex purchased material. Reference heat numbers: T7257, T7232, T7130, T7141, U9728, 0129862, X25899, J62810, JF6843, J70358, and 478765.

	<u>Thomas Clark</u>	<u>10/26/07</u>
Metalex Representative Signature	Print Name	Date

The Sherwin-Williams Co.
3143 EAST KEMPER RD
CINCINNATI, OHIO 45241

METALEX
Q. A. DEPT
ACCEPTED
DATE 6/29/07
BY TC

MTX
QC 28

Job 7558

**CERTIFICATE OF COMPLIANCE
STATEMENT OF QUALITY**

METALEX

PURCHASE ORDER 71261-JG
DATE OF MFG
SHELF LIFE
PART

QUANTITY
BATCH

IT IS HEREBY CERTIFIED THAT ALL MATERIAL USED IN THE
MANUFACTURE OF PARTS IN THE QUALITY CALLED FOR ON
THE SUBJECT PURCHASE ORDER, CONFORM TO THE MATERIALS
AND/OR MANUFACTURING SPECIFICATIONS INDICATED IN
DRAWINGS OF SPECIFICATIONS AS CALLED FOR ON SAID
PURCHASE ORDER.

THE SHERWIN-WILLIAMS CO
3143 EAST KEMPER RD
CINCINNATI OHIO 45241



AUTHORIZED SIGNATURE
CUSTOMER SERVICE ADM

Shelf life 36 months
OX2696S
batch date OX2716S
OX27855 B67NS
OX0275C B67HS
OX2905Z



METALEX WELD CERTIFICATION

MX JOB #: 07-7558 QTY 4 CUSTOMER: Hi-Tech Manufacturing, Inc.

PART NAME: Support Girder

PART NUMBER: L1430401-100400 REVISION: 6

S/N: (if applicable) 7A-08198-10,
7A-08198-13 thru -12

METALEX PROCEDURE # WPS 146 (K. Ballard), WPS 194-1 (G. Black)

CUST. SPECIFICATION # AWS D1.1

WELD WIRE SPEC AWS A5.20

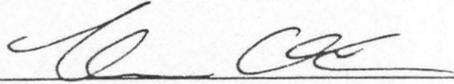
TYPE E71T-1

HEAT 81869, 81192

DIAMETER 1/16"

<u>SERIAL NUMBER</u>	<u>WELDER</u>
7A-08198-10	Ken Ballard
7A-08198-13	Ken Ballard
7A-08198-14	Ken Ballard
7A-08198-15	Ken Ballard

THE ABOVE PARTS LISTED WERE WELDED IN ACCORDANCE WITH THE REFERENCED WELDING SPECIFICATION.


Metalex Quality Control

10/26/07
Date



ZERUST

Material Safety Data Sheet

Z-Maxx Lube – Heavy Duty Grease

SECTION 1

Technical Phone: 651-784-1250 MSDS# 4-4-3-12-1-180 Rev A
Date Prepared 6 July 2004

SECTION 2 - INGREDIENTS

Complex Mixture – Petroleum Hydrocarbons Plus Additives. This material is not known to contain greater than 0.1% of any carcinogen required to be listed under the OSHA Hazard Communication Standard (29CFR 1910.1200).

This product is considered non-hazardous when handled properly and used for intended purpose.

*This product does not contain any chemical subject to the reporting requirements of the Superfund Amendments and Reauthorization Act of 1986 (SARA), Title III, Section 313 and 40 CFR Part 372.

SECTION 3 – PHYSICAL DATA

Appearance and Odor: Amber grease, mild mineral odor
Boiling Point: N/A
Specific Gravity: .945
Vapor Pressure (mm Hg): N/A
Vapor Density (air = 1): N/A
Water Solubility: Nil

SECTION 4 – FIRE AND EXPLOSION DATA

Flash Point >200°C (392°F)	Method used Cleveland open cup	LEL% Unknown	UEL% Unknown
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Extinguisher Media: CO₂ Dry chemical, Foam or Sand/Earth
Fire Fighting: NIOSH/MSHA approved, self-contained, pressure demand respirator recommended; water may spread fire.
Fire and Explosion Hazards: Containers not on fire may be cooled with water.

SECTION 5 – REACTIVITY DATA

Material is: Stable
Hazardous polymerization: Will not occur.
Conditions to avoid: Strong acids and direct open flames.
Incompatibility: Excessive heat. Avoid conditions that could generate an oil mist.
Hazardous decomposition product: Oxides of Carbon, Sulphur, Nitrogen

SECTION 6 – HEALTH HAZARDS

Acute: Unknown.
Chronic: May cause eye or skin irritation.
Signs and symptoms of exposure: Eye, skin irritation.
Medical conditions generally aggravated by exposure: Unknown
Carcinogenic status: OSHA: N/A I.A.R.C. N/A N.T.P. N/A

Inhalation: Emergency and first aid procedures:
Move to fresh air.
Eyes: Flush with water for 15 minutes, if film or irritation persists, seek medical attention.
Skin: Wipe off excess and wash with soap and water.
Ingestion: Do not induce vomiting. Consult physician.

SECTION 7 – SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

Handling and storage: Store in a dry, cool environment.
Other precautions: Keep away from open flames.
Spill or release: Scoop up and place in metal container. Use inert absorbent to clean residue and place in metal container. U.S. Coast Guard 1-800-424-8802.
Disposal methods: Dispose of in accordance with all applicable federal, state and local regulations.
Emergency Phone: Chemtrec 1-800-424-9300

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory protection: Not required at normal use temperatures.
Ventilation Procedures: Local exhaust: recommended to maintain oil mist below TLV limit. Mechanical: to maintain below TLV limits. Special: N/A Other: N/A
Protective gloves: Oil resistant gloves.
Eye protection: Safety glasses (goggles).
Other protective equipment: N/A
Work/hygienic practices: Practice good housekeeping.
N/A = Not Applicable

(May be used to comply with OSHA's Hazard Communications Standard, 29CFR 1910.1200. Standard must be consulted for specific requirements.)

NORTHERN TECHNOLOGIES
INTERNATIONAL CORPORATION
6680 North Highway 49 * Lino Lakes MN 55014
Toll Free: 800-328-2433 * Phone: 651-784-1250 * Fax: 651-784-2902
URL: www.ntic.com * American Stock Exchange Symbol: NTI



AMERICAN GRINDING & MACHINE CO.

2000 N. MANGO AVE. CHICAGO, IL 60639
773-889-4343 toll free: 877-988-4343
FAX 773-889-3781

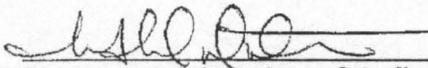
CERTIFICATE OF COMPLIANCE

Customer: Hi-Tech Mfg PHONE: (847) 678-1616
4637 N. 25th Ave. FAX: (847) 678-1716
Schiller Park, IL
60176

RE: PURCHASE ORDER 16845

PRINT NUMBER(S) (if applicable) L143 0802-200030

This is to certify that the services and /or material furnished by American Grinding & Machine Company on this order meets the requirements of listed purchase order and any prints furnished to us for that purchase order.


Signature of American Grinding Representative

7/19/07
Date

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: METALEX, INC.

PART NAME: UNDULATOR GIRDER ASSY

DRAWING #: L1430401-100400 (05)

SERIAL #: 10

P.O. #: 7A-08189

DATE: 10-29-07

ACCEPTANCE CRITERIA

1. Visually inspect for damage. Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Perpendicularity of Datum B to C	≤ 0.025	≤ 0.025	$\angle = .025$	Accept/Reject
Perpendicularity of Datum A to C	≤ 0.025	≤ 0.025	$\angle = .025$	Accept/Reject
True position of 2 D2 hole to 2 D3 holes	≤ 0.03	≤ 0.03	$\angle = .03$	Accept/Reject
Parallelism of support pad surface to Datum C	≤ 0.07	≤ 0.07	#1 $\angle = .07$	Accept/Reject
			#2 $\angle = .07$	
			#3 $\angle = .07$	
			#4 $\angle = .07$	
Distance from Datum C to support pad surface	109.50	+0.2/-0.2	#1 109.5	Accept/Reject
			#2 109.53	
			#3 109.49	
			#4 109.53	

INSPECTOR: Simon

QA Supervisor: Muelaga

TEST EQUIPMENT USED: feeler gage, dial indicator, micrometer, precision square.

COMMENTS: