Metalex Manufacturing Inc.

Metalex

Certified ISO 9001 Quality Management
Veteran Owned Business 30 Plus Years

#1-- INSIDE Pkg - Cust Copy

Ship To: STANFORD UNIVERSITY-SLAC
BUILDING 081, ROOM 118
2575 SAND HILL ROAD
MENLO PARK CA 94025

Packing List# 39083 **Rel#** 1 **PAGE** 1
Metalex Job# 2006-5686

Date: 10/11/06
Ship Via:
PTA# _____
(prepaid shipments only)
BOL/Air Bill#
Prepaid: XXXXXXX **Collect:**
Weight: **Ctns:** **Zone:**
Dimensions:

Attn: BEN POLING 408-250-6877
Customer PO: 5A10359

P.O. Item No.	Qty Ordered	Qty Shipped	Qty Back Ordered	Description
004	15	1	10	LCLS UNDULATOR MAIN ASSY ANL PART/REVISION NUMBER: L143-112000-05 SLAC PART NUMBER: SA-381-001-35 ASSEMBLY SERIAL NUMBER: 5A10359-12 STRONGBACK SERIAL NUMBER: 5A0699-12 -CERTIFICATE OF CONFORMANCE, INSPECTION DATA, AND CERTIFICATIONS ENCLOSED. ANL SOURCE: SIGNATURE: Glen S Lawrence DATE: 10/12/06 PRINT: Glen S. Lawrence STAMP:

Received By:

Printed Name _____ Signature _____ Date _____

MX3006 (10/ 02)

Metalex Manufacturing Inc.
5750 Cornell Road • Cincinnati, OH 45242
Phone (513) 489-0507 • Fax (513) 489-1020
EMAIL: metalex@metalexmfg.com

Metalex
Customized Machinery and Parts
ISO 9001:2000 and AS9100 Certified
Veteran Owned Business 30 Plus Years

CERTIFICATE OF CONFORMANCE

Date: 10/11/2006
Customer: Argonne National Laboratory
9700 S. Cass
Argonne, IL 60439

Attention: Michael Oprondek

Metalex Job# 2006-5686
Purchase Order # 5A10359
MX Packing List # 39083

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.

ITEM	QTY	PART NUMBER	REV	PART NAME	ID # *
004	1	L143-112000	05	LCLS Undulator Main Assembly	5A10359-12

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

COMMENTS: "First Article" submitted on Metalex Shipper #37728 dated 3/31/06 (Job#05-4718).

SLAC Part Number: SA-381-001-35.

Assembly Serial Number: 5A10359-12.

Strongback Serial Number: 5A0699-12.

QE
Metalex Representative Signature

TODD CAUDILL MTX QC 12
Print Name

10/11/2006
Date

MX1011 (05/05)

Metalex
Manufacturing
Inc.

Metalex
Customized Machinery and Parts
CERTIFIED ISO 9001 QUALITY MANAGEMENT

Metalex Manufacturing
L143-112000 BOM/ASSY Undulator
Purchase Order No. 5A10359

LCLS Undulator L143-00076 Assembly Procedure

Assembly:

ANL Part/Revision Number: L143-112000-~~01~~ 05 Td. 9106 MTX QC 12
SLAC Part Number: SA-381-001-35
Assembly Serial Number: 5A10359-12

Dimensional Inspection Requirements:

20. *Dimensionally inspect overall height of the magnet assemblies to verify they are within specification before installation into the strongback.*

Dimension: 78mm (3.071")

L143-110800 Upper Left Magnet Structure Assembly	Actual: 78.01-77.98
L143-111000 Upper Middle Magnet Structure Assembly	Actual: 78.02-77.99
L143-111200 Upper Right Magnet Structure Assembly	Actual: 78.01-77.98
L143-110900 Lower Left Magnet Structure Assembly	Actual: 78.01-77.98
L143-111100 Lower Middle Magnet Structure Assembly	Actual: 78.00-77.98
L143-111300 Lower Right Magnet Structure Assembly	Actual: 78.01-78.00

Temperature at start of inspection: 22 Deg.C

Temperature at end of inspection: 22 Deg. C

Verification of completion of assembly procedure:

Completed By: Thomas L. Becker **Date:** 10·2·06

5750 Cornell Road • Blue Ash Industrial Park • Cincinnati, OH 45242
Phone (513) 489-0507 • Fax (513) 489-1020

Metalex Manufacturing
L143-112000 BOM/ASSY Undulator
Purchase Order No. 5A10359

LCLS Undulator Training Record

L143-00066 Statement of Work for LCLS Undulator Main Assembly

Section 4.1.3.2 Training of Assembly Personal

Requirements:

1.) Review and understand L143-00066 Statement of Work

2.) Review and understand L143-112000 Drawing Package

3.) Review and understand L143-00076 Assembly Procedure

4.) Review and understand Magnet Installation Procedure ANL video

5.) Review and understand Magnet Structure Installation ANL video

Completed By: Thomas P. Becker **Date:** 2.27.06

Thomas P. Becker

5750 Cornell Road • Blue Ash Industrial Park • Cincinnati, OH 45242
Phone (513) 489-0507 • Fax (513) 489-1020

Metalex Manufacturing
L143-112000 BOM/ASSY Undulator
Purchase Order No. 5A10359

LCLS Undulator Training Record

L143-00066 Statement of Work for LCLS Undulator Main Assembly

Section 4.1.3.2 Training of Assembly Personal

Requirements:

1.) Review and understand L143-00066 Statement of Work

2.) Review and understand L143-112000 Drawing Package

3.) Review and understand L143-00076 Assembly Procedure

4.) Review and understand Magnet Installation Procedure ANL video

5.) Review and understand Magnet Structure Installation ANL video

Completed By: Rob Schuermann Date: 02/27/06
ROB SCHUERMANN

5750 Cornell Road • Blue Ash Industrial Park • Cincinnati, OH 45242
Phone (513) 489-0507 • Fax (513) 489-1020

Metalex Manufacturing
L143-112000 BOM/ASSY Undulator
Purchase Order No. 5A10359

Assembly:

ANL Part/Revision Number: L143-112000-05
SLAC Part Number: SA-381-001-35
Assembly Serial Number: 5A10359-12

LCLS Undulator photographs per L143-00066 Sect. 4.1.3.3

L143-110800-02 Upper Left Magnet Structure Assembly

L143-110900-02 Lower Left Magnet Structure Assembly

L143-111000-102 Upper Middle Magnet Structure Assembly

L143-111000-202 Upper Middle Magnet Structure Assembly

L143-111000-302 Upper Middle Magnet Structure Assembly

L143-111100-102 Lower Middle Magnet Structure Assembly

L143-111100-202 Lower Middle Magnet Structure Assembly

L143-111100-302 Lower Middle Magnet Structure Assembly

L143-111200-02 Upper Right Magnet Structure Assembly

L143-111300-02 Lower Right Magnet Structure Assembly

Rob Schuermann Date: 11/01/06

5750 Cornell Road • Blue Ash Industrial Park • Cincinnati, OH 45242
Phone (513) 489-0507 • Fax (513) 489-1020

1. DISTRIBUTION: LCLS Undulator Ass'y Contractors, Tom Barsz, and Glen Lawrence.

ARGONNE NATIONAL LABORATORY

ACCEPTANCE CRITERIA LISTING

2. PAGE ONE OF 1 3. ACL NO. E5-020020

4. ORIGINATOR'S NAME & DIVISION Glen Lawrence/XFD 5. PHONE 2-9298 6. DATE 1/20/2005

7. PART NO. & NAME L143-110700 LCLS Undulator Strongback 8. QUANTITY 40

9. FOR INSPECTION, DELIVER TO BLDG. NO. N/A DIVISION _____ ATTN: _____

10. AFTER INSPECTION, DELIVER TO BLDG. NO. N/A DIVISION _____ ATTN: _____

11. REFERENCES AND/OR REMARKS: Strongbacks are to be delivered to undulator assembly contractor by machining contractor Undulator assembly contractor shall inspect strongback prior to acceptance, Argonne National Laboratory shall review all certification and machining vendor 's reported and optionally shall do on-site inspections..

12 STEP NO.	13 INSPECTION/TEST REQUIREMENT	14 INSPECTION TEST LOCATION	18 ACCEPTED BY OR NONCONFORMANCE REPORT NO.	19 DATE
1	Visual inspection of part for shipping damage. A) Were critical surfaces protected per SOW L143-00030 Section 4.1.4? B) Is there any visible damage?	Undulator Ass'y Contractor	TODD CAUDILL MTX QC 12	10/10/06
2	Check Strongback is marked with serial number & part no.'s (ANL & SLAC) per SOW Section 4.1.3	Undulator Ass'y Contractor	TODD CAUDILL MTX QC 12	10/10/06
3	Check all accompanying Certifications have correct part Serial number.	Undulator Ass'y Contractor	TODD CAUDILL MTX QC 12	10/10/06
4	Check Material Certification for compliance with ASTM B381-03, Grade F2	Undulator Ass'y Contractor & ANL	TODD CAUDILL MTX QC 12	10/10/06
5	Check Forging Annealing Certification for annealing conformance to AMS-H-81200A, Table V, commercial Pure, Bars & Forgings, including. Note 8	Undulator Ass'y Contractor & ANL	TODD CAUDILL MTX QC 12	10/10/06
6	Check Rough Machining Anneal Certification for annealing conformance to AMS 2801B section3.2.9	Undulator Ass'y Contractor & ANL	TODD CAUDILL MTX QC 12	10/10/06
7	Check the strongback contractor's reported dimensional measurements against the part drawing.	ANL		
8	Verify the strongback critical dimensions as listed in the SOW section 4.5.2 are in compliance with the print.	Undulator Ass'y Contractor	TODD CAUDILL MTX QC 12	10/10/06
	L143-112000-05			
	SA-381-001-35			
	5A10359-12			

15. ORIGINATOR OF PLAN Glen Lawrence DATE 01/20/2005

16. PLAN REVIEWED/APPROVED BY _____ DATE _____

17. QAR CONCURRENCE WITH PLAN _____ DATE _____

#1-- INSIDE Pkg - Cust Copy

Metalex
Manufacturing
Inc.

Metalex
Certified ISO 9001 Quality Management
Veteran Owned Business 30 Plus Years

Packing List# 37255 **Rel#** 1 **PAGE** 1
Metalex Job# 2005-3806

Ship To: ARGONNE NATIONAL
LABORATORY
BLDG 201, OCF-PRO
9700 S CASS AVE.
ARGONNE IL 60439

Date: 2/02/06
Ship Via: REMAIN @ METALEX
PTA# _____
(prepaid shipments only)
BOL/Air Bill#
Prepaid: **Collect:**
Weight: **Ctns:** **Zone:**
Dimensions:

Attn: MICHAEL OPRONDEK
Customer PO: 5A06990

P.O. Item No.	Qty Ordered	Qty Shipped	Qty Back Ordered	Description
002	19	1	14	L143-110700 REV. 07 STRONGBACK S/N: 5A06990-12 -CERTIFICATE OF CONFORMANCE, INSPECTION DATA, AND CERTIFICATIONS ENCLOSED. -REF: SDR'S #3801-001, #3801-004, & 3801-006 TESTING SURVEILLANCE BY ANL HAS BEEN WAIVED PER MEETING BETWEEN TOM BARSZ (ANL QUALITY) & ROB SCHUERMANN (MX PROJECT ENGINEER)

Received By:

Printed Name _____ Signature _____ Date _____

www.metalexmfg.com
sales@metalexmfg.com
5750 Cornell Road Cincinnati, Oh 45242-2083
Phone (513) 489-0507 Fax (513) 489-1020

Metalex Manufacturing Inc.
5750 Cornell Road • Cincinnati, OH 45242
Phone (513) 489-0507 • Fax (513) 489-1020
EMAIL: metalex@metalexmfg.com

Metalex
Customized Machinery and Parts
ISO 9001:2000 and AS9100 Certified
Veteran Owned Business 30 Plus Years

CERTIFICATE OF CONFORMANCE

Date: 02/02/2006
Customer: Argonne National Laboratory
Bldg. 201, OCF-PRO
9700 S Cass Ave.
Argonne, Illinois 60439
Attention: Michael Oprondek

Metalex Job# 2005-3806
Purchase Order # 5A06990
MX Packing List # 37255

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.

ITEM	QTY	PART NUMBER	REV	PART NAME	ID # *
0002	1	L143-110700	07	Strongback	5A06990-12

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

COMMENTS: "First Article" submitted on Metalex Shipper #36794 dated 10/17/05 (Job#05-3801).

Metalex is in compliance with Statement of Workscope Document No. L143-110700, Revision 5, dated 09/05/05 and Strongback was successfully Vibration Stress Relieved per the Procedure in Appendix A.

Material from Heat Lot #G61C

Reference SDR# 3801-001 (Material Substitution), SDR# 3801-004 (Modification), & SDR# 3801-006 (Modification).

Testing Surveillance by ANL has been waived per meeting @ Metalex Mfg. on 02/01/06 between Tom Barsz (ANL Quality and Rob Schuermann (MX Project Engineer).

Todd Caldwell QE — Metalex Representative Signature
TODD CALDWELL MTX QC 12 — Print Name
2/2/2006 — Date

MX1011 (05/05)

To: METALEX MANUFACTURING INC
Address: 5750 CORNELL ROAD
CINCINNATI, OH 45242
Attention Of: PURCHASING AGENT

ATI Wah Chang
Allegheny Technologies
P.O. Box 460
Albany, Oregon 97321-0460
(541) 926-4211 FAX (541) 967-6948

PRODUCT CERTIFICATION

IN REGARD TO YOUR

Vencor Identification:	Wah Chang
Purchase Order No.:	58095-BL
Sales Order No.:	327418
Item No.:	1
Description:	Titanium Grade 2 Billet
Dimensions:	12.020-12.060" Dia. x 134.50-134.75" L
Specifications:	ASTM B381-05, AMS H 81200A and P.O.
Date:	November 3, 2005
Date Revised:	November 11, 2005 to add part number to certification
Heat No.:	G61C
Alloy:	Ti-2
SFC No.:	1310039
Quantity Shipped (pcs.):	2
Weight Shipped (lbs.):	5006
Part No.:	5A06990-10, 5A06990-12

JOB #3805 & 3806
5.10 5.12

METALEX
QA DEPT.
ACCEPTED
DATE 11/23/05
BY TC

THE TEST REPORT FOLLOWS:

Material Condition: Forged, conditioned, annealed and machined.

INGOT CHEMISTRY IN PERCENT

Element	Alpha Spec.	Spec. Max.	TOP	MIDDLE	BOTTOM
C		0.08	0.008	0.008	0.008
Fe		0.30	0.07	0.06	0.06
H		0.015	0.0009	0.0007	0.0007
N		0.03	0.004	0.005	0.006
O		0.25	0.13	0.13	0.15
OTHERS_EACH		0.1	<0.1	<0.1	<0.1
OTHERS_TOTAL		0.4	<0.4	<0.4	<0.4
Ti	BALANCE				

CERTIFICATE OF CONFORMITY

This is to hereby certify that the listed material has been processed, annealed and tested in accordance with the specifications noted in the Purchase Order.

Certified By: S. Giuliani QA Specialist as 11/11/05

Wah Chang Is A Registered / Certified ISO 9001:2000 Company.

Purchase Order No.: 58095-BL
Sales Order No.: 127418
Item No.: 1
Heat No.: G61C
SFC No.: 1310039

ATI Wah Chang
Allegheny Technologies
P.O. Box 460
Albany, Oregon 97321-0136
(541) 926-4211 FAX (541) 967-6948

ROOM TEMPERATURE TENSILES (FOR INFO ONLY)

Test	Method	Offset	Gage	Units	Spec. Min.	Trans.
Tensile Strength:	ASTM E8			Ksi	50	66.4
Yield Strength:	ASTM E8	0.2%		Ksi	40	50.9
Elongation:	ASTM E8		1"	Pct	20	28
Reduction in Area:	ASTM E8			Pct	30	57

METALLURGY
QA DEPT.
ACCEPTED
DATE 11/22/05
BY TE

HEAT TREAT PROCESS CERTIFICATION FORM

S. O. #: N/A

Heat #: G-61C

MOT # 437140

Date: 9/1/05

Start Time: 03:01

Finish Time: 11:05

Material ID's: A, B, C, D

Was the Lot Split? (yes) (no) (Circle one)

Furnace #: 9 Size: 13" (Rnd.) (RCS) (Plate) (Rect.)

Heat Treated to Specification: AMS-H-81200, Latest Revision

HEAT TREATING PROCEDURE: STRESS RELIEVE

Anneal	Temp. 1100 °F	Time at Temp. 8 Hrs. — mins.	To 8 Hrs. 15 mins.
Beat Soln. Treat	Temp. ____ °F	Time at Temp. ____ Hrs. ____ mins.	To ____ Hrs. ____ mins.
Solution Treat	Temp. ____ °F	Time at Temp. ____ Hrs. ____ mins.	To ____ Hrs. ____ mins.
Duplex Anneal	Temp. ____ °F	Time at Temp. ____ Hrs. ____ mins.	To ____ Hrs. ____ mins.

Quench Media: (Furnace Cool) (Air Cool) (Fan Cool) (Water Quench) (Circle One)

Heat Treatment Performed By: SM, CJ 9/1/05

Date Operator Trained: N/A

Supervisor Review: [signature]

Quality Assurance Review: ____

METALITE QA DEPT. ACCEPTED DATE 11/23/05 BY TC

HEAT TREAT CHARTS IN JOB # 3005 FILE. TC 11/23/05

HEAT TREAT PROCESS CERTIFICATION FORM

S. O. #: N/A

Heat #: G61C

MOT # 437140

Date: 8/30/05

Start Time: 21:55

Finish Time: 05:55

Material ID's:

A							
B							
C							
D							

Was the Lot Split? (yes) (no) (Circle one)

Furnace #: 9 Size: 13" (Rnd.) (RCS) (Plate) (Rect.)

Heat Treated to Specification: AMS-H-81200, Latest Revision

HEAT TREATING PROCEDURE:

Anneal	Temp. 1250 °F	Time at Temp. 8 Hrs. — mins.	To	— Hrs. — mins.	
Heat Soln. Treat	Temp. ____ °F	Time at Temp. ____ Hrs. ____ mins.	To	____ Hrs. ____ mins.	
Solution Treat	Temp. ____ °F	Time at Temp. ____ Hrs. ____ mins.	To	____ Hrs. ____ mins.	
Duplex Anneal	Temp. ____ °F	Time at Temp. ____ Hrs. ____ mins.	To	____ Hrs. ____ mins.	

Quench Media: (Furnace Cool) (Air Cool) (Fan Cool) (Water Quench)
(Circle One)

Heat Treatment Performed By: SM 8/31/05

Date Operator Trained: N/A

Supervisor Review: DMA

Quality Assurance Review: _____

METALEX QA DEPT. ACCEPTED DATE 11/22/05 BY TL

HEAT TREAT CHART IN JOB FOLDER TL 11/23/05

ATI Wah Chang

ATTACHMENT No. 2
Wah Chang / Kach Machine Works P.O. ~~181086~~ Rev 1 180122
CERTIFICATE OF CONFORMANCE

Kach Machine Works hereby certifies that all conversion processing for the above Purchase Order conforms to material and/or manufacturing requirements indicated in the drawing or specifications, as applicable. Inspection and/or test reports substantiating conformity are attached.

Any exceptions, deviations, or non-conformances are listed below.
(Attach additional sheets if necessary.)

NONE

Bar is perfectly Straigth

METALEX
QA DEPT.
ACCEPTED
DATE 11/23/05
BY TC

MAN VAN NGUYEN
Name

foreman
Title

KACH MACHINE WORKS, Inc.

3838 N. BALLAST STREET • SWAN ISLAND • PORTLAND, OREGON 97217

QUALITY CONTROL DIMENSION INSPECTION REPORT

CUSTOMER WAH CHANG DATE 10-1-05

PART NAME 12" ⌀ x 135" long Bar PART NO. SEC 1306032 - B1

P.O. NO. 180122 NO. PCS. 4 I.D. NO. 2 OF 4

MATERIAL Titanium HEAT NO. G61C

DRAWING NO. None ~~REVISION~~ Part # 5A 06990-17

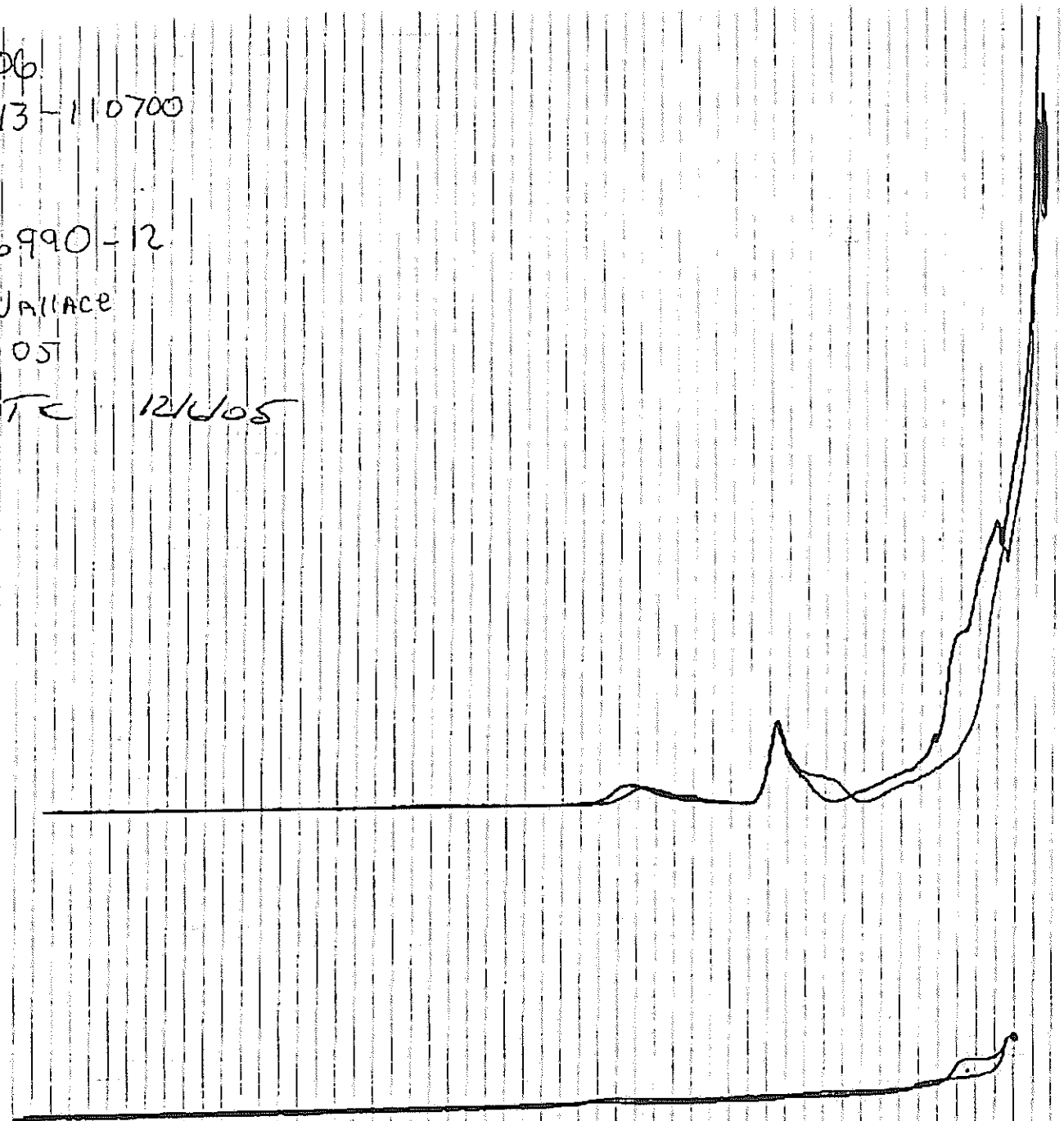
DIM. NO.	Given	Actual					
1	OD 12.060"/12.020	12.050"					
2	LENGTH 134.75"/134.50	134.72"					
3	Finish 125 Ra	89 Ra					
4	Run out	None					
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

METALEX QA DEPT. ACCEPTED DATE 11/2/05 BY TZ

REMARKS

INSPECTOR

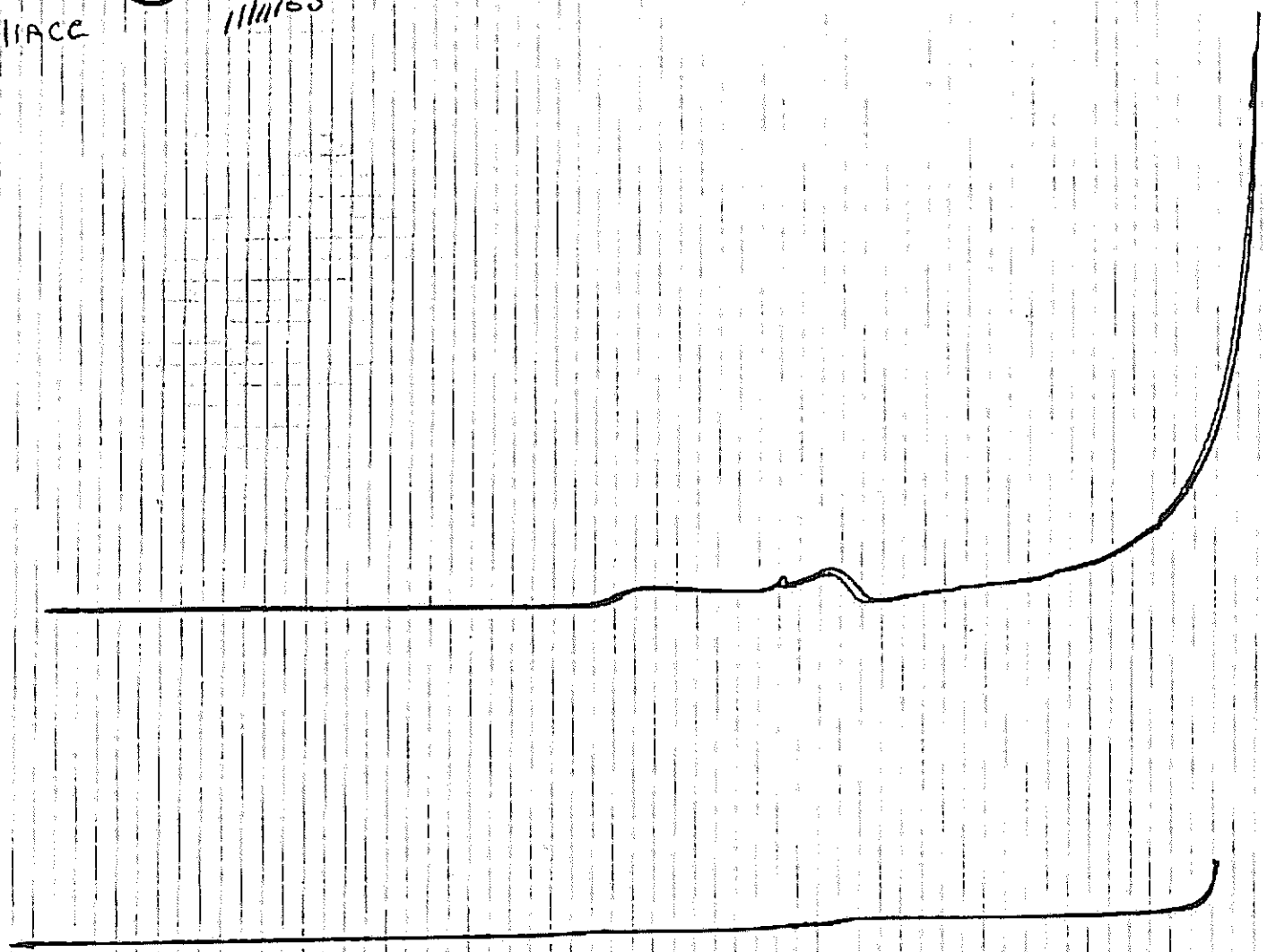
Job# 3806
Part# L143-110700
Opp# 50
S/N 5A06990-12
Steve Wallace
12-6-05
MTX 06 12
TC 12/6/05



Job# 3806
PART# L143-110700
OPP# 20
S/N 5A06990-12
11-11-05
Steve WALLACE

MTX DEC 12

TC
11/11/05



Metalex Customized Machinery and Parts CERTIFIED ISO 9001 QUALITY MANAGEMENT	INSPECTION PLANNING & REPORT FORM Metalex Mfg. 5750 Comell Rd ! Cincinnati, OH 45242 ! (513) 489-0507	Job No. 2005-3806	Qty 1

Inspection Origin	Vendor (Sub-Tier Source) Identification		Customer Identification		
☐ Receiving ☐ In-Process ■ Final ☐ Rework/Repair ☐ First Article	Vendor Name N/A		Part No. L143-110700	REV 07	P.O. Number 6A06990
	Date Rec'd N/A	P.O. No. N/A	Part Name STRONGBACK		
At Oper. 160	Serial Numbers: S/N: 6A06990-12 PRODUCTION		Customer Name ARGONNE NATIONAL LABORATORY		

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 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 +/-0.3 DEG. CELSIUS. **** THE PART TEMPERATURE BEFORE, DURING, AND AFTER DIMENSIONAL MEASUREMENT SHALL BE RECORDED BELOW****					
PART TEMPERATURE *BEFORE* INSPECTION	SOW 4.5.1	CONTACT THERMOMETER MX1794	68.60	MTX QC 16	
PART TEMPERATURE *DURING* INSPECTION	SOW 4.5.1	CONTACT THERMOMETER MX1794	68.62	MTX QC 16	
PART TEMPERATURE *AFTER* INSPECTION	SOW 4.5.1	CONTACT THERMOMETER MX1794	68.61	MTX QC 16	
DRAWING L143-110700					
MATERIAL DESCRIPTION: ASTM B381 F2 TITANIUM GRADE 2	A2	CERT# 127418	CONFORMS	MTX QC 16	
ALL DIMENSIONS ARE IN MILLIMETERS, SURFACE FINISH IN MICRONS.	NOTE #1		INFORMATION ONLY	MTX QC 16	
REMOVE ALL BURRS AND BREAK SHARP EDGES 0.3mm MAX.	NOTE #2	VISUAL & RADIUS GAGE MX837 & MX838	CONFORMS .3 MAX	MTX QC 16	
UNLESS OTHERWISE SPECIFIED, SURFACE FINISH TO BE 6.4 MICRONS.	NOTE #3	PROFILOMETER MX1304	6.4 OR BETTER	MTX QC 16	
⌖ | .05 | A | B	D7	CMM MX1269	.025	MTX QC 16	
⌖ | .05 | A | B	D2	CMM MX1269	.015	MTX QC 16	
1.6	D2	PROFILOMETER MX1304	1.6 OR BETTER	MTX QC 16	
167.00 +.05 / -.00	C2	CMM MX1269	167.013 - 167.038	MTX QC 16	

STAMP	INSPECTED BY	DATE	PAGE	QTY ACC	QTY REJ
MTX QC 16		1/20/06	1 OF 2	1	

MX1010 (7/98)

Metalex
Customized Machinery and Parts
CERTIFIED ISO 9001 QUALITY MANAGEMENT

INSPECTION PLANNING & REPORT FORM

Metalex Mfg.
5750 Cornell Rd ! Cincinnati, OH 45242 ! (513) 489-0507

Job No.	Qty
2005-3806	1

Inspection Origin	Vendor (Sub-Tier Source) Identification		Customer Identification		
☐ Receiving ☐ In-Process ■ Final ☐ Rework/Repair ☐ First Article	Vendor Name: N/A		Part No.: L143-110700	REV: 07	P.O. Number: 5A06990
	Date Rec'd: N/A	P.O. No.: N/A	Part Name: STRONGBACK		
At Oper.: 150	Serial Numbers: S/N: 5A06990-12 PRODUCTION		Customer Name: ARGONNE NATIONAL LABORATORY		

SPECIFICATION	B/P ZONE	INSPECTION METHOD / GAGE NO.	ACTUAL DIMENSION / GAGE VERIFICATION (Range of Readings or Accept Status)	QTY ACC	QTY REJ
83.50 ±.08	C2	CMM MX1269	83.49 - 83.505	MTX QC 16	
1.6	C2	PROFILOMETER MX1304	1.6 OR BETTER	MTX QC 16	
⌭ |.05	C2	CMM MX1269	w/in .025	MTX QC 16	
▱ |.05	C2	CMM MX1269	w/in .027	MTX QC 16	
▱ |.05	D1	CMM MX1269	w/in .043	MTX QC 16	
⊥ |.1|A	D1	CMM MX1269	w/in .025	MTX QC 16	
// |.05|A	E8	CMM MX1269	w/in .015	MTX QC 16	
ALL OTHER FEATURES ARE ACCEPTED PER METALEX OPERATOR ACCEPTANCE PROGRAM (OAP) MXWI17001 & OPERATOR SIGNOFF OF ROUTER OPERATIONS FOR COMPLIANCE TO ALL DRAWING FEATURES GENERATED WITHIN THAT DEFINED OPERATION.		ROUTER SIGNOFF MX5009	ConiForm 5	MTX QC 16	

STAMP	INSPECTED BY	DATE	PAGE	QTY ACC	QTY REJ
MTX QC 16		1/20/06	2 OF 2	1	

J034806

SUPPLIER DISPOSITION REQUEST (SDR)

(Form AIL-311 includes instructions and continuation sheet)

(CHECK ONE)

Page 1 of 1

☑ 1A. Deviation Request

☐ 1B. Nonconformance Action Request

2. SDR No. 3801-001

3. SDR Date 06/23/2005

4. Supplier Name, Address, Telephone, Fax

Metalex Manufacturing Inc.
5750 Comell Road
Cincinnati, Ohio 45242
513-489-0507
513-489-1020

5. Purchase Order No. 5A06990

6. Related Documents

6.1 Document No. L143-00030 Date

7. Qty.	8. Describe Nonconforming Condition	9. Identify Requirement	10. Cause & Corrective Action
	1.) Document No. L143-00030 Section 4.1.1 has the forging being made per ASTM B 381-03. The current revision level of this specification is ASTM B 381-05. Metalex supplier, ATI Wah Chang would like to work to the latest revision.	Metalex request direction from ANL on what revision applies to this contract. Metalex supplier, ATI Wah Chang needs this clear direction as soon as possible to continue with acceptance of the order.	

SUPPLIER'S COMMENTS
(IF YES, EXPLAIN)

11. Affects Form, Fit or Function
☐ Yes ☑ No

12. Affects Price
☐ Yes ☑ No

Ken Schuermann - Director, Tech. Business Unit - 06/23/05

13. SUPPLIER REPRESENTATIVE – TITLE – DATE

10. Affects Delivery
☑ Yes ☐ No This will hold up material supplier.

14. Recommended Disposition and Comments:

15. ANL REPRESENTATIVE – DATE

17. ANL Disposition and Remarks: Accept ASTM B381-05 as equivalent to ASTM B381-05 for our purposes on this procurement

18. Approved

7/1/05
TECHNICAL REPRESENTATIVE – DATE

7/1/05
QUALITY ASSURANCE REPRESENTATIVE – DATE

PROCUREMENT REPRESENTATIVE – DATE

Job #3806

SUPPLIER DISPOSITION REQUEST (SDR)

Form ANL-31* includes instructions and continuation sheet

Page 1 of 1

(CHECK ONE)

☑ 1A. Deviation Request

☐ 1B. Nonconformance Action Request

2. SDR No. 3801-004

3. SDR Date 08/17/2005

4. Supplier Name, Address, Telephone, Fax

Metalex Manufacturing Inc.
5750 Comell Road
Cincinnati, Ohio 45242
(513) 489-0507 phone
(513) 489-1020 fax

5. Purchase Order No. 5A06990

6. Related Documents

6.1 ANL drawing L143-110700 Rev 4 Date

7. Qty.	8. Describe Nonconforming Condition	9. Identify Requirement	10. Cause & Corrective Action
	1) Along with this form, Metalex has attached a sketch named SDR 3801-004, pages 1 and 2. This sketch outlines some additional "for manufacturing process only" holes that Metalex is requesting permission to add to the Strongback details On each end of each part, (4) 5/8-11 tapped holes and (2) .6250" diameter dowel pin holes are requested to be added for internal use at Metalex.	Metalex requests direction from ANL on this item.	

SUPPLIER'S COMMENTS
IF YES, EXPLAIN:

11. Affects Form, Fit or Function
☐ Yes ☑ No

12. Affects Price
☐ Yes ☑ No

13. Affects Delivery
☐ Yes ☑ No Only if this is unresolved when raw material is arrives

14. Recommended Disposition and Comments:

Rob Schuermann - Director, Tech. Business Unit - 08/17/05

15. SUPPLIER REPRESENTATIVE - TITLE - DATE

16. ANL REPRESENTATIVE - DATE

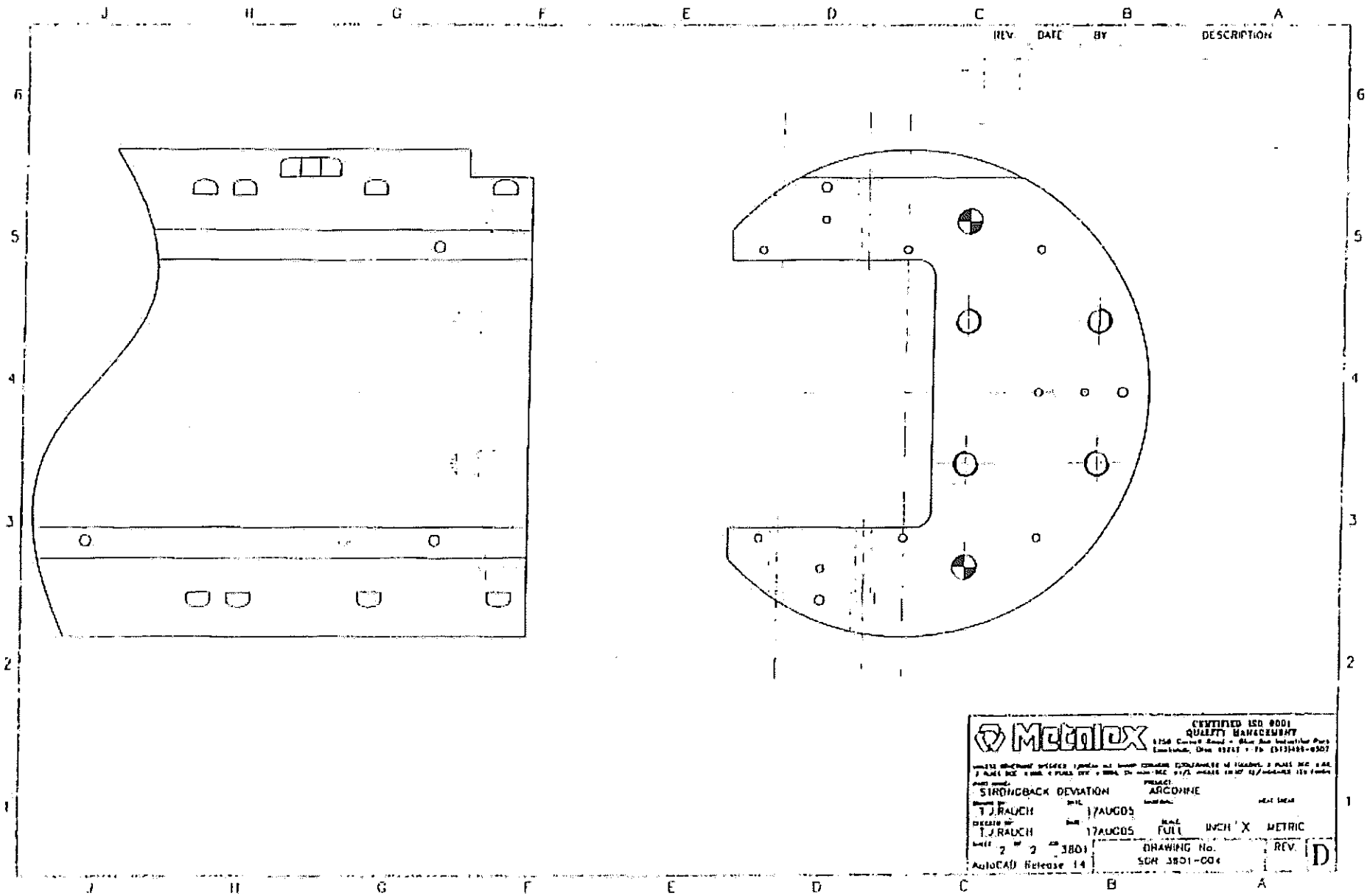
17. ANL Disposition and Remarks: The requested modifications for internal Metalex use are allowed.

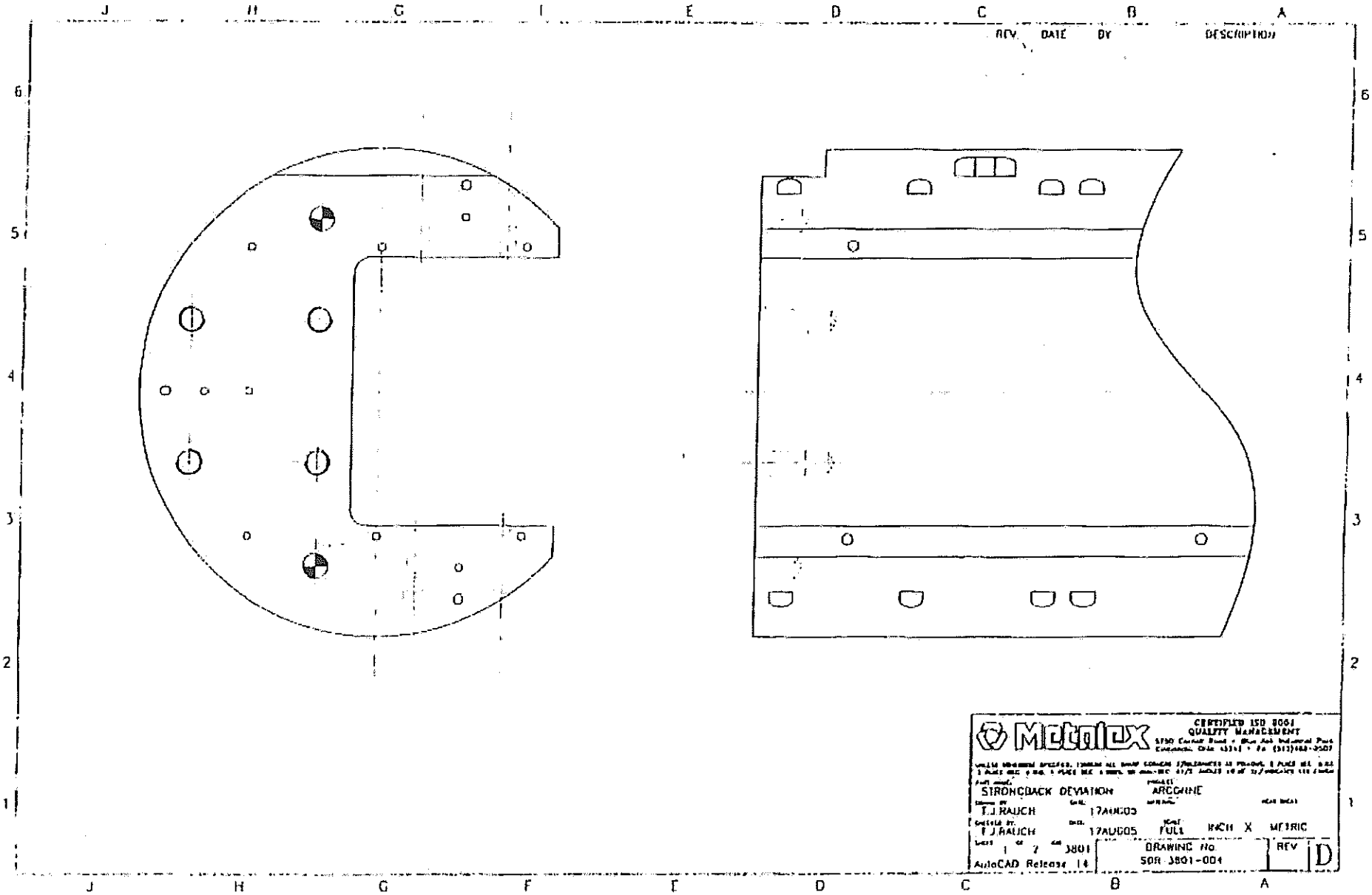
18. Approved

TECHNICAL REPRESENTATIVE - DATE 08-23-05

QUALITY ASSURANCE REPRESENTATIVE - DATE 8/25/05

PROCUREMENT REPRESENTATIVE - DATE 8/26/05


REV. DATE BY DESCRIPTION
Mevotec
CERTIFIED ISO 9001
QUALITY MANAGEMENT
STRONGBACK DEVIATION
ARCHIVE
T.J.RAUCH
17AUG05
T.J.RAUCH
17AUG05
FULL
INCH X METRIC
SIZE D
3801
DRAWING No.
SDR 3801-004
REV.
D
AutoCAD Release 14


REV DATE BY DESCRIPTION
Metalex
CERTIFIED ISO 9001
QUALITY MANAGEMENT
STRONGBACK DEVIATION
ARGONNE
T.J.RAUCH
17AUG05
T.J.RAUCH
17AUG05
FULL
INCH X METRIC
1 2 3801
AutoCAD Release 14
DRAWING No.
SDR-3801-004
REV
D

SUPPLIER DISPOSITION REQUEST (SDR)

(Form ANL-311 includes instructions and continuation sheet.)

Page 1 of 1

[CHECK ONE]

☑ 1A. Deviation Request

☐ 1B. Nonconformance Action Request

2. SDR No. 3801-006

3. SDR Date 11/03/2005

4. Supplier Name, Address, Telephone, Fax

Metalex Manufacturing Inc.
5750 Cornell Road
(513) 489-0507 phone
(513) 489-1020 fax

5. Purchase Order No. 5A06990

6. Related Documents

6.1 ANL drawing L143-110700 Rev.7 Date

7. Qty.	8. Describe Nonconforming Condition	9. Identity Requirement	10. Cause & Corrective Action
	1) Along with this form, Metalex has attached a sketch named MXPL143-110700-03. This sketch outlines some additional "for manufacturing process only" holes that Metalex is requesting permission to add to the production Stongback details. These three (3) .2500" diameter tooling holes located as shown will allow ease of manufacturing and inspection of the critical overall length of this detail.	Metalex requests direction and approval from ANL on this item.	

SUPPLIER'S COMMENTS
[IF YES, EXPLAIN]

11. Affects Form, Fit or Function
☐ Yes ☑ No

12. Affects Price
☐ Yes ☑ No

Rob Schuermann - Director, Tech, Business Unit -11/03/05

Rob Schuermann 11/05/05

15. SUPPLIER REPRESENTATIVE – TITLE – DATE

13. Affects Delivery
☐ Yes ☑ No

14. Recommended Disposition and Comments:

Recommend acceptance.

16. ANL REPRESENTATIVE – DATE

17. ANL Disposition and Remarks: Acceptable

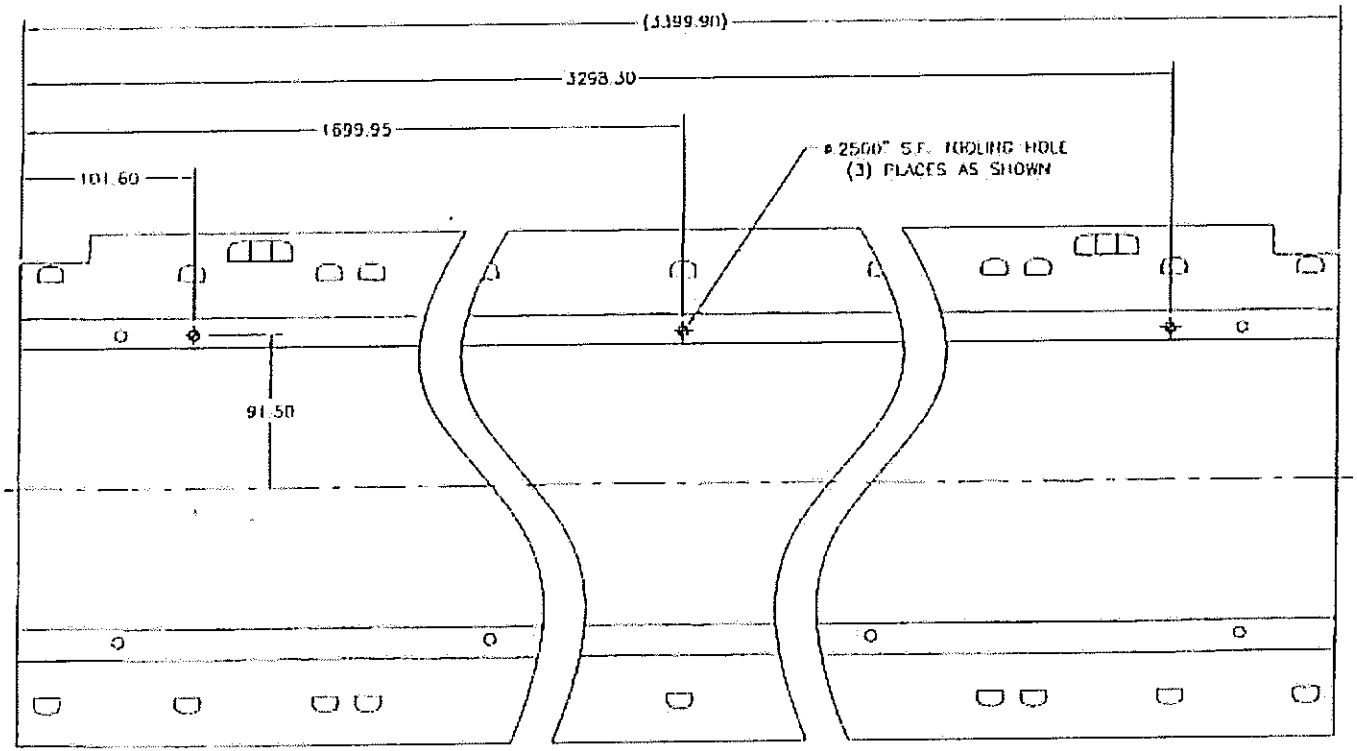
18. Approved

11/05/05
TECHNICAL REPRESENTATIVE – DATE

11/03/05
QUALITY ASSURANCE REPRESENTATIVE – DATE

11/3/5
PROCUREMENT REPRESENTATIVE – DATE

REV.	DATE	BY	DESCRIPTION



These three (3) 2500" diameter tooling holes located as shown will allow ease of manufacturing and inspection of the critical overall length of this detail.

Metalex
CERTIFIED ISO 9001 QUALITY MANAGEMENT

STRONGBACK PROCESS	ARGONNE
R.SCHUERMANN 03NOV05	
R.SCHUERMANN 03NOV05	FULL / INCH X / METRIC
SHEET 1 OF 2 / JOB 3801	DRAWING No. MXPL143-110700-03 / REV D
AutoCAD Release 14	

Schuermann, Rob

From: Oprondek, Michael T. [moprondek@anl.gov]
Sent: Thursday, November 03, 2005 5:36 PM
To: Schuermann, Rob
Cc: Lawrence, Glen; Barsz, Thomas R.
Subject: metalex SDR 006
Attachments: metalex.pdf

<<metalex.pdf>>

Michael Oprondek, Procurement Department,
Argonne National Laboratory; operated for the
U. S. Department of Energy by the University of Chicago
phone 630 252 7069 fax 630 252 4517

1. DISTRIBUTION: LCLS Undulator Ass'y Contractors, Tom Barsz, and Glen Lawrence

ARGONNE NATIONAL LABORATORY

ACCEPTANCE CRITERIA LISTING

2. PAGE ONE OF 1 3. ACL NO. E5-026046

4. ORIGINATOR'S NAME & DIVISION Glen Lawrence XFD 5. PHONE 2-9298 6. DATE 1-24-05

7. PART NO. & NAME L143-110107 Magnet Structure last Pole / L143-110105 Magnet Structure Pole 8. QUANTITY 170 / 19030

9. FOR INSPECTION, DELIVER TO BLDG. NO. N/A DIVISION _____ ATTN: _____

10. AFTER INSPECTION, DELIVER TO BLDG. NO. N/A DIVISION _____ ATTN: _____

11. REFERENCES AND/OR REMARKS: The Magnet Poles are to be delivered to the Undulator Asembly Contractors by the Machining Contractor . Undulator Assembly Contractor shall inspect the Magnet Poles prior to acceptance. ANL shall review all Certifications and Machining Contractor's reported measurements & optionally perform on-site inspections.

12 STEP NO.	13 INSPECTION/TEST REQUIREMENT	14 INSPECTION TEST LOCATION	18 ACCEPTED BY OR NONCONFORMANCE REPORT NO.	19 DATE
1	Visual inspection of parts for shipping damage.	Undulator Ass'y Contractor	Thomas P Beden	10.10.06
2	Check that parts were "bagged and Tagged" with serial no.'s and part no.'s (ANL & SLAC) per SOW L143-00031,	Undulator Ass'y Contractor	Thomas P Beden	10.10.06
	Section 4.1.3.			
3	Check that parts were marked with serial numbers per SOW section 4.1.3.	Undulator Ass'y Contractor	Thomas P Beden	10.10.06
4	Check that accompanying Certifications have correct part serial numbers.	Undulator Ass'y Contractor	N/A MTX QC 12 TODD CADIN	10/10/06
5.	Check the material certification for compliance with ASTM A801, Type 1.	Undulator Ass'y Contractor & ANL	N/A MTX QC 12 TODD CADIN	10/10/06
6	Check the anneal certification for compliance with AMS-A801, or a specified material supplier's annealing schedule.	Undulator Ass'y Contractor & ANL	N/A MTX QC 12 TODD CADIN	10/10/06
7	Check that the machining Contractor's certified dimensional measurements are in compliance with the drawing.	ANL		
8	Verify the critical dimensions as listed in the SOW, Section 4.5.2 are in compliance with the drawing	Undulator Ass'y Contractor	Thomas P Beden	10.10.06
	L143-112000-05			
	SA-381-001-35			
	5A10359-12			

15. ORIGINATOR OF PLAN Glen Lawrence DATE 1-24-05

16. PLAN REVIEWED/APPROVED BY _____ DATE _____

17. QAR CONCURRENCE WITH PLAN _____ DATE _____

Metalex Manufacturing
L143-112000 BOM/ASSY Undulator
Purchase Order No. 5A10359

LCLS Undulator poles inspection per L143-00076 Assembly Procedure:

Inspection - Poles / Magnets / Magnet Structure Bases

1. *Obtain the QA inspection reports for the* ***poles (drawing L143-110105)*** *and magnets (drawing L143-110106 - See appendix A for blank inspection reports). Randomly select 10% of the delivered poles and magnets and inspect them to a minimum precision of .0025mm to verify that they meet the critical drawing specifications.*

Assembly:

ANL Part/Revision Number: L143-112000-05
SLAC Part Number: SA-381-001-35
Assembly Serial Number: 5A10359-12

Inspection/Acceptance report or components for as-built drawings:

Part: L143-110105 Poles

Completed By: Thomas P Bedar **Date:** 10·10·06

5750 Cornell Road • Blue Ash Industrial Park • Cincinnati, OH 45242
Phone (513) 489-0507 • Fax (513) 489-1020

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 4657

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.93	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.98	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	<.01	Accept/Reject
Flatness of base	</= .01	N/A	<.01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX111, MX1452, 587F, MX0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 4269

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	(Accept)/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.94	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.97	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	< .01	Accept/Reject
Flatness of base	</= .01	N/A	< .01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX 111, MX 1452, 587F, MX 0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 5509

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.92	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.98	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	<.01	Accept/Reject
Flatness of base	</= .01	N/A	<.01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX111, MX1452, 587F, MX0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 1309

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.95	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.98	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	< .01	Accept/Reject
Flatness of base	</= .01	N/A	< .01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX 111, MX 1452, 587F, MX 0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 3424

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	(Accept)/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	(Accept)/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.97	(Accept)/Reject
Pole Thickness	6.00	+0 / -.05	5.98	(Accept)/Reject
Perpendicularity to A (both sides)	</= .01	N/A	<.01	(Accept)/Reject
Flatness of base	</= .01	N/A	<.01	(Accept)/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX111, MX1452, 587F, MX0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 1368

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.97	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.97	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	<.01	Accept/Reject
Flatness of base	</= .01	N/A	<.01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX 111, MX 1452, 587F, MX 0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 1953

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.92	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.97	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	< .01	Accept/Reject
Flatness of base	</= .01	N/A	< .01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX111, MX1452, 587F, MX0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 3052

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.98	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.97	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	<.01	Accept/Reject
Flatness of base	</= .01	N/A	<.01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX 111, MX 1452, 587F, MX 0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 3880

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	(Accept)/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	(Accept)/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.99	(Accept)/Reject
Pole Thickness	6.00	+0 / -.05	5.98	(Accept)/Reject
Perpendicularity to A (both sides)	</= .01	N/A	<.01	(Accept)/Reject
Flatness of base	</= .01	N/A	<.01	(Accept)/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX 111, MX 1452, 587F, MX 0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 1264

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.98	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.99	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	<.01	Accept/Reject
Flatness of base	</= .01	N/A	<.01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX111, MX1452, 587F, MX0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 1367

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.92	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.98	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	<.01	Accept/Reject
Flatness of base	</= .01	N/A	<.01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX 111, MX 1452, 587F, MX 0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 1079

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.91	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.97	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	<.01	Accept/Reject
Flatness of base	</= .01	N/A	<.01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX111, MX1452, 587F, MX0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 4857

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.94	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.98	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	< .01	Accept/Reject
Flatness of base	</= .01	N/A	< .01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX 111, MX 1452, 587F, MX 0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 1235

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	(Accept)/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	(Accept)/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.97	(Accept)/Reject
Pole Thickness	6.00	+0 / -.05	5.97	(Accept)/Reject
Perpendicularity to A (both sides)	</= .01	N/A	< .01	(Accept)/Reject
Flatness of base	</= .01	N/A	< .01	(Accept)/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX 111, MX 1452, 587F, MX 0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 4087

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.93	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.97	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	< .01	Accept/Reject
Flatness of base	</= .01	N/A	< .01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX 111, MX 1452, 587F, MX 0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 1781

P.O. #: SA-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.93	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.97	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	< .01	Accept/Reject
Flatness of base	</= .01	N/A	< .01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX 111, MX 1452, 587F, MX 0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 3435

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	(Accept)/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	(Accept)/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.93	(Accept)/Reject
Pole Thickness	6.00	+0 / -.05	5.99	(Accept)/Reject
Perpendicularity to A (both sides)	</= .01	N/A	<.01	(Accept)/Reject
Flatness of base	</= .01	N/A	<.01	(Accept)/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX 111, MX1452, 587F, MX0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 2336

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.99	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.97	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	<.01	Accept/Reject
Flatness of base	</= .01	N/A	<.01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX111, MX1452, 587F, MX0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 5292

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.96	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.98	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	< .01	Accept/Reject
Flatness of base	</= .01	N/A	< .01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX111, MX1452, 587F, MX0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 5420

P.O. #: SA-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.97	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.98	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	< .01	Accept/Reject
Flatness of base	</= .01	N/A	< .01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX 111, MX 1452, 587F, MX 0256, 587B

COMMENTS:

Pole width print dim = 44 +0 -.1

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 5147

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.93	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.98	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	<.01	Accept/Reject
Flatness of base	</= .01	N/A	<.01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX 111, MX1452, 587F, MX0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 4295

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.94	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.99	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	<.01	Accept/Reject
Flatness of base	</= .01	N/A	<.01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX111, MX1452, 587F, MX0256, 587B

COMMENTS:

Pole width print dim = 44 +0 -.1

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 2857

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.91	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.97	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	< .01	Accept/Reject
Flatness of base	</= .01	N/A	< .01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX 111, MX 1452, 587F, MX 0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 1380

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.98	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.98	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	<.01	Accept/Reject
Flatness of base	</= .01	N/A	<.01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX111, MX1452, 587F, MX0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 3448

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	44.00	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.99	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	<.01	Accept/Reject
Flatness of base	</= .01	N/A	<.01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX111, MX1452, 587F, MX0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 1297

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.93	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.99	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	<.01	Accept/Reject
Flatness of base	</= .01	N/A	<.01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX 111, MX 1452, 587F, MX 0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 3155

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	(Accept)/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	(Accept)/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.93	(Accept)/Reject
Pole Thickness	6.00	+0 / -.05	5.98	(Accept)/Reject
Perpendicularity to A (both sides)	</= .01	N/A	<.01	(Accept)/Reject
Flatness of base	</= .01	N/A	<.01	(Accept)/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX111, MX1452, 587F, MX0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 4316

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.98	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.98	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	<.01	Accept/Reject
Flatness of base	</= .01	N/A	<.01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX111, MX1452, 587F, MX0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 5817

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.95	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.99	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	<.01	Accept/Reject
Flatness of base	</= .01	N/A	<.01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX111, MX1452, 587F, MX0256, 587B

COMMENTS:

Pole width print dim = 44 +0 -.1

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 1491

P.O. #: SA-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.99	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.97	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	<.01	Accept/Reject
Flamess of base	</= .01	N/A	<.01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX 111, MX 1452, 587F, MX 0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 3418

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.98	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.98	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	<.01	Accept/Reject
Flatness of base	</= .01	N/A	<.01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX 111, MX 1452, 587F, MX 0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 4542

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	(Accept)/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	44.01	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.98	(Accept)/Reject
Perpendicularity to A (both sides)	</= .01	N/A	< .01	Accept/Reject
Flatness of base	</= .01	N/A	< .01	(Accept)/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX111, MX1452, 587F, MX0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 3092

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	(Accept)/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	(Accept)/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.97	(Accept)/Reject
Pole Thickness	6.00	+0 / -.05	5.97	(Accept)/Reject
Perpendicularity to A (both sides)	</= .01	N/A	<.01	(Accept)/Reject
Flatness of base	</= .01	N/A	<.01	(Accept)/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX 111, MX 1452, 587F, MX 0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 4548

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.99	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.98	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	< .01	Accept/Reject
Flatness of base	</= .01	N/A	< .01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX111, MX1452, 587F, MX0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 3412

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	(Accept)/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	(Accept)/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.98	(Accept)/Reject
Pole Thickness	6.00	+0 / -.05	5.98	(Accept)/Reject
Perpendicularity to A (both sides)	</= .01	N/A	< .01	(Accept)/Reject
Flatness of base	</= .01	N/A	< .01	(Accept)/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX 111, MX 1452, 587F, MX 0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 4469

P.O. #: SA-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.94	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.99	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	<.01	Accept/Reject
Flatness of base	</= .01	N/A	<.01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX 111, MX1452, 587F, MX0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 5446

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.98	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.97	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	<.01	Accept/Reject
Flatness of base	</= .01	N/A	<.01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX111, MX1452, 587F, MX0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 4134

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.98	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.98	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	< .01	Accept/Reject
Flatness of base	</= .01	N/A	< .01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX 111, MX 1452, 587F, MX 0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 4364

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.96	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.97	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	< .01	Accept/Reject
Flatness of base	</= .01	N/A	< .01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX111, MX1452, 587F, MX0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 2751

P.O. #: SA-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.94	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.98	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	<.01	Accept/Reject
Flatness of base	</= .01	N/A	<.01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX 111, MX 1452, 587F, MX 0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 3350

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.97	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.99	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	<.01	Accept/Reject
Flatness of base	</= .01	N/A	<.01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX111, MX1452, 587F, MX0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 1878

P.O. #: 6A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	(Accept)/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	(Accept)/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.98	(Accept)/Reject
Pole Thickness	6.00	+0 / -.05	5.98	(Accept)/Reject
Perpendicularity to A (both sides)	</= .01	N/A	< .01	(Accept)/Reject
Flatness of base	</= .01	N/A	< .01	(Accept)/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX 111, MX 1452, 587F, MX 0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 2559

P.O. #: SA-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.91	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.98	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	< .01	Accept/Reject
Flatness of base	</= .01	N/A	< .01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX 111, MX 1452, 587F, MX 0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 2333

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.94	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.97	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	<.01	Accept/Reject
Flatness of base	</= .01	N/A	<.01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX111, MX1452, 587F, MX0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 2992

P.O. #: SA-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.98	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.98	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	< .01	Accept/Reject
Flatness of base	</= .01	N/A	< .01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX 111, MX 1452, 587F, MX 0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 5523

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.93	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.99	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	< .01	Accept/Reject
Flatness of base	</= .01	N/A	< .01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX 111, MX 1452, 587F, MX 0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 2311

P.O. #: SA-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.95	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.97	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	<.01	Accept/Reject
Flatness of base	</= .01	N/A	<.01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX111, MX1452, 587F, MX0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 4101

P.O. #: 5A-05150

DATE: 9.23.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	47.99	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.93	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.97	Accept/Reject
Perpendicularity to A (both sides)	</= .01	N/A	<.01	Accept/Reject
Flatness of base	</= .01	N/A	<.01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

TEST EQUIPMENT USED: MX111, MX1452, 587F, MX0256, 587B

COMMENTS:

Pole width print dim = $44^{+0}_{-.1}$

1. DISTRIBUTION: LCLS Undulator Ass'y Contractors, Tom Barsz, and Glen Lawrence

ARGONNE NATIONAL LABORATORY

ACCEPTANCE CRITERIA LISTING

2. PAGE ONE OF 1 3. ACL NO. E5-069069

4. ORIGINATOR'S NAME & DIVISION Glen Lawrence XFD 5. PHONE 2-9298 6. DATE 1-31-05

7. PART NO. & NAME L143-110106 Magnet Structure Magnet 8. QUANTITY 19200

9. FOR INSPECTION, DELIVER TO BLDG. NO. 401 DIVISION XFD ATTN: Glen Lawrence

10. AFTER INSPECTION, DELIVER TO BLDG. NO. 401 DIVISION XFD ATTN: Glen Lawrence

11. REFERENCES AND/OR REMARKS: Most of the magnets wil be drop shipped directly to the Undulator Assembly Contractor, who will only perform limited physical inspection of the parts as they are highly magnetized. A sampling from Each lot will be sent to ANL for verification of the magnetic field properties.

12 STEP NO.	13 INSPECTION/TEST REQUIREMENT	14 INSPECTION TEST LOCATION	18 ACCEPTED BY OR NONCONFORMANCE REPORT NO.	19 DATE
1	Visual inspection of parts for shipping damage..	Undulator Ass'y Contractor	Thomas P Beda	10.10.06
2	Visual inspection of parts for surface chips and pits.	Undulator Ass'y Contractor	Thomas P Beda	10.10.06
3	Dimensional check of part for conformance to the drawing.	Undulator Ass'y Contractor	Thomas P Beda	10.10.06
4	Review vendor certified test data agrees with SOW requirements	APS Bldg 401		
5	Review Vendor sort list for agreement with sort procedure.	APS Bldg 401		
6	On random sampling, inspect magnetic field with magnetic visualization film for magnetic defects.	APS Magnet Group		
7	On random sampling, confirm Magnetic Moment magnitude And vector components agree with vendor reports	APS Magnet Group		
8	On random sampling, verify the magnet's demagnetization and thermal stability	APS Magnet Group		
	L143-112000-05			
	SA-381-001-35			
	5A10359-12			

15. ORIGINATOR OF PLAN Glen Lawrence DATE 02-07-05

16. PLAN REVIEWED/APPROVED BY _____ DATE _____

17. QAR CONCURRENCE WITH PLAN _____ DATE _____

Metalex Manufacturing
L143-112000 BOM/ASSY Undulator
Purchase Order No. 5A10359

LCLS Undulator magnets inspection per L143-00076 Assembly Procudure:

Inspection - Poles / Magnets / Magnet Structure Bases

1. *Obtain the QA inspection reports for the poles (drawing L143-110105)* ***and magnets (drawing L143-110106 - See appendix A for blank inspection reports).*** *Randomly select 10% of the delivered poles and magnets and inspect them to a minimum precision of .0025mm to verify that they meet the critical drawing specifications.*

Assembly:

ANL Part/Revision Number: L143-112000-05
SLAC Part Number: SA-381-001-35
Assembly Serial Number: 5A10359-12

Inspection/Acceptance report or components for as-built drawings:

Part: L143-110106 Magnet

Completed By: Thomas A Beda **Date:** 10·10·06

5750 Cornell Road • Blue Ash Industrial Park • Cincinnati, OH 45242
Phone (513) 489-0507 • Fax (513) 489-1020

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5359

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.012	Accept/Reject
Magnet Width	66.00	+/- .25	66.025	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.975	Accept/Reject

INSPECTOR: Thomas P Beeker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462 MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5347

P.O. #:

DATE: 9.28.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	(Accept)/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.00	(Accept)/Reject
Magnet Width	66.00	+/- .25	66.025	(Accept)/Reject
Magnet thickness	9.00	+0 / -.10	8.975	(Accept)/Reject

INSPECTOR: Thomas P Becker Thomas P Becker

QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462 MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: ShinEtsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5518

P.O. #: 5A-068868

DATE: 9-24-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	(Accept)/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.01	(Accept)/Reject
Magnet Width	66.00	+/- .25	65.975	(Accept)/Reject
Magnet thickness	9.00	+0 / -.10	8.950	(Accept)/Reject

INSPECTOR: Thomas P. Becker

QA Supervisor:

TEST EQUIPMENT USED: mx111, mx1383, mx587k, mx1462, mx2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5288

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.012	Accept/Reject
Magnet Width	66.00	+/- .25	66.00	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.940	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5348

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.01	Accept/Reject
Magnet Width	66.00	+/- .25	66.05	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.975	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5681

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.02	Accept/Reject
Magnet Width	66.00	+/- .25	65.975	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.940	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5377

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	(Accept)/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.03	(Accept)/Reject
Magnet Width	66.00	+/- .25	66.04	(Accept)/Reject
Magnet thickness	9.00	+0 / -.10	8.975	(Accept)/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5290

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	(Accept)/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.01	(Accept)/Reject
Magnet Width	66.00	+/- .25	66.00	(Accept)/Reject
Magnet thickness	9.00	+0 / -.10	8.950	(Accept)/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5380

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.012	Accept/Reject
Magnet Width	66.00	+/- .25	66.012	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.940	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 569 1

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.012	Accept/Reject
Magnet Width	66.00	+/- .25	66.012	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.940	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5405

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	(Accept)/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.01	(Accept)/Reject
Magnet Width	66.00	+/- .25	66.025	(Accept)/Reject
Magnet thickness	9.00	+0 / -.10	8.988	(Accept)/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5699

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	(Accept)/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.012	(Accept)/Reject
Magnet Width	66.00	+/- .25	66.012	(Accept)/Reject
Magnet thickness	9.00	+0 / -.10	8.940	(Accept)/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1131, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5317

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	(Accept)/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.012	(Accept)/Reject
Magnet Width	66.00	+/- .25	66.025	(Accept)/Reject
Magnet thickness	9.00	+0 / -.10	8.960	(Accept)/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5509

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.012	Accept/Reject
Magnet Width	66.00	+/- .25	65.975	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.940	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5373

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	(Accept)/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.02	(Accept)/Reject
Magnet Width	66.00	+/- .25	66.025	(Accept)/Reject
Magnet thickness	9.00	+0 / -.10	8.975	(Accept)/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5602

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	(Accept)/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.012	(Accept)/Reject
Magnet Width	66.00	+/- .25	66.025	(Accept)/Reject
Magnet thickness	9.00	+0 / -.10	8.950	(Accept)/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5374

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.01	Accept/Reject
Magnet Width	66.00	+/- .25	66.00	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.950	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX597K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5634

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.020	Accept/Reject
Magnet Width	66.00	+/- .25	66.025	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.950	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5378

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.020	Accept/Reject
Magnet Width	66.00	+/- .25	66.025	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.960	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5740

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	(Accept)/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.025	(Accept)/Reject
Magnet Width	66.00	+/- .25	66.00	(Accept)/Reject
Magnet thickness	9.00	+0 / -.10	8.940	(Accept)/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5291

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.010	Accept/Reject
Magnet Width	66.00	+/- .25	66.00	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.950	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX3

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5537

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.040	Accept/Reject
Magnet Width	66.00	+/- .25	66.012	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.930	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5382

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	(Accept)/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.01	(Accept)/Reject
Magnet Width	66.00	+/- .25	66.025	(Accept)/Reject
Magnet thickness	9.00	+0 / -.10	8.975	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5635

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	(Accept)/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.020	(Accept)/Reject
Magnet Width	66.00	+/- .25	66.040	(Accept)/Reject
Magnet thickness	9.00	+0 / -.10	8.950	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1131, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5519

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.020	Accept/Reject
Magnet Width	66.00	+/- .25	65.988	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.940	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5341

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.01	Accept/Reject
Magnet Width	66.00	+/- .25	66.025	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.975	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX597K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5595

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.020	Accept/Reject
Magnet Width	66.00	+/- .25	65.873	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.960	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX597K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5356

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	(Accept)/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.012	(Accept)/Reject
Magnet Width	66.00	+/- .25	66.025	(Accept)/Reject
Magnet thickness	9.00	+0 / -.10	8.975	(Accept)/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5620

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	(Accept)/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.012	(Accept)/Reject
Magnet Width	66.00	+/- .25	66.025	(Accept)/Reject
Magnet thickness	9.00	+0 / -.10	8.960	(Accept)/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5294

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.020	Accept/Reject
Magnet Width	66.00	+/- .25	66.00	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.988	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5577

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.020	Accept/Reject
Magnet Width	66.00	+/- .25	66.040	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.950	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5351

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.012	Accept/Reject
Magnet Width	66.00	+/- .25	66.025	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.970	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5628

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	(Accept)/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.040	~~Accept~~/Reject
Magnet Width	66.00	+/- .25	66.025	(Accept)/Reject
Magnet thickness	9.00	+0 / -.10	8.950	(Accept)/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5355

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.012	Accept/Reject
Magnet Width	66.00	+/- .25	66.025	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.970	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5619

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.020	Accept/Reject
Magnet Width	66.00	+/- .25	66.005	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.940	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5505

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.000	Accept/Reject
Magnet Width	66.00	+/- .25	66.040	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.960	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5546

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.012	Accept/Reject
Magnet Width	66.00	+/- .25	66.012	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.960	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5412

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.012	Accept/Reject
Magnet Width	66.00	+/- .25	66.025	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.960	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5535

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.000	Accept/Reject
Magnet Width	66.00	+/- .25	66.050	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.940	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5493

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	(Accept)/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.012	(Accept)/Reject
Magnet Width	66.00	+/- .25	66.040	(Accept)/Reject
Magnet thickness	9.00	+0 / -.10	8.980	(Accept)/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: mx587K, mx1452, mx1471, mx851, mx1462, mx1121, mx2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5679

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	(Accept)/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.010	(Accept)/Reject
Magnet Width	66.00	+/- .25	66.025	(Accept)/Reject
Magnet thickness	9.00	+0 / -.10	8.950	(Accept)/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5429

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	(Accept)/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.010	(Accept)/Reject
Magnet Width	66.00	+/- .25	66.040	(Accept)/Reject
Magnet thickness	9.00	+0 / -.10	8.950	(Accept)/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1463, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5580

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.030	Accept/Reject
Magnet Width	66.00	+/- .25	66.025	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.950	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5460

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.010	Accept/Reject
Magnet Width	66.00	+/- .25	66.025	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.975	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5568

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.020	Accept/Reject
Magnet Width	66.00	+/- .25	66.025	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.950	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5454

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.010	Accept/Reject
Magnet Width	66.00	+/- .25	66.025	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.975	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5585

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.020	Accept/Reject
Magnet Width	66.00	+/- .25	66.012	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.960	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR:

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 5725

P.O. #:

DATE: 10.2.06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.020	Accept/Reject
Magnet Width	66.00	+/- .25	66.012	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.960	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX587K, MX1452, MX1471, MX851, MX1462, MX1121, MX2

COMMENTS:

Thomas R Bader
10.10.06

ANL Part/Revision Number: L143-112000-05
SLAC Part Number: SA-381-001-35
Assembly Serial Number: 5A10359-12
LOT12 magnets Serial # 5281-5760

Bottom Jaw

Slot Number	Serial No.	Main filed Orientation	x-axis orientation
1	5347	Upstream	Right
2	5518	Downstream	Right
3	5359	Upstream	Left
4	5288	Downstream	Left
5	5348	Upstream	Right
6	5681	Downstream	Left
7	5377	Upstream	Left
8	5290	Downstream	Right
9	5380	Upstream	Right
10	5691	Downstream	Left
11	5405	Upstream	Left
12	5699	Downstream	Right
13	5335	Upstream	Left
14	5543	Downstream	Right
15	5349	Upstream	Left
16	5597	Downstream	Left
17	5463	Upstream	Left
18	5627	Downstream	Left
19	5343	Upstream	Left
20	5515	Downstream	Right
21	5366	Upstream	Left
22	5501	Downstream	Right
23	5358	Upstream	Left
24	5696	Downstream	Right
25	5317	Upstream	Right
26	5509	Downstream	Right
27	5373	Upstream	Right
28	5602	Downstream	Left
29	5374	Upstream	Left
30	5634	Downstream	Left
31	5378	Upstream	Right
32	5740	Downstream	Right
33	5291	Upstream	Left
34	5537	Downstream	Right
35	5382	Upstream	Left
36	5635	Downstream	Left
37	5407	Upstream	Left
38	5583	Downstream	Right
39	5337	Upstream	Left
40	5670	Downstream	Left
41	5741	Upstream	Left
42	5756	Downstream	Left
43	5379	Upstream	Right

Top Jaw

Slot Number	Serial No.	Main filed Orientation	x-axis orientation
1	5519	Downstream	Left
2	5341	Upstream	Left
3	5595	Downstream	Right
4	5356	Upstream	Left
5	5620	Downstream	Right
6	5294	Upstream	Right
7	5577	Downstream	Left
8	5351	Upstream	Right
9	5628	Downstream	Right
10	5355	Upstream	Right
11	5619	Downstream	Left
12	5505	Upstream	Left
13	5508	Downstream	Left
14	5443	Upstream	Left
15	5622	Downstream	Left
16	5328	Upstream	Left
17	5321	Downstream	Left
18	5467	Upstream	Right
19	5596	Downstream	Left
20	5364	Upstream	Right
21	5576	Downstream	Right
22	5430	Upstream	Left
23	5561	Downstream	Left
24	5325	Upstream	Right
25	5546	Downstream	Left
26	5412	Upstream	Right
27	5535	Downstream	Right
28	5493	Upstream	Left
29	5679	Downstream	Left
30	5429	Upstream	Left
31	5580	Downstream	Right
32	5460	Upstream	Left
33	5568	Downstream	Right
34	5454	Upstream	Right
35	5585	Downstream	Left
36	5725	Upstream	Left
37	5684	Downstream	Right
38	5438	Upstream	Left
39	5672	Downstream	Right
40	5401	Upstream	Right
41	5736	Downstream	Left
42	5455	Upstream	Left
43	5540	Downstream	Right

44	5655	Downstream	Right
45	5560	Upstream	Right
46	5300	Downstream	Left
47	5418	Upstream	Right
48	5541	Downstream	Right
49	5695	Upstream	Right
50	5728	Downstream	Right
51	5309	Upstream	Left
52	5710	Downstream	Right
53	5464	Upstream	Left
54	5525	Downstream	Right
55	5316	Upstream	Right
56	5731	Downstream	Left
57	5487	Upstream	Left
58	5520	Downstream	Right
59	5313	Upstream	Right
60	5439	Downstream	Right
61	5474	Upstream	Right
62	5573	Downstream	Left
63	5475	Upstream	Right
64	5548	Downstream	Right
65	5605	Upstream	Left
66	5732	Downstream	Right
67	5494	Upstream	Right
68	5425	Downstream	Left
69	5345	Upstream	Left
70	5514	Downstream	Right
71	5559	Upstream	Right
72	5542	Downstream	Left
73	5361	Upstream	Left
74	5531	Downstream	Right
75	5608	Upstream	Right
76	5391	Downstream	Left
77	5738	Upstream	Left
78	5674	Downstream	Right
79	5406	Upstream	Right
80	5626	Downstream	Left
81	5281	Upstream	Left
82	5526	Downstream	Left
83	5730	Upstream	Right
84	5532	Downstream	Left
85	5658	Upstream	Left
86	5516	Downstream	Right
87	5629	Upstream	Left
88	5724	Downstream	Right
89	5498	Upstream	Right
90	5700	Downstream	Right
91	5452	Upstream	Left
92	5484	Downstream	Left
93	5478	Upstream	Right
94	5298	Downstream	Right
95	5717	Upstream	Right

44	5384	Upstream	Left
45	5476	Downstream	Left
46	5332	Upstream	Right
47	5649	Downstream	Left
48	5488	Upstream	Left
49	5296 ~~5646~~	Downstream	~~Right~~ Left 8.10.06
50	5506	Upstream	Left
51	5562	Downstream	Left
52	5615	Upstream	Right
53	5673	Downstream	Right
54	5461	Upstream	Right
55	5661	Downstream	Right
56	5293	Upstream	Left
57	5755	Downstream	Right
58	5417	Upstream	Right
59	5527	Downstream	Right
60	5399	Upstream	Right
61	5744	Downstream	Right
62	5599	Upstream	Left
63	5311	Downstream	Right
64	5446	Upstream	Left
65	5510	Downstream	Left
66	5457	Upstream	Left
67	5584	Downstream	Left
68	5507	Upstream	Right
69	5502	Downstream	Right
70	5449	Upstream	Left
71	5722	Downstream	Right
72	5444	Upstream	Left
73	5369	Downstream	Right
74	5286	Upstream	Right
75	5716	Downstream	Right
76	5545	Upstream	Right
77	5497	Downstream	Right
78	5420	Upstream	Left
79	5735	Downstream	Right
80	5650	Upstream	Left
81	5538	Downstream	Left
82	5533	Upstream	Left
83	5632	Downstream	Right
84	5512	Upstream	Right
85	5657	Downstream	Left
86	5743	Upstream	Left
87	5664	Downstream	Left
88	5426	Upstream	Right
89	5709	Downstream	Left
90	5344	Upstream	Left
91	5569	Downstream	Right
92	5727	Upstream	Left
93	5643	Downstream	Left
94	5473	Upstream	Right
95	5511	Downstream	Left

96	5746	Downstream	Right
97	5609	Upstream	Left
98	5451	Downstream	Right
99	5427	Upstream	Left
100	5726	Downstream	Right
101	5413	Upstream	Right
102	5721	Downstream	Right
103	5297	Upstream	Left
104	5750	Downstream	Right
105	5469	Upstream	Right
106	5423	Downstream	Right
107	5742	Upstream	Left
108	5557	Downstream	Right
109	5539	Upstream	Left
110	5706	Downstream	Left
111	5447	Upstream	Left
112	5723	Downstream	Right
113	5589	Upstream	Left
114	5466	Downstream	Left
115	5334	Upstream	Right
116	5302	Downstream	Left
117	5434	Upstream	Left
118	5547	Downstream	Right
119	5503	Upstream	Right
120	5574	Downstream	Left
121	5408	Upstream	Right
122	5431	Downstream	Left
123	5642	Upstream	Left
124	5480	Downstream	Right
125	5623	Upstream	Right
126	5757	Downstream	Right
127	5705	Upstream	Right
128	5720	Downstream	Left
129	5606	Upstream	Left
130	5414	Downstream	Left
131	5388	Upstream	Right
132	5295	Downstream	Right
133	5411	Upstream	Right
134	5392	Downstream	Left
135	5669	Upstream	Right
136	5737	Downstream	Left
137	5322	Upstream	Left
138	5523	Downstream	Right
139	5616	Upstream	Right
140	5662	Downstream	Right
141	5534	Upstream	Right
142	5587	Downstream	Right
143	5360	Upstream	Right
144	5398	Downstream	Right
145	5647	Upstream	Left
146	5625	Downstream	Right
147	5453	Upstream	Left

96	5529	Upstream	Left
97	5421	Downstream	Right
98	5522	Upstream	Left
99	5601	Downstream	Right
100	5594	Upstream	Left
101	5663	Downstream	Right
102	5504	Upstream	Left
103	5490	Downstream	Right
104	5402	Upstream	Left
105	5551	Downstream	Left
106	5718	Upstream	Right
107	5549	Downstream	Right
108	5395	Upstream	Left
109	5482	Downstream	Right
110	5307	Upstream	Left
111	5713	Downstream	Left
112	5759	Upstream	Right
113	5593	Downstream	Right
114	5323	Upstream	Right
115	5651	Downstream	Right
116	5751	Upstream	Left
117	5394	Downstream	Right
118	5708	Upstream	Right
119	5680	Downstream	Left
120	5565	Upstream	Left
121	5733	Downstream	Right
122	5486	Upstream	Right
123	5390	Downstream	Left
124	5289	Upstream	Left
125	5285	Downstream	Left
126	5703	Upstream	Right
127	5397	Downstream	Right
128	5400	Upstream	Right
129	5357	Downstream	Right
130	5318	Upstream	Right
131	5665	Downstream	Left
132	5719	Upstream	Left
133	5600	Downstream	Left
134	5472	Upstream	Left
135	5424	Downstream	Left
136	5499	Upstream	Right
137	5648	Downstream	Right
138	5448	Upstream	Left
139	5558	Downstream	Left
140	5659	Upstream	Right
141	5758	Downstream	Right
142	5292	Upstream	Left
143	5734	Downstream	Left
144	5306	Upstream	Right
145	5598	Downstream	Right
146	5491	Upstream	Left
147	5624	Downstream	Left

148	5667	Downstream	Left
149	5327	Upstream	Right
150	5641	Downstream	Right
151	5712	Upstream	Left
152	5571	Downstream	Left
153	5477	Upstream	Left
154	5432	Downstream	Right
155	5282	Upstream	Right
156	5284	Downstream	Right
157	5617	Upstream	Left
158	5753	Downstream	Right
159	5701	Upstream	Right
160	5690	Downstream	Left
161	5630	Upstream	Left
162	5687	Downstream	Right
163	5653	Upstream	Left
164	5563	Downstream	Left
165	5409	Upstream	Left
166	5590	Downstream	Right
167	5301	Upstream	Right
168	5320	Downstream	Left
169	5745	Upstream	Right
170	5656	Downstream	Left
171	5352	Upstream	Left
172	5675	Downstream	Right
173	5614	Upstream	Left
174	5676	Downstream	Right
175	5389	Upstream	Left
176	5668	Downstream	Right
177	5363	Upstream	Right
178	5578	Downstream	Left
179	5436	Upstream	Right
180	5312	Downstream	Left
181	5462	Upstream	Right
182	5581	Downstream	Left
183	5393	Upstream	Right
184	5693	Downstream	Right
185	5375	Upstream	Left
186	5633	Downstream	Left
187	5303	Upstream	Left
188	5603	Downstream	Right
189	5437	Upstream	Left
190	5331	Downstream	Left
191	5326	Upstream	Left
192	5524	Downstream	Right
193	5613	Upstream	Right
194	5747	Downstream	Left
195	5368	Upstream	Left
196	5544	Downstream	Right
197	5471	Upstream	Right
198	5607	Downstream	Right
199	5435	Upstream	Left

148	5671	Upstream	Left
149	5304	Downstream	Left
150	5387	Upstream	Right
151	5645	Downstream	Right
152	5415	Upstream	Left
153	5283	Downstream	Right
154	5707	Upstream	Right
155	5591	Downstream	Left
156	5372	Upstream	Left
157	5556	Downstream	Left
158	5419	Upstream	Left
159	5714	Downstream	Left
160	5459	Upstream	Left
161	5315	Downstream	Right
162	5610	Upstream	Left
163	5644	Downstream	Left
164	5481	Upstream	Right
165	5564	Downstream	Left
166	5410	Upstream	Right
167	5396	Downstream	Right
168	5314	Upstream	Right
169	5579	Downstream	Left
170	5287	Upstream	Left
171	5729	Downstream	Right
172	5386	Upstream	Right
173	5754	Downstream	Right
174	5611	Upstream	Right
175	5555	Downstream	Left
176	5305	Upstream	Left
177	5621	Downstream	Left
178	5470	Upstream	Left
179	5588	Downstream	Right
180	5416	Upstream	Left
181	5752	Downstream	Left
182	5339	Upstream	Right
183	5575	Downstream	Right
184	5495	Upstream	Right
185	5760	Downstream	Left
186	5489	Upstream	Left
187	5458	Downstream	Left
188	5441	Upstream	Right
189	5689	Downstream	Right
190	5492	Upstream	Right
191	5639	Downstream	Right
192	5445	Upstream	Left
193	5572	Downstream	Left
194	5336	Upstream	Right
195	5592	Downstream	Right
196	5370	Upstream	Left
197	5660	Downstream	Left
198	5479	Upstream	Left
199	5652	Downstream	Right

200	5678	Downstream	Right
201	5450	Upstream	Right
202	5698	Downstream	Left
203	5340	Upstream	Left
204	5570	Downstream	Right
205	5310	Upstream	Right
206	5654	Downstream	Left
207	5308	Upstream	Left
208	5483	Downstream	Right
209	5468	Upstream	Left
210	5686	Downstream	Right
211	5299	Upstream	Left
212	5697	Downstream	Left
213	5371	Upstream	Right
214	5513	Downstream	Right
215	5404	Upstream	Right
216	5640	Downstream	Left
217	5433	Upstream	Left
218	5319	Downstream	Left
219	5428	Upstream	Left
220	5685	Downstream	Right
221	5342	Upstream	Right
222	5682	Downstream	Right
223	5354	Upstream	Left
224	5586	Downstream	Left
225	5324	Upstream	Left

200	5381	Upstream	Right
201	5465	Downstream	Left
202	5496	Upstream	Left
203	5566	Downstream	Left
204	5383	Upstream	Right
205	5530	Downstream	Right
206	5365	Upstream	Right
207	5517	Downstream	Right
208	5748	Upstream	Right
209	5552	Downstream	Right
210	5350	Upstream	Left
211	5618	Downstream	Left
212	5456	Upstream	Right
213	5554	Downstream	Left
214	5338	Upstream	Right
215	5550	Downstream	Right
216	5333	Upstream	Left
217	5612	Downstream	Right
218	5422	Upstream	Right
219	5638	Downstream	Right
220	5376	Upstream	Right
221	5636	Downstream	Left
222	5385	Upstream	Right
223	5637	Downstream	Right
224	5485	Upstream	Right
225	5582	Downstream	Right

For "X-Axis Orientation" column
"Right" stands for right-numbered surface should face to the undulator axis.
"Left" stands for left-numbered surface should face to the undulator axis.
This "Right", "Left" procedure applies for both Right and Left Jaw

For "Main-Field Orientation" column **(see Assembly Procedure Document)**
"Downstream" side corresponts to the direction of lower-numbered slot.
Arrow should point toward the lower numbered slots.
"Upstream" side corresponds to the direction of higher-numbered slot.
Arrow should point toward the higher numbered slots.

Spare magnets

serial No.	Reduced Magnetization
5567	33%
5353	80%
5631	
5362	
5692	
5329	
5528	
5739	

Sample magnets

serial No.	
5346	
5440	
5553	
5604	
5711	

5688
5715
5296
5367
5666
5749
5694
5330
5677
5403
5521
5704
5702
5500
5683
5442
5536

CUSTOMER	SHIP DATE	GROSS WEIGHT	QUOTE	1 OF 1	PACKIN.
55230	06/30/06 SHP	1500	05-1226592-		TEST RESULTS
BILL TO: METALEX MFG INC	WORK ORDER **		ORDER DATE 05/30/06 ORD		

DELIVERY DATE	SHIP BRANCH	SELL BRANCH	WORK ORDER
07/05/06 DEL	02 - GRR	05 - DAY	2P1680

SHIP TO

METALEX MFG INC 01
5750 CORNELL
CINCINNATI OH 45242

1310 SCRIBNER NW, GRAND RAPIDS MI 49504-3287

Copper and Brass Sales
A ThyssenKrupp Materials NA company
ThyssenKrupp

CUSTOMER PO NUMBER	TERRITORY	ENTRY ID
64760-BL - 681	03	05JWZ

BUYER	INSIDE SALES
BRIAN LAWSN,P.A.	JEFF W. ZELLERS

BUYER TELEPHONE	INSIDE SALES TELEPHONE
(513)489-059	(937)415-2620 52631

CUSTOMER SIGNATURE: DATE:

	QUANTITY ORDERED	SHIPPED
INVENTORY	654.23 LB	640.00
BILLING	654 .23 LB	640.00
WAREHOUSE		

SHIPMENT / SHIPPING STATUS

INTERNAL	COMPLETE	PARTIAL	CANCEL
POOL-TO 0-DAY	X		

TO CUSTOMER: OUR TRUCK/OUR DE-01

FOB: ORIG

BILL OF LADING

FREIGHT STATUS: PPD

PACKED WITH OTHER GOODS

FINISHED GOODS LOCATION: WARN LABEL:1013

PART DESCRIPTION 310373 6

ALUMINUM BRONZE PLATE AMPCO 8 C614/C613, .3125 (+-.019)
SAW 48" X 36" (+.064,-0), LINE ITEM#: 1.
Test Results Attn to: QA Department. , actual certs must be signed Item# 1

4pcs

METALEX QA. DEPT. ACCEPTED DATE 7/10/06 BY KKB

SPECIAL INSTRUCTIONS

P/N L143-110104

PULL	SCRAP	FILLED BY	PACKED BY	Q/A AUDIT
		JM		

CUSTOMER RECEIVING HOURS	MAX SKID WEIGHT	LOADING INSTRUCTIONS	MAXIMUM BUNDLE WEIGHT
6:00 am - 12:00 pm	15000	CRANE, FORK	30000

BOXES	BARS	CASES	CUSHP	PKGS	SKIDS	BDLS	TUBES	CTNS	FLAT	COILS
					1					

INSPECTION RECORD

TEST RESULTS

CERTIFICATE OF COMPLIANCE
We hereby certify that mercury or any of its compounds are not used in the processing and distribution of our products. The products we distribute are not hazardous in their received state. For MSDS sheets go to www.copperandbrass.com/msds or call 248-233-5682. We hereby certify that the material above complies with the following specifications:
ASTM-B169

ROHS COMPLIANT

TAG NO	QUANTITY	UOM	VENDOR	VEND PO	HEAT/LOT	PCS	TAG NO	QUANTITY	UOM	VENDOR	VEND PO	HEAT/LOT	PCS
042931 00	640.00	LB	REVEREC	0CK5986	532/4386								

Del
RECEIVED
JUL 05 2006
METALEX MFG.
BY S.W

STEVEN J. FARACI - General Manager: GRAND RAPIDS PRINTED 06/30/06 01:39 PM CONTROL NO 00049

COPPER AND BRASS SALES IS A DIVISION OF THYSSENKRUPP MATERIALS, INC.

Revere Copper Products, Inc.

24 North Front Street New Bedford, MA 02740
Phone: (508) 999-5601 Fax: (508) 991-2115

CERTIFICATE OF TEST

PAGE 1

DATE CODE: 179

ORDER FROM:
COPPER AND BRASS SALES
ATTN: ACCOUNTS PAYABLE
P O BOX 5116
SOUTHFIELD MI 48086-5116

SHIPPED TO:
TMX/COPPER AND BRASS SALES
1310 SCRIBNER AVENUE NORTH WEST
GRAND RAPIDS MI 49504-3287

DATE: 6/28/06
REVERE NO: 33549 ITEM#: 01
CUSTOMER ORDER NUMBER:
CK5986

MATERIAL INFORMATION:

ALUMINUM BRONZE SHEET
C61300/C61400 / AMPCO 8
SOFT TEMPER
48" X 144" X .3125"

ASTM B 169-2001
P/N 310373-6
ROHS COMLIANT

CHEMICAL COMPOSITION

PIECES	LOT	HEAT	COPPER Cu	TIN Sn	LEAD Pb	IRON Fe	NICKEL Ni	MANGANESE Mn	PHOSPHORUS P	CARBON C	SULFUR S	ZINC Zn	SILICON Si	ALUMINUM Al	ARSENIC As
4	4386	532	90.00	.260	.00	2.58	.00	.16	.004			.03	.01	6.92	

NICKEL INCLUDES COBALT

PHYSICAL AND MECHANICAL PROPERTIES

LOT	HEAT	YIELD STRENGTH 0.5% Ext. Psi	TENSILE STRENGTH Psi	ELONGATION % in 2 inches	BEND in degrees	RESISTIVITY ohms/g/m2	ASTM F68 CLASS	ROCKWELL/ BRINELL
4386	532	38,000	83,500	50	120			
4386	532	37,900	82,600	48	120			

Job# 5681
Part# L143-110104
P.O# 64760-BL

METALEX QA. DEPT. ACCEPTED DATE 7/10/06 BY KKB MTX OC 18

Metalex
6-30-06
P064760-BL - 5681
ZP:1680
640#
CHB

WE HEREBY CERTIFY THAT EACH LOT HAS BEEN SAMPLED, TESTED, AND INSPECTED IN ACCORDANCE WITH THE ABOVE SPECIFICATIONS AND HAS MET THE REQUIREMENTS. THE MATERIAL HAS NOT BEEN WELD REPAIRED.

JORG SCHAFFSTEIN
Q.C. ADMINISTRATOR

ML2-1 02/01

CERTIFICATE OF TEST

Certification Date
26-MAY-2006

CUSTOMER ORDER NUMBER
64752-BL-5681

CUSTOMER PART NUMBER
ITEM 1

EARLE M. JORGENSEN COMPANY
601 REDNA TERRACE
P.O. BOX 15100
CINCINNATI OH 45215

Invoice Number
S956531

SOLD TO: METALEX MANUFACTURING
5750 CORNELL RD
CINCINNATI OH 45242

SHIP TO: METALEX MFG
5750 CORNELL ROAD
CINCINNATI OH 45242

Description: 1018 CF BAR ASTM A108
3/16 X 1/2 FLATS X 12' R/L
HEAT: CL132712 ITEM: 502748

Line Total: 3.8 LB

Specifications:
ASTM A108 93

CHEMICAL ANALYSIS

C	MN	P	S	B	CR	CU	MO
0.16	0.71	0.008	0.029	0.0001	0.09	0.2	0.01

N	NI	SI	SN	TI	V
0.007	0.06	0.25	0.009	0.001	0.001

RCPT: R251728
MILL : CHARTER WIRE

COUNTRY OF ORIGIN : US

STRAND CAST REDUCTION RATIO 284.0 TO 1

COMMENTS
MELT SOURCE: STEEL DYNAMICS
HOT ROLL SOURCE: CHARTER STEEL
SILICON KILLED COARSE GRAIN

METALEX
QA. DEPT.
ACCEPTED
DATE 6/6/06
BY KKB

Job# 5681
PART# L143-110108
P.O# 64752

The above data were transcribed from the manufacturer's Certificate of Test after verification for completeness and specification requirements of the information on the certificate. All test results remain on file subject to examination.

We hereby certify that the material covered by this report will meet the applicable requirements described herein, including any specification forming a part of the description.

The willful recording of false, fictitious, or fraudulent statements in connection with test results may be punishable as a felony under federal statutes.

Material did not come in contact with mercury while in our possession.

MANAGER, QUALITY ASSURANCE

EMJ SID#:S956531 CUSTOMER:METALEX MFG P.O:64752-BL-5681 CUST PART#:ITEM 1 QTY: 3 800 DATE:06-05-26 SIGNATURE:

CHARTER WIRE
A Division of Charter Manufacturing Co., Inc.
114 N. Jackson Street
Milwaukee, Wisconsin 53202-6297
(414) 390-3000
(414) 390-3031 Fax

R 251728

DATE: 11/12/2004

CERTIFICATE OF MATERIAL AND SPECIFICATION

CUSTOMER: EMJ
CUSTOMER'S P.O. NO: P743436001
Customer Item: 502748
SIZE: .1875 X .500
GRADE: AISI 1018
HEAT NO: cl132712

SALES ORDER NO: s37410
WORKORDER: 06100003
ITEM NO: 09043
SPEC 1: ASTM A108-93
SPEC 2:
SPEC 3:

CHEMICAL ANALYSIS: C: .1600 Mn .7100 P: .0080 S: .0290
B: .0001 Cr .0900 Cu .2000 Mo .0100
N: .0070 Ni .0600 Si .2500 Sn .0090
Ti .0010 V: .0010

MILL SPECIFICATIONS: Hot Roll Source: CHARTER STEEL (USA)
Melt Source: STEEL DYNAMICS (USA)
Casting Practice: STRAND
Killing Practice/Grainsize: SILICON KILLED COARSE GRAIN
Reduction Ratio: 284 TO 1

906#56811

METALEX
QA. DEPT.
ACCEPTED
DATE 6/6/06
BY KKB

P/N L143-110108
P.O.# 64752
Item# 1

HEAT ANALYSIS IS FROM THE PACKING LIST RECEIVED BY CHARTER FROM OUR RAW MATERIAL SUPPLIER.

QUALITY REPRESENTATIVE

ORIGINAL

CUSTOMER	SHIP DATE	GROSS WEIGHT	QUOTE	3 OF 6	PACKING LIST
55230	06/01/06 SHP	22	05-1226405-		TEST RESULTS
BILL TO	WORK ORDER		ORDER DATE		
METALEX MFG INC	**		05/30/06 ORD		
			DELIVERY DATE	SHIP BRANCH / SELL BRANCH	WORK ORDER
			06/01/06 DEL	05-DAY / 05-DAY	5R2157

SHIP TO

METALEX MFG INC 01
5750 CORNELL
CINCINNATI OH 45242

6700 POE AVENUE, DAYTON OH 45414-2590

Copper and Brass Sales
A ThyssenKrupp Materials NA company
ThyssenKrupp

CUSTOMER P.O. NUMBER	TERRITORY	ENTRY ID
64760 - BL- 5681	03	05JWZ

CUSTOMER SIGNATURE: DATE:

BUYER	INSIDE SALES
BRIAN LAWSON, P.A.	JEFF W. ZELLERS

BUYER TELEPHONE	INSIDE SALES TELEPHONE
(513)489-0539	(937)415-2620 52631

SHIP VIA	SHIPPING STATUS		
CRITERIA	COMPLETE	PARTIAL	CANCEL
	X		

TO CUSTOMER	FOB
OUR TRUCK/OUR DEL-D1	ORIG
BILL OF LADING	FREIGHT STATUS
	PPD

QUANTITY	ORDERED	SHIPPED
INVENTORY	21.17 LB	21.00
BILLING	2.00 PC	2.00
WAREHOUSE		2.00 PC

PACKED WITH OTHER GOODS

FINISHED GOODS LOCATION: WARN LABEL:1001

PART DESCRIPTION: 019980 2

RECT 6061-T6511 EXTR ALUMINUM BAR, 1/2(+/-.009)X 1-1/2 (+/-.014) X 12 FT ML
NO PROCESSING - 144" ML, Test Results Attn to: QA Department.
actual certs must be signed

Item 4

SPECIAL INSTRUCTIONS

PULL	SCRAP	FILLED BY	PACKED BY	QA AUDIT
		KEN		

CUSTOMER RECEIVING HOURS	MAX SKID WEIGHT	LOADING INSTRUCTIONS	MAXIMUM BUNDLE WEIGHT
6:00 am - 12:00 pm	15000	CRANE, FORK	30000

PCS	PANS	CASES	CUSHP	PKGS	SKIDS	BDLS	TUBES	CTNS	FLAT	COILS
						1				
INSPECTION RECORD										

TEST RESULTS - - - - -

CERTIFICATE OF COMPLIANCE
We hereby certify that mercury or any of its compounds are not used in the processing and distribution of our products. The products we distribute are not hazardous in their received state. For MSDS sheets go to www.copperandbrass.com/msds or call 248-233-5682. We hereby certify that the material above complies with the following specifications:

ASTM-B221 AMS-QQ-A-200/8

P.P.D

ROHS COMPLIANT

TAG NO	QUANTITY	UOM	VENDOR	VEND PO	HEAT/LOT	PCS	TAG NO	QUANTITY	UOM	VENDOR	VEND PO	HEAT/LOT	PCS
[illegible]	2.00	PC	KAISER		0CI6601 348 057	2							

METALEX MTX OC 18
QA. DEPT.
ACCEPTED
DATE 6/22/06
BY KKB

Dec
LW
6/2
RECEIVED
JUN 01 2006
METALEX MFG.
BY S.W

ROBERT E. MARLIN - General Manager: DAYTON PRINTED 05/30/06 09:31 PM CONTROL NO 00042

COPPER AND BRASS SALES IS A DIVISION OF THYSSENKRUPP MATERIALS, INC.

P/N C143-11015

KAISER ALUMINUM
MATERIAL CERTIFICATION
COPPER & BRASS SALES
CUSTOMER PICK-UP
6700 POE AVE
DAYTON, OH 45414

AISER ALUMINUM
111 S 74 E Ave

ulsa, OK 74145

OPPER & BRASS SALES
OUTHFIELD MI 48086 CI6601 01/19/06
OLD TO PURCHASE ORDER DATE PRINTED

OLD TO PURCHASE ORDER DATE PRINTED

019980-2 0.500 X 1.500 SQ COR RECT BAR
USTOMER PART NUMBER DESCRIPTION

803448-001 348 057 6061-T6511
RELEASE-ITEM LOT ALLOY/TEMPER

MECHANICAL PROPERTY RESULTS

EFERENCE	SAMPLE#	UTS(KSI)	YTS(KSI)	%Elong in 2"	HARDNESS	CONDUCT.	BEND
48 057	0001 C001	51.3	48.0	16.2		N/A	N/A
48 057	0001 0002	50.6	47.6	15.6		N/A	N/A
48 057	0001 0003	50.5	47.4	16.5		N/A	N/A

CHEMICAL COMPOSITION (WT%), ALUMINUM REMAINDER

061 LIMITS	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Bi	Zr	Others Ea	Others Tot
Maximum	0.80	0.70	0.40	0.15	1.20	0.35	0.25	0.15	NA	NA	NA	0.05	0.15
Minimum	0.40	0.00	0.15	0.00	0.80	0.04	0.00	0.00	NA	NA	NA	0.00	0.00

P.O.# 64760 Item# 4

METALEX MTX QC18
QA. DEPT
ACCEPTED
DATE 6/22/06
BY KKB

PPLICABLE REQUIREMENTS:

STM-B221-02-STENCILED
SME-SB221 1998 SECT II
IS-QQ-A-200/6
IS#95061

Kaiser Aluminum & Chemical Corp. ('Kaiser') hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms & conditions of sale. Test reports are on file, subject to examination.

P/N C143-11015

CERTIFICATE OF TEST

Certification Date
26-MAY-2006

CUSTOMER ORDER NUMBER
64752-BL-5681
CUSTOMER PART NUMBER
ITEM 2

EARLE M. JORGENSEN COMPANY
601 REDNA TERRACE
P.O. BOX 15100
CINCINNATI OH 45215

Invoice Number
S956534

SOLD TO: METALEX MANUFACTURING
5750 CORNELL RD
CINCINNATI OH 45242

SHIP TO: METALEX MFG
5750 CORNELL ROAD
CINCINNATI OH 45242

Description: 1018 CF BAR ASTM A108
1/4 X 3/4 FLATS X 12' R/L
HEAT: CI134628
ITEM: 502781
Line Total: 7.6 LB

Specifications:
ASTM A108 93

CHEMICAL ANALYSIS

C	MN	P	S	AL	B	CR	CU
0.18	0.67	0.011	0.027	0.007	0.0002	0.09	0.17

MO	N	NI	SI	SN	V
0.02	0.009	0.07	0.15	0.011	0.002

RCPT: R636656
MILL : CHARTER WIRE
COUNTRY OF ORIGIN : USA

STRAND CAST REDUCTION RATIO 145.0 TO 1

COMMENTS
MELT SOURCE ALTON STEEL USA
SILICON KILLED COARSE GRAIN

METALEX QA. DEPT. ACCEPTED DATE 6/6/06 BY KKB

Job#5681
Part#L143-11012
P.O# 64752-BL

The above data were transcribed from the manufacturer's Certificate of Test after verification for completeness and specification requirements of the information on the certificate. All test results remain on file subject to examination.

We hereby certify that the material covered by this report will meet the applicable requirements described herein, including any specification forming a part of the description.

The willful recording of false, fictitious, or fraudulent statements in connection with test results may be punishable as a felony under federal statutes.

Material did not come in contact with mercury while in our possession.

Paul Barnhart
MANAGER, QUALITY ASSURANCE

PMI.017

Earle M. Jorgensen Co. Original test report for the order shown below.

EMJ SID#:S956534 CUSTOMER:METALEX MFG P.O:64752-BL-5681 CUST. PART#:ITEM 2 QTY: 7,657 DATE:06-05-26 SIGNATURE:

CHARTER WIRE
A Division of Charter Manufacturing Co., Inc.
114 N. Jackson Street
Milwaukee, Wisconsin 53202-6297
(414) 390-3000
(414) 390-3031 Fax

R 636656

DATE: 01/18/2006

CERTIFICATE OF MATERIAL AND SPECIFICATION

CUSTOMER: EMJ
CUSTOMER'S P.O. NO: P849582002
Customer Item: 502781
SIZE: .250 X .750
GRADE: AISI 1018
HEAT NO: cl134628

SALES ORDER NO: S42327
WORKORDER: 11011631
ITEM NO: 11070
SPEC 1: ASTM A108-93
SPEC 2:
SPEC 3:

CHEMICAL ANALYSIS: C: .1800 Mn .6700 P: .0110 S: .0270
AL .0070 B: .0002 Cr .0900 Cu .1700
Mo .0200 N: .0090 Ni .0700 Si .1500
Sn .0110 V: .0020

MILL SPECIFICATIONS: Hot Roll Source: CHARTER STEEL (USA)
Melt Source: ALTON STEEL (USA)
Casting Practice: STRAND
Killing Practice/Grainsize: SILICON KILLED COARSE GRAIN
Reduction Ratio: 145 TO 1

Job# 5681

METALEX QA. DEPT. ACCEPTED DATE 6/6/06 BY KKB

P/N L143-110112
P.O.# 64752
Item# 2

HEAT ANALYSIS IS FROM THE PACKING LIST RECEIVED BY CHARTER FROM OUR RAW MATERIAL SUPPLIER.

QUALITY ASSURANCE/CONTINUOUS IMPROVEMENT MANAGER

ORIGINAL

CERTIFICATE OF TEST

Certification Date
26-MAY-2006

CUSTOMER ORDER NUMBER
64752-BL-5681

CUSTOMER PART NUMBER
ITEM 3

EARLE M. JORGENSEN COMPANY
601 REDNA TERRACE
P.O. BOX 15100
CINCINNATI OH 45215

Invoice Number
S956533

SOLD TO: METALEX MANUFACTURING
5750 CORNELL RD
CINCINNATI OH 45242

SHIP TO: METALEX MFG
5750 CORNELL ROAD
CINCINNATI OH 45242

Description: 1018 CF BAR ASTM A108
3/16 X 8 FLATS X 12' R/L
HEAT: 571622

Line Total: 61.2 LB

ITEM: 502771

Specifications:
ASTM A108 93

CHEMICAL ANALYSIS

C	MN	P	S	SI	AL	TI	CR
0.19	0.65	0.006	0.008	0.03	0.041	0.001	0.1

MO	CU	NI	N	B
0.028	0.21	0.07	0.007	0.0001

RCPT: R568656
MILL : CLINGAN STEEL INC

COUNTRY OF ORIGIN : USA

MECHANICAL PROPERTIES

DESCRIPTION	YLD STR	ULT TEN	%ELONG	%RED IN AREA	HARDNESS RB
					83

METALEX
QA. DEPT.
ACCEPTED
DATE 6/6/06
BY KRB

Job#5681
Part# L143-11014
P.O# 64752-BL

The above data were transcribed from the manufacturer's Certificate of Test after verification for completeness and specification requirements of the information on the certificate. All test results remain on file subject to examination.

We hereby certify that the material covered by this report will meet the applicable requirements described herein, including any specification forming a part of the description.

The willful recording of false, fictitious, or fraudulent statements in connection with test results may be punishable as a felony under federal statutes.

Material did not come in contact with mercury while in our possession.

Paul Barnhart
MANAGER, QUALITY ASSURANCE

PM1.017

Carl M. Jorgensen Co. Original test report for the order shown below.

EMJ SID#:S956533 CUSTOMER:METALEX MFG P.O:64752-BL-5681 CUST. PART#:ITEM 3 QTY: 61,260 DATE:06-05-26 SIGNATURE:

CLINGAN STEEL, INC.
CERTIFIED TEST REPORT

R 568656

11/10/05

TO:
EMJ CORPORATION CHICAGO
1900 MITCHELL BLVD.
SCHAUMBURG, IL 60193

SHIP TO:
EMJ CORPORATION CHICAGO
1900 MITCHELL BLVD.
SCHAUMBURG, IL 60193

Cust. P/O#: P832728-423 Part No.: 582771

STEEL,.1875 X 8.00 X 144.00

GRADE: C1018 PER ASTM A108-93 SQUARE EDGE

B/L Date 11/10/05 Bill/Ladng# 093368
Sales Ordr: 078583 01

Tag# 924451 01 Heat# 571622 MasterTag# 922078 01

C : .190	Mn: .650	P : .006	S : .008
Si: .030	Al: .041	Ti: .001	
Cr: .100	Mo: .028	Cu: .210	
Ni: .070	N : .007		B : .0001

Rockwell: B83

MELTED & MFG IN U.S.A.

Sales Ordr: 078583 01

Tag# 924452 01 Heat# 571622 MasterTag# 922078 01

C : .190	Mn: .650	P : .006	S : .008
Si: .030	Al: .041	Ti: .001	
Cr: .100	Mo: .028	Cu: .210	
Ni: .070	N : .007		B : .0001

Rockwell: B83

MELTED & MFG IN U.S.A.

Job# 5681

METALEX
QA. DEPT 01.30
ACCEPTED
DATE 6/6/06
BY KKB

P/N L143-110114
P.O.# 64752

Continued...

Laha M. Jorgensen Co. Original test report for the order shown below.

EMJ SID#:S956533 CUSTOMER METALEX MFG P.O:04752-B1/5681 CUST. PART#:ITEM:3 QTY: 61,260 DATE:06-05-26 SIGNATURE:

CLINGAN STEEL, INC.
CERTIFIED TEST REPORT

11/10/05

TO:
EMJ CORPORATION CHICAGO
1900 MITCHELL BLVD.
SCHAUMBURG, IL 60193

SHIP TO:
EMJ CORPORATION CHICAGO
1900 MITCHELL BLVD.
SCHAUMBURG, IL 60193

Cust. P/O#: P832728-423 Part No.: 502771

STEEL,.1875 X 8.00 X 144.00

GRADE: C1018 PER ASTM A108-93 SQUARE EDGE

B/L Date 11/10/05 Bill/Ladng# 093368

P06#5681
METALEX
QA. DEPT. 01.30
ACCEPTED
DATE 6/6/06
BY KKB

P/N L143-110114
P.O.# 04752
Item# 3

WE HEREBY CERTIFY THE ABOVE FIGURES ARE ACCURATELY STATED, MEET YOUR MATERIAL REQUIREMENTS AND ARE TRACEABLE IN OUR RECORDS.

CLINGAN STEEL, INC.
QUALITY ASSURANCE MANAGER

QMF 17

CERTIFICATE OF TEST

Certification Date
26-MAY-2006

CUSTOMER ORDER NUMBER
64752-BL-5681

CUSTOMER PART NUMBER
501059

EARLE M. JORGENSEN COMPANY
601 REDNA TERRACE
P.O. BOX 15100
CINCINNATI OH 45215

Invoice Number
S956532

SOLD TO: METALEX MANUFACTURING
5750 CORNELL RD
CINCINNATI OH 45242

SHIP TO: METALEX MFG
5750 CORNELL ROAD
CINCINNATI OH 45242

Description: 1018 CF BAR ASTM A108
1/2 RD X 12' R/L
Line Total: 8 LB
HEAT: 745271 ITEM: 501059

Specifications:
ASTM A108 99

CHEMICAL ANALYSIS

C	MN	SI	S	P
0.19	0.79	0.22	0.04	0.01

RCPT: R261809
MILL : NUCOR COLD FINISH
COUNTRY OF ORIGIN : USA

Item#4
METALEX QA. DEPT. ACCEPTED DATE 6/12/06 BY RKB

Job# 5681
Part# L143-110119
P.O# 64752-BL

The above data were transcribed from the manufacturer's Certificate of Test after verification for completeness and specification requirements of the information on the certificate. All test results remain on file subject to examination.

We hereby certify that the material covered by this report will meet the applicable requirements described herein, including any specification forming a part of the description.

The willful recording of false, fictitious, or fraudulent statements in connection with test results may be punishable as a felony under federal statutes.

Material did not come in contact with mercury while in our possession.

Paul Barnhart
MANAGER, QUALITY ASSURANCE

PM1.017

MILL TEST REPORT

NUCOR COLD FINISH
A DIVISION OF NUCOR CORPORATION
2800 N. GOVERNOR WILLIAMS HIGHWAY
DARLINGTON, SOUTH CAROLINA 29540
FAX 843-395-8759
TELEPHONE 843-395-8689

CUSTOMER P.O. P746700001-126
BILL OF LADING 009587
DATE 12/01/04

SOLD TO

EARLE M. JORGENSEN STEEL
601 REDNA TERRACE
BOX 15100
CINCINNATI, OH

45215

SHIP TO

EARLE M. JORGENSEN STEEL
601 REDNA TERRACE
BOX 15100
CINCINNATI, OH

45215

GRADE	SIZE	PROD	HEAT NO.	C	Mn	Si	S	P	V	Cu	Ni	Cr	Mo	Pb	CUST. PART #
1018	1/2	RD	742923	.19	.84	.27	.030	.010							501059
1018	1/2	RD	745271	.19	.79	.22	.040	.010							501059
														P261809	

PHYSICAL PROPERTIES

GRADE	SIZE	PROD	HEAT NO.	YIELD (ksi)	TENSILE (ksi)	El% (in 2")	ROA %	HARDNESS (SCALE)	COMMENTS

SPECIAL INSTRUCTIONS:

ROUNDS UP TO & INCLUDING 2.5" ARE 100% EDDY CURRENT TESTED
COUNTRY OF ORIGIN FOR 12L14 MATERIAL:

PIN 1143-110119
P.O. # 64752
Item #1

METALEX
QA. DEPT.
ACCEPTED
DATE 6/18/04
BY KRB

Gibbs Sales

TERRY CIESLINSKI

QUALITY ASSURANCE METALLURGIST

ALL COLD DRAWN CARBON STEEL LISTED ABOVE MEETS ASTM A108-99 SPECIFICATIONS.
ALL COLD DRAWN ALLOY STEEL LISTED ABOVE MEETS ASTM A331-95 (REAPP2000) SPECIFICATIONS.
ALL COLD DRAWN STRESS RELIEVED STEEL LISTED ABOVE MEETS ASTM A311-B95 (REAPP2000) SPECIFICATIONS.

06-02-2006 12:42 SARA KANE 513-771-1767

PAGE:2

PRECISION BRAND PRODUCTS, INC.
2250 CURTISS STREET
DOWNERS GROVE, IL 60515 USA
PHONE: (630) 969-7200 FAX: (630) 969-0310

ISO 9001:2000 Certified Company

PO# 65353-BL
J & L Industrial
Michelle Lafferty

Wednesday, 07/26/2006

This is to certify that to the best of our knowledge and belief, all values shown below are correct and true and the material complies with the specifications shown.

J&L Part Number
PBP-44505M
BL 72606
Job# 5681/5725

METALEX
QA. DEPT
ACCEPTED
DATE 8/9/06
BY KKB

COLOR CODED SHIM

.0005 - .005 POLYESTER
.0075 - .060 POLYVINYL CHLORIDE (PVC)

	.0005 - .005	.0075 - .030	.040 - .060
TENSILE STRENGTH	30,000 PSI	6,600 PSI	14,000 PSI
ULTIMATE ELONGATION	90%	180%	180%
FOLDING ENDURANCE (MIT)	>100,000	37,000	37,000
TEAR STRENGTH (ELMENDORF)	20 g/mil	--	--
MOISTURE ABSORPTION	0.8%	0.15%	0.15%
THICKNESS TOLERANCE	+/- 5%	+/- 5%	+/- 5%
COMPRESSION @ 5,000 PSI	1.0%	0.7%	0.7%
SERVICE TEMPERATURE	-90ΘF - 300ΘF	-10ΘF - 155ΘF	-10ΘF - 155ΘF
MEETS SPECIFICATION:	L-P-377	L-P-535	L-P-535

P/N L143-110704

CUSTOMER	SHIP DATE	GROSS WEIGHT	QUOTE	PACKING LIST
55230	05/31/06 SHP	180	05-1226405-	4 OF 6
			ORDER DATE 05/30/06 ORD	

BILL TO: METALEX MFG INC

WORK ORDER **

DELIVERY DATE	SHIP BRANCH	SELL BRANCH	WORK ORDER
06/01/06 DEL	31-ELK	05-DAY	VM2796

SHIP TO

METALEX MFG INC 01
5750 CORNELL
CINCINNATI OH 45242

58144 CHARLOTTE AVE, ELKHART IN 46517

Copper and Brass Sales
A ThyssenKrupp Materials NA company
ThyssenKrupp

CUSTOMER P.O. NUMBER	TERRITORY	ENTRY ID
64760 - BL- 5681	03	05JWZ

BUYER	INSIDE SALES
BRIAN LAWSON, P.A.	JEFF W. ZELLERS

BUYER TELEPHONE	INSIDE SALES TELEPHONE
(513)489-0539	(937)415-2620 52631

CUSTOMER SIGNATURE: DATE:

QUANTITY	ORDERED	SHIPPED
INVENTORY	159.42 LB	160.00
BILLING	15.00 PC	15.00
WAREHOUSE		15.00 PC

SHIP VIA: INTERNAL POOL-TO 05-DAY

SHIPPING STATUS: COMPLETE X | PARTIAL | CANCEL

TO CUSTOMER: OUR TRUCK/OUR DEL-D1

FOB: ORIG

PACKED WITH OTHER GOODS

BILL OF LADING

FREIGHT STATUS: PPD

FINISHED GOODS LOCATION

PART DESCRIPTION 088407-2

CAST ALUMINUM TOOLING PLATE, 2.500 (+-.005)
SAW 5.25" (+.064,-0) X 7.937" (+.064,-0), actual certs must be signed

Item 5

METALEX MTX QC 18
QA. DEPT.
ACCEPTED
DATE 6/22/06
BY KKB

SPECIAL INSTRUCTIONS

FULL	SCRAP	FILLED BY	PACKED BY	Q/A AUDIT
		DW		

CUSTOMER RECEIVING HOURS	MAX SKID WEIGHT	LOADING INSTRUCTIONS	MAXIMUM BUNDLE WEIGHT
6:00 am - 12:00 pm	15000	CRANE, FORK	30000

BOXES	BARS	CASES	CUSHP	PKGS	SKIDS	BDLS	TUBES	CTNS	FLAT	COILS
					1					

INSPECTION RECORD

CERTIFICATE OF COMPLIANCE
We hereby certify that mercury or any of its compounds are not used in the processing and distribution of our products. The products we distribute are not hazardous in their received state. For MSDS sheets go to www.copperandbrass.com/msds or call 248-233-5682. We hereby certify that the material above complies with the following specifications:

ROHS COMPLIANT

TAG NO	QUANTITY	UOM	VENDOR	VEND PO	HEAT/LOT	PCS	TAG NO	QUANTITY	UOM	VENDOR	VEND PO	HEAT/LOT	PCS
J03190 11	3.00	PC	ALCOA M	0CF9934	#9249		D72291 11	3.00	PC	ALCOA M	0C96029	9096	
G62814 02	2.00	PC	ALCOA M	0CC7051	9182		H60667 20	3.00	PC	ALCOA M	0CE6083	9217	
F69530 15	2.00	PC	ALCOA M	0CB9428	9148		N08971 14	2.00	PC	ALCOA M	0CJ975[illegible]	[illegible]	

P.P.d
Del

Job# 5681
PART# L143-110801
&
L143-110901

W 6/2

RECEIVED
JUN 01 2006
METALEX MFG.
BY S.W

STEVEN J. FARACI · General Manager: ELKHART PRINTED 05/30/06 03:32 PM CONTROL NO 00050

P.O# 64760-BL

COPPER AND BRASS SALES IS A DIVISION OF THYSSENKRUPP MATERIALS, INC.

PACKING LIST

CUSTOMER	SHIP DATE	GROSS WEIGHT	QUOTE	6 OF 6
55230	05/31/06 SHP	2421	05-1226405-	
BILL TO:	WORK ORDER		ORDER DATE	
METALEX MFG INC	**		05/30/06 ORD	

DELIVERY DATE	SHIP BRANCH	SELL BRANCH	WORK ORDER
06/01/06 DEL	31-ELK	05-DAY	VM2798

SHIP TO

METALEX MFG INC 01
5750 CORNELL
CINCINNATI OH 45242

58144 CHARLOTTE AVE, ELKHART IN 46517

Copper and Brass Sales
A ThyssenKrupp Materials NA company
ThyssenKrupp

CUSTOMER P O NUMBER	TERRITORY	ENTRY ID
64760 - BL- 5681	03	05JWZ

CUSTOMER SIGNATURE: DATE

BUYER	INSIDE SALES
~~BRIAN LAWSON, P.A.~~	JEFF W. ZELLERS
BUYER TELEPHONE	INSIDE SALES TELEPHONE
(513)489-0539	(937)415-2620 52631

	QUANTITY ORDERED	SHIPPED
INVENTORY	2391.31 LB	2381.00
BILLING	45.00 PC	45.00
WAREHOUSE		45.00 PC

SHIP VIA	SHIPPING STATUS		
INTERNAL	COMPLETE	PARTIAL	CANCEL
POOL-TO 05-DAY	X		

TO CUSTOMER	FOB	PACKED WITH OTHER GOODS
OUR TRUCK/OUR DEL-D1	ORIG	
BILL OF LADING	FREIGHT STATUS	FINISHED GOODS LOCATION
	PPD	

PART DESCRIPTION 088407-2

CAST ALUMINUM TOOLING PLATE, 2.500 (+-.005)
SAW 5.25" (+.064,-0) X 39.812", (+.064,-0)
actual certs must be signed

Item 7

METALEX MTX
QA. DEPT OC 18
ACCEPTED
DATE 6/22/06
BY KKB

SPECIAL INSTRUCTIONS

FULL	SCRAP	FILLED BY	PACKED BY	Q/A AUDIT
		HS		

CUSTOMER RECEIVING HOURS	MAX SKID WEIGHT	LOADING INSTRUCTIONS	MAXIMUM BUNDLE WEIGHT
6:00 am - 12:00 pm	15000	CRANE, FORK	30000

BOXES	BARS	CASES	CUSHP	PKGS	SKIDS	BDLS	TUBES	CTNS	FLAT	COILS
					1					

INSPECTION RECORD

CERTIFICATE OF COMPLIANCE
We hereby certify that mercury or any of its compounds are not used in the processing and distribution of our products. The products we distribute are not hazardous in their received state. For MSDS sheets go to www.copperandbrass.com/msds or call 248-233-5682. We hereby certify that the material above complies with the following specifications:

P.P.D

ROHS COMPLIANT

TAG NO	QUANTITY	UOM	VENDOR	VEND PO	HEAT/LOT	PCS
N43922 01	33.00	PC	ALCOA M	0CK5444	9283	
N55627 02	6.00	PC	ALCOA M	0CK7268	9283	
N55627 01	6.00	PC	ALCOA M	0CK7268	9283	

Job# 5681
Part# L143-111001
&
L143-111101
P.O# 64760-BL

Del
RECEIVED
JUN 01 2006
METALEX MFG.
BY S.L

STEVEN J. FARACI - General Manager: ELKHART PRINTED 05/30/06 03:32 PM CONTROL NO 00052

COPPER AND BRASS SALES IS A DIVISION OF THYSSENKRUPP MATERIALS, INC.

CUSTOMER	SHIP DATE	GROSS WEIGHT	QUOTE		PACKING LIST
55230	05/31/06 SHP	164	05-1226405-	5 OF 6	
BILL TO:	WORK ORDER		ORDER DATE		
METALEX MFG INC	**		05/30/06 ORD		

DELIVERY DATE	SHIP BRANCH	SELL BRANCH	WORK ORDER
06/01/06 DEL	31-ELK	05-DAY	VM2797

SHIP TO

METALEX MFG INC 01
5750 CORNELL
CINCINNATI OH 45242

58144 CHARLOTTE AVE, ELKHART IN 46517

Copper and Brass Sales
A ThyssenKrupp Materials NA company
ThyssenKrupp

CUSTOMER P.O. NUMBER	TERRITORY	ENTRY ID
64760 - BL- 5681	03	05JWZ

CUSTOMER SIGNATURE: DATE:

BUYER	INSIDE SALES
BRIAN LAWSON, P.A.	JEFF W. ZELLERS

BUYER TELEPHONE	INSIDE SALES TELEPHONE
(513)489-0539	(937)415-2620 52631

QUANTITY	ORDERED	SHIPPED
INVENTORY	154.42 LB	154.00
BILLING	15.00 PC	15.00
WAREHOUSE		15.00 PC

SHIP VIA / SHIPPING STATUS

INTERNAL	COMPLETE	PARTIAL	CANCEL
POOL-TO 05-DAY	X		

TO CUSTOMER	FOB	PACKED WITH OTHER GOODS
OUR TRUCK/OUR DEL-D1	ORIG	
BILL OF LADING	FREIGHT STATUS: PPD	FINISHED GOODS LOCATION

PART DESCRIPTION 088407-2

CAST ALUMINUM TOOLING PLATE, 2.500 (+-.005)
SAW 5.25" (+.064,-0) X 7.687" (+.064,-0), actual certs must be signed

Item 6

METALEX MTX
QA. DEPT. OC 18
ACCEPTED
DATE 6/22/06
BY KKB

SPECIAL INSTRUCTIONS

FULL	SCRAP	FILLED BY	PACKED BY	Q/A AUDIT
		DW		

CUSTOMER RECEIVING HOURS	MAX SKID WEIGHT	LOADING INSTRUCTIONS	MAXIMUM BUNDLE WEIGHT
6:00 am - 12:00 pm	15000	CRANE, FORK	30000

BOXES	BARS	CASES	CUSHP	PKGS	SKIDS	BDLS	TUBES	CTNS	FLAT	COILS
					1					

INSPECTION RECORD

CERTIFICATE OF COMPLIANCE
We hereby certify that mercury or any of its compounds are not used in the processing and distribution of our products. The products we distribute are not hazardous in their received state. For MSDS sheets go to www.copperandbrass.com/msds or call 248-233-5682. We hereby certify that the material above complies with the following specifications:

PPD
DCL

ROHS COMPLIANT

TAG NO	QUANTITY	UOM	VENDOR	VEND PO	HEAT/LOT	PCS	TAG NO	QUANTITY	UOM	VENDOR	VEND PO	HEAT/LOT	PCS
D60958 14	2.00	PC	ALCOA M	0C96028	9096		C54216 07	1.00	PC	PECHINE	0C38989	145800	
C54216 08	1.00	PC	PECHINE	0C38989	145800		D05456 13	4.00	PC	PECHINE	0C84984	148201	
D08802 07	4.00	PC	ALCOA M	0C88592	9061		E13235 12	3.00	PC	ALCOA			

Job# 5681
PART# L143-111301
&
L143-111201

RECEIVED
JUN 01 2006
METALEX MFG.
BY S.W

STEVEN J. FARACI - General Manager: ELKHART

P.O# 64760-BL

PRINTED 05/30/06 03:32 PM CONTROL NO 00051

COPPER AND BRASS SALES IS A DIVISION OF THYSSENKRUPP MATERIALS, INC.

CUSTOMER	SHIP DATE	GROSS WEIGHT
55230	06/01/06 SHP	35

SOLD TO
METALEX MFG INC

WORK ORDER **

QUOTE	PACKING LIST
05-1226405-	1 OF 6 TEST RESULTS

ORDER DATE	DELIVERY DATE	SHIP BRANCH	SELL BRANCH	WORK ORDER
05/30/06 ORD	06/01/06 DEL	05-DAY	05-DAY	5R2156

SHIP TO
METALEX MFG INC 01
5750 CORNELL
CINCINNATI OH 45242

6700 POE AVENUE, DAYTON OH 45414-2590
Copper and Brass Sales
A ThyssenKrupp Materials NA company
ThyssenKrupp

CUSTOMER P.O. NUMBER	TERRITORY	ENTRY ID
64760 - BL- 5681	03	05JWZ

CUSTOMER SIGNATURE: DATE:

BUYER	INSIDE SALES
BRIAN LAWSON, P.A.	JEFF W. ZELLERS

BUYER TELEPHONE	INSIDE SALES TELEPHONE
(513)489-0539	(937)415-2620 52631

QUANTITY	ORDERED	SHIPPED
INVENTORY	35.28 LB	35.00
BILLING	1.00 PC	1.00
WAREHOUSE		1.00 PC

SHIP VIA
OUR TRUCK/OUR DEL-01

SHIPPING STATUS

INTERNAL	COMPLETE	PARTIAL	CANCEL
	X		

FOB: ORIG
FREIGHT STATUS: PPD
PACKED WITH OTHER GOODS:
BILL OF LADING:
FINISHED GOODS LOCATION: WARN LABEL:1001

PART DESCRIPTION 020354-7

RECT 6061-T6511 EXTR ALUMINUM BAR, 1-1/4 (+/-.012) X 2 (+/.024) X 12 FT ML
NO PROCESSING - 144" ML, Test Results Attn to: QA Department.
actual certs must be signed

Item 2

METALEX MFG. QA. DEPT. ACCEPTED DATE 6/22/06 BY KKB

SPECIAL INSTRUCTIONS

PULL	SCRAP	FILLED BY	PACKED BY	QA AUDIT
		KEN		

CUSTOMER RECEIVING HOURS	MAX SKID WEIGHT	LOADING INSTRUCTIONS	MAXIMUM BUNDLE WEIGHT
6:00 am - 12:00 pm	15000	CRANE, FORK	30000

PIECES	BARS	CASES	CUSHIP	PKGS	SKIDS	BDLS	TUBES	CTNS	FLAT	COILS
	1									
INSPECTION RECORD										

TEST RESULTS - - - - -

CERTIFICATE OF COMPLIANCE
We hereby certify that mercury or any of its compounds are not used in the processing and distribution of our products. The products we distribute are not hazardous in their received state. For MSDS sheets go to www.copperandbrass.com/msds or call 248-233-5682. We hereby certify that the material above complies with the following specifications:

ASTM-B221 AMS-QQ-A-200/8

ROHS COMPLIANT

P.A.D

TAG NO	QUANTITY	UOM	VENDOR	VEND PO	HEAT/LOT	PCS	TAG NO	QUANTITY	UOM	VENDOR	VEND PO	HEAT/LOT	PCS
DR4745 06	1.00	PC	KAISER	0CJB649	686 181	1							

~~Job # 568P~~
~~PART # L143-110109~~
L143-110110
P.O # 64760-

Del
W 6/2
RECEIVED
JUN 01 2006
METALEX MFG.
BY S-W

SCOTT T. MARLIN - General Manager: DAYTON PRINTED 05/30/06 09:27 PM CONTROL NO 00047

COPPER AND BRASS SALES IS A DIVISION OF THYSSENKRUPP MATERIALS, INC.

P/N L143-110109
-110110

KAISER ALUMINUM
FABRICATED PRODUCTS

Best in Class

CERTIFIED TEST REPORT

http://www.KaiserAluminum.com

KAISER ALUMINUM
FABRICATED PRODUCTS
9700 SOUTH HARLEM AVE
BRIDGEVIEW, IL 60455

CUSTOMER PO NUMBER:	CUSTOMER PART NUMBER:	PRODUCT DESCRIPTION:
CJ8649	020354-7/STK	1.250 X 2.000 RECT BAR

KAISER ORDER NUMBER:	LINE ITEM:	SHIP DATE:	KAISER LOT NUMBER:	ALLOY:	TEMPER:
983437	001	05/01/2006	686 181	6061	T6511
WEIGHT SHIPPED:	**QUANTITY:**	**B/L NUMBER:**	**DIAM/DAF/THKNS:**	**WIDTH:**	**LENGTH:**
2116.000 LB	60.000 PCS	932309			12.000 FT

SHIP TO:	SOLD TO:
COPPER & BRASS SALES 6700 POE AVENUE DAYTON OH 45414 USA	COPPER & BRASS SALES PO BOX 5116 SOUTHFIELD, MI 48086-5116 USA

Actual Physical Properties

REFERENCE	DASH#	SAMPLE#	UTS(KSI)	YTS(KSI)	%Elong in 2	HARDNESS	CONDUCT.	BEND
XTR045096	0001	0001	55.3	51.7	12.6		N/A	N/A
XTR045096	0001	0002	54.1	50.6	12.6		N/A	N/A
XTR045096	0001	0003	55.2	51.6	12.6		N/A	N/A

Chemical Composition (wt%), Aluminum Remainder

LIMITS	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Bi	Zr	Ea	Tot
Maximum	0.8	0.7	0.40	0.15	1.2	0.35	0.25	0.15	NA	NA	NA	0.05	0.15
Minimum	0.40		0.15		0.8	0.04			NA	NA	NA		

APPLICABLE REQUIREMENTS:

ASTM-B221-02-STENCILED ASME-SB221 1998 SECT II AMS-QQ-A-200/8 UNS#96061

Miscellaneous Notes

MANUFACTURED IN USA MELTED IN USA

METALEX MTX QC 18
QA. DEPT.
ACCEPTED
DATE 6/22/06
BY KKB

CERTIFICATION

Kaiser Aluminum & Chemical Corp ('Kaiser') hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the descripti on set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms & conditions of sale. Test reports are on file, subject to examination.

Frank E. Watson, Quality Assurance Manager

Plant Serial: 00139734

Kaiser Order Number: 983437

Page 1 of 1

Line Item: 001

P/N 443-110109
-110110

CUSTOMER	SHIP DATE	GROSS WEIGHT	QUOTE	PACKING LIST
55230	05/31/06 SHP	3	05-1226405-	2 OF 6 TEST RESULTS

BILL TO: METALEX MFG INC

WORK ORDER: **

ORDER DATE: 05/30/06 ORD

DELIVERY DATE: 06/01/06 DEL | SHIP BRANCH: 02-GRR | SELL BRANCH: 05-DAY | WORK ORDER: 2P1686

SHIP TO:
METALEX MFG INC
5750 CORNELL
CINCINNATI OH 45242

01

1310 SCRIBNER NW, GRAND RAPIDS MI 49504-3287

Copper and Brass Sales
A Hyster Kepp Materials 4A company

CUSTOMER P.O. NUMBER: 64760 - BL- 5681 | TERRITORY: 03 | ENTRY ID: 05JWZ

BUYER: BRIAN LAWSON, P.A. | INSIDE SALES: JEFF W. ZELLERS

BUYER TELEPHONE: (513) 489-0539 | INSIDE SALES TELEPHONE: (937) 415-2620 52631

CUSTOMER SIGNATURE: | DATE:

QUANTITY	ORDERED	SHIPPED
INVENTORY	0.72 LB	1.00
BILLING	1.00 PC	1.00
WAREHOUSE		1.00 PC

SHIP VIA: INTERNAL POOL-TO 05-DAY

SHIPPING STATUS: COMPLETE X | PARTIAL | CANCEL

TO CUSTOMER: CUR TRUCK/CUR DEL-CHUC

FOB: ORIG

BILL OF LADING:

FREIGHT STATUS: PPD

PACKED WITH OTHER GOODS:

FINISHED GOODS LOCATION: WARN LABEL:1012

PART DESCRIPTION: 209591-7

RD SM DIA HH BRASS ROD C36000, 1/4 (+-.0015)
NO PROCESSING - 48" ML, Test Results Attn to: QA Department.
actual certs must be signed

QA DEPT. ACCEPTED DATE 8/11/06 BY KKB
MTX 06 18
Job#5681

SPECIAL INSTRUCTIONS:

FILL	SCRAP	FILLED BY	PACKED BY	QA AUDIT
		WEB		

CUSTOMER RECEIVING HOURS	MAX SKID WEIGHT	LOADING INSTRUCTIONS	MAXIMUM BUNDLE WEIGHT
6:00 am - 12:00 pm	15000	CRANE, FORK	30000

BUTTS	BARS	CASES	CLSHP	PKGS	SKIDS	BDLS	TUBES	CTNS	FLAT	COILS
							1			

INSPECTION RECORD

TEST RESULTS -----

CERTIFICATE OF COMPLIANCE
We hereby certify that mercury or any of its compounds are not used in the processing and distribution of our products. The products we distribute are not hazardous in their received state. For MSDS sheets go to www.copperandbrass.com/msds or call 248-223-5682. We hereby certify that the material above complies with the following specifications:
ASTM-B16
AC UAE CHEMICAL NOM PHYSICAL ROHS EXEMPT

TAG NO	QUANTITY	UOM	VENDOR	VEND PO	HEAT/LOT	PCS	TAG NO	QUANTITY	UOM	VENDOR	VEND PO	HEAT/LOT	PCS
[illegible]	1.00	LB	COMMONW	OCE3763	437811								

P/N 443-110113

SM [illegible] T. CARACCI - General Manager: GRAND RAPIDS PRINTED 05/30/06 09:05 AM CONTROL NO 00382

COPPER AND BRASS SALES IS A DIVISION OF THYSSENKRUPP MATERIALS, INC.

« COPPER AND BRASS MILLS SEVOJNO »

SEVOJNO
SERBIA & MONTENEGRO

CERTIFICATE

No 766

DATE _____

CUSTOMER: METALCO CORP, New York

FORM: Brass C36o rods Quantity 4o.o34 lbs.

STANDARD: ASTM-B Material _____ Temper _____

CUSTOMER'S REF: 1o7-5 Export ref. BY 9855-4

Sample No	CHEMICAL COMPOSITION (%) Cu	Pb	Fe	Zn		MECHANICAL, METALLOGRAPHICAL AND TECHNOLOGICAL PROPERTIES Tensile strength Rm PSI	Yield strength Rp0,2 PSI	Elong after A5 %	Hardness scale HB	Average grain size (mm)	Hg2 (NO3)2
	C360 Ø0,1875"x12' Ø4,762x3658mm H02 CE3773										
436311	60,00	2,80	0,23	Rest.		72000	59735	23,2			
/2						73000	60000	22,0			
	C360 Ø1/4"x12' Ø6,35x3658mm H02 CE3763										
437811	62.70	2,55	0,20	Rest.		62000	52000	26,7			
/2						61158	49280	25,3			
/3						62000	49000	23,3			
/4						64000	50000	21,3			
	C360 Ø5/16"x12' Ø7,937x3658mm H02 CE3764										
43861	62,00	2,95	0,25	Rest		64000	55468	17,6			
/2						58313	52000	18,9			

Job#5681

METALCO QA. DEPT. ACCEPTED DATE 8/11/06 BY KKB

P/N L143-110113
P.O.# 64760
Item# 2

O:629

CONTROL'S DEPARTMENT

FORM 10.19

7

METALEX MANUFACTURING INC
5750 CORNELL RD
CINCINNATI OH 45242

(CALLER) BRIAN LAWSON

YOUR PURCHASE ORDER NUMBER
64792-BL-5681
Today's Date: 6/02/06

MCMASTER-CARR
200 AURORA INDUSTRIAL PKWY
AURORA OH 44202
IF THERE ARE ANY QUESTIONS ABOUT THIS SHIPMENT CONTACT OUR SALES DEPARTMENT
(330)995-5500

MCM NUMBER
8294515-02

Warehouse Location	McMaster Carr Part Number	Fill Quantity	Item Description	Your Line	Your Order	This Shipment
1-295-01 05-82	91290 A330	3 PK	METRIC CLASS 12.9 ALLOY SOCKET HEAD CAP SCREW M6 THREAD,25 MM LENGTH,1 MM PITCH PKG= 100 EA/PK 5	7	3 PK	3
		******	Information about the rest of your order		*****	
	92185 A151		316 STAINLESS STEEL SOCKET HEAD CAP SCREW Shipped 80 PK today from this McMaster-Carr warehouse Shipped 173 PK today from another McMaster-Carr warehouse	8	253 PK	
	92146 A545		18-8 STAINLESS STEEL SPRING LOCK WASHER Shipped 32 PK today from this McMaster-Carr warehouse	9	32 PK	
	92196 A197		18-8 STAINLESS STEEL SOCKET HEAD CAP SCREW Shipped 32 PK today from this McMaster-Carr warehouse	10	32 PK	
	98437 A104		18-8 SS SPRING WASHER FOR SCKT-HEAD CAP SCREW Shipped 64 PK today from this McMaster-Carr warehouse	11	64 PK	
	98017 A690		18-8 STAINLESS STEEL AN 960 FLAT WASHER Shipped 9 PK today from this McMaster-Carr warehouse CERTIFICATE OF COMPLIANCE -This is to certify the above item(s) on your purchase order was supplied in accordance with the description and as illustrated in the catalog. Compliance Manager- Alberto Valedon	12	9 PK	

L143-110111

RECEIVED
JUN 05 2006
METALEX MFG.
BY CD

METALEX
QA. DEPT.
ACCEPTED
DATE 6/13/06
BY KKB

WEIGHT 70

7 8294515-02 1
METALEX MANUFACTURING INC

MCMASTER-CARR
WAREHOUSE INSTRUCTIONS
LNS

PURCHASE ORDER
64792-BL-5681

CYCLE
020

PRT523 6/02/06 09:08 159 00004 CCP

12 | METALEX MANUFACTURING INC
5750 CORNELL RD
CINCINNATI OH 45242

(CALLER) BRIAN LAWSON

YOUR PURCHASE ORDER NUMBER
64792-BL-5681
Today's Date: 6/02/06

MCMASTER-CARR
200 AURORA INDUSTRIAL PKWY
AURORA OH 44202
IF THERE ARE ANY QUESTIONS ABOUT THIS SHIPMENT CONTACT OUR SALES DEPARTMENT
(330)995-5500

MCM NUMBER
8294515-01

Warehouse Location	McMaster Carr Part Number	Fill Quantity	Item Description	Your Line	Your Order	This Shipment
	91292 A156		METRIC 18-8 SS SOCKET HEAD CAP SCREW Shipped 92 PK today from another McMaster-Carr warehouse	6	92 PK	
	91290 A330		METRIC CLASS 12.9 ALLOY SOCKET HEAD CAP SCREW Shipped 3 PK today from another McMaster-Carr warehouse	7	3 PK	
	92146 A545		18-8 STAINLESS STEEL SPRING LOCK WASHER Shipped 32 PK today from another McMaster-Carr warehouse	9	32 PK	
	92196 A197		18-8 STAINLESS STEEL SOCKET HEAD CAP SCREW Shipped 32 PK today from another McMaster-Carr warehouse	10	32 PK	
	98437 A104		18-8 SS SPRING WASHER FOR SCKT-HEAD CAP SCREW Shipped 64 PK today from another McMaster-Carr warehouse	11	64 PK	
	98017 A690		18-8 STAINLESS STEEL AN 960 FLAT WASHER Shipped 9 PK today from another McMaster-Carr warehouse CERTIFICATE OF COMPLIANCE -This is to certify the above item(s) on your purchase order was supplied in accordance with the description and as illustrated in the catalog. Compliance Manager- Alberto Valedon	12	9 PK	

METALEX QA. DEPT. ACCEPTED DATE 6/13/06 BY KKB MTX QC'18

RECEIVED
JUN 05 2006
METALEX MFG.
BY _____

WEIGHT 19

1 8294515-01 3
METALEX MANUFACTURING INC

MCMASTER-CARR
WAREHOUSE INSTRUCTIONS
LNS

PURCHASE ORDER
64792-BL-5681

CYCLE
017

PRTAK
PT001PR

6/02/06 09:15 514 00021

CCP

5 | METALEX MANUFACTURING INC
5750 CORNELL RD
CINCINNATI OH 45242

(CALLER) BRIAN LAWSON

YOUR PURCHASE ORDER NUMBER
64792-BL-5681
Today's Date: 6/02/06

MCMASTER-CARR
200 AURORA INDUSTRIAL PKWY
AURORA OH 44202

IF THERE ARE ANY QUESTIONS ABOUT THIS SHIPMENT CONTACT OUR SALES DEPARTMENT
(330)995-5500

MCM NUMBER
8294515-03

Warehouse Location	McMaster-Carr Part Number	Fill Quantity	Item Description	Your Line	Your Order	This Shipment
		*****	Information about the rest of your order		*****	
	91292 A122		METRIC 18-8 SS SOCKET HEAD CAP SCREW Shipped 1 PK today from this McMaster-Carr warehouse	1	1 PK	
	91292 A135		METRIC 18-8 SS SOCKET HEAD CAP SCREW Shipped 1 PK today from this McMaster-Carr warehouse	2	1 PK	
	91292 A136		METRIC 18-8 SS SOCKET HEAD CAP SCREW Shipped 5 PK today from this McMaster-Carr warehouse	3	5 PK	
	91292 A139		METRIC 18-8 SS SOCKET HEAD CAP SCREW Shipped 2 PK today from this McMaster-Carr warehouse	4	2 PK	
	91292 A147		METRIC 18-8 SS SOCKET HEAD CAP SCREW Shipped 2 PK today from this McMaster-Carr warehouse	5	2 PK	
	91292 A156		METRIC 18-8 SS SOCKET HEAD CAP SCREW Shipped 92 PK today from this McMaster-Carr warehouse	6	92 PK	
	91290 A330		METRIC CLASS 12.9 ALLOY SOCKET HEAD CAP SCREW Shipped 3 PK today from this McMaster-Carr warehouse CERTIFICATE OF COMPLIANCE -This is to certify the above item(s) on your purchase order was supplied in accordance with the description and as illustrated in the catalog. Compliance Manager- Alberto Valedon	7	3 PK	

METALEX QA. DEPT. ACCEPTED DATE 6/13/06 BY KKB

RECEIVED
JUN 05 2006
METALEX MFG.
BY

WEIGHT 32

5 8294515-03 9
METALEX MANUFACTURING INC

MCMASTER-CARR
WAREHOUSE INSTRUCTIONS
LNS

PURCHASE ORDER
64792-BL-5681

CYCLE
020

PRT545

6/02/06 09:08 916 00014

CCP

5 | METALEX MANUFACTURING INC
5750 CORNELL RD
CINCINNATI OH 45242

(CALLER) BRIAN LAWSON

YOUR PURCHASE ORDER NUMBER
64792-BL-5681
Today's Date: 6/02/06

MCMASTER-CARR
200 AURORA INDUSTRIAL PKWY
AURORA OH 44202
IF THERE ARE ANY QUESTIONS ABOUT THIS SHIPMENT CONTACT OUR SALES DEPARTMENT
(330)995-5500

MCM NUMBER
8294515-03

WAREHOUSE INSTRUCTIONS

VERIFIED LARGE QTYS

METALEX
QA. DEPT
ACCEPTED
DATE 6/13/06
BY KKB

916

008973400 6/02/06 09:08 8294515-03 9 LNS
METALEX MANUFACTURING INC
6015732704276

REFER TO:
CCP
LNS

PACKER	Number of CARTONS	FILLER

916 LNS: 5 WEIGHT 1 32

CYCLE
020

MCM NO. 8294515-03 9 06

LEX

PURCHASE ORDER
64792-BL-5681

FROM:
MCMASTER-CARR
200 AURORA INDUSTRIAL PKWY
AURORA OH 44202 USA

SHIP TO:

METALEX MANUFACTURING INC
BLUE ASH INDUSTRIAL PARK
5750 CORNELL RD
CINCINNATI OH
45242-2010

PRT545
00015

CCP

Reid Supply Company
A Division of Reid Entities
2265 Black Creek Road • Muskegon, MI 49444-2684
www.reidsupply.com mail@reidsupply.com
Phone: 800-253-0421
231-777-3951
Fax: 800-438-1145
231-773-4485

UPS G-D

RECEIVED
JUN 0 1 2006
METALEX MFG.
BY

* 3 5 8 6 6 0 0 *

P.O. # : 64754-BL-5681

Shipper No 03586600-1

Bill To: METALEX MFG INC
5750 CORNELL RD
CINCINNATI, OH 45242-2010

Phone

Ship To: METALEX MFG INC
5750 CORNELL RD
CINCINNATI, OH 45242-2083

Attn:

Customer No	Your P.O. No	Sched Date	Ship Via	Ship Date	Shipper No
29204	64754-BL-5681	05/25/06	U.P.S.	05/30/06	03586600-1

Line	Order Qty	Item	Description	Qty Shipped	Back Order
1	668	KLI-66353	INSERT M8X1.25 X M12X1.25 THINWALL - SS	668	0
	4718			HS Tariff Code:	820510
				Country of Origin:	United States

Total Number of items: 1 Estimated Weight 7 lb 1.61 oz 3.224 kg

Opr: JMH Branch: 11 SLSM: 801

Picker:

METALEX
QA. DEPT.
ACCEPTED
DATE 6/6/06
BY KKB

All sales of products by Reid Supply Company are made on the terms contained in Reid Supply Company's standard Terms of Sale, which are incorporated by reference. If buyer has not otherwise agreed to those terms, then buyer's Acceptance of Delivery of, or Payment For, the goods will constitute buyer's agreement to the standard Terms of Sale. Reid Supply Company's standard Terms of Sale are available at www.reidsupply.com or by calling 800-253-0421 and requesting a copy.

KLI-66353

X1.25 X M12X1.25
SS

Qty 668

METALEX MFG INC

Bag Size SB
Qty/Bag 10

3586600 - 1 - 1

PACK REID

RLM 05-30-200 SHIP

Reid Supply Company and it's divisions being ISO-9002 compliant does certify that according to our records the above material purchased was supplied in accordance with the description as illustrated in our catalog.

ALL ITEMS MANUFACTURED IN THE U.S.A UNLESS OTHERWISE NOTED.
THANK YOU VERY MUCH FOR YOUR ORDER

Cathy Reid, Document Control Supervisor

Packing List

Packing List

Reid Supply Company®
A Division of Reid Entities
2265 Black Creek Road • Muskegon, MI 49444-2684
www.reidsupply.com mail@reidsupply.com

Phone: 800-253-0421
231-777-3951
Fax: 800-438-1145
231-773-4485

METALEX MFG. INC.
QA. DEPT.
ACCEPTED
DATE 6/6/06
BY KKB

3586600

P.O. # : 64754-BL-5681

Shipper No 03586600-0

Bill To: METALEX MFG INC
5750 CORNELL RD
CINCINNATI, OH 45242-2010

Ship To: METALEX MFG INC
5750 CORNELL RD
CINCINNATI, OH 45242-2083

Phone Attn:

Customer No	Your P.O. No	Sched Date	Ship Via	Ship Date	Shipper No
22204	64754-BL-5681	05/25/06	U.P.S.	05/25/06	03586600-0

Line	Order Qty	Item	Description	Qty Shipped	Back Order
1	950	KLI-66353	INSERT M8X1.25 X M12X1.25 THINWALL - SS	282	668
	4718			HS Tariff Code:	820510
				Country of Origin:	United States

Total Number of items: 1 UPS GND Estimated Weight 2 lb 15.96 oz 1.361 kg

Opr: JMH Branch: 11 SLSM: 801

Picker: PCH

RECEIVED
MAY 30 2006
METALEX MFG.
BY RB

5/31

All sales of products by Reid Supply Company are made on the terms contained in Reid Supply Company's standard Terms of Sale, which are incorporated by reference. If buyer has not otherwise agreed to those terms, then buyer's Acceptance of Delivery of, or Payment For, the goods will constitute buyer's agreement to the standard Terms of Sale. Reid Supply Company's standard Terms of Sale are available at www.reidsupply.com or by calling 800-253-0421 and requesting a copy.

CERTIFICATION OF COMPLIANCE

Reid Supply Company and it's divisions being ISO-9002 compliant does certify that according to our records the above material purchased was supplied in accordance with the description as illustrated in our catalog.

ALL ITEMS MANUFACTURED IN THE U.S.A UNLESS OTHERWISE NOTED.
THANK YOU VERY MUCH FOR YOUR ORDER

Cathy Reid, Document Control Supervisor

Packing List **Packing List**

Reid Supply Company®
A Division of Reid Entities
2265 Black Creek Road • Muskegon, MI 49444-2684
www.reidsupply.com mail@reidsupply.com

Phone: 800-253-0421
231-777-3951
Fax: 800-438-1145
231-773-4485

* 3 6 0 5 2 3 8 *
P.O. # : 65182-RB
Shipper No 03605238-0

job#5681

METALEX
QA. DEPT
ACCEPTED
DATE 7/13/06
BY KKB
MTX
OC 18

Bill To: METALEX MFG INC
5750 CORNELL RD
CINCINNATI, OH 45242-2083

Phone

Ship To: METALEX MFG INC
5750 CORNELL RD
CINCINNATI, OH 45242-2083

Attn: JOB #5681

Customer No	Your P.O. No	Sched Date	Ship Via	Ship Date	Shipper No
29204	65182-RB	07/07/06	U.P.S.	07/07/06	03605238-0

Line	Order Qty	Item	Description	Qty Shipped	Back Order
1	60	KLI-66353	INSERT M8X1.25 X M12X1.25 THINWALL - SS	60	0
		4718		HS Tariff Code:	820510
				Country of Origin:	United States

Total Number of items: 1

Estimated Weight 0 lb 10.20 oz 0.290 kg

Opr: MAC Branch: 11 SLSM: 801

Picker:

All sales of products by Reid Supply Company are made on the terms contained in Reid Supply Company's standard Terms of Sale, which are incorporated by reference. If buyer has not otherwise agreed to those terms, then buyer's Acceptance of Delivery of, or Payment For, the goods will constitute buyer's agreement to the standard Terms of Sale. Reid Supply Company's standard Terms of Sale are available at www.reidsupply.com or by calling 800-253-0421 and requesting a copy.

UPSGND

RECEIVED
JUL 11 2006
METALEX MFG.
BY CD

CERTIFICATION OF COMPLIANCE
Reid Supply Company and it's divisions being ISO-9002 compliant does certify that according to our records the above material purchased was supplied in accordance with the description as illustrated in our catalog.

ALL ITEMS MANUFACTURED IN THE U.S.A UNLESS OTHERWISE NOTED.
THANK YOU VERY MUCH FOR YOUR ORDER

Packing List

Cathy Reid, Document Control Supervisor

Packing List

Job#15681/5725

METALEX QA. DEPT. ACCEPTED DATE 8/7/06 BY RKB

CRAFTS TECHNOLOGY
Precision Fabrication of Ultra-Hard Materials

Crafts Technology
91 Joey Drive
Elk Grove Village, IL 60007
UPS ACCT# 4E3-E38

Ph: 847-758-3100
Fax: 847-758-0162

Pack List

Number: 8358 Date: 20-Jul-06

To

Metalex Manufacturing, Inc.
5750 Cornell Road
Cincinnati, OH 45242
USA

Ph: 513-489-0507 Fax: 513-489-1020

Ship To

Metalex Manufacturing, Inc.
5750 Cornell Road
Cincinnati, OH 45242
USA

Ph: 513-489-0507 Fax: 513-489-1020

Terms	Ship Via
Net 21 days	UPS RED

Quantity	Description
297 each	Part: L143-110702 Rev: 01 TAPER SHIM Job: 2717 PO: 64975-BL Line:

Thank you for your order

This is to certify that the materials, parts and/or processes furnished against the above referenced purchase order were manufactured in accordance with the customer drawing and revision level shown

Crafts Technology/Quality Control Department

Crafts Technology, Inc.

FINAL INSPECTION REPORT

DATE 7-20-06

INSPECTOR John A

JOB NUMBER 2717

PART NUMBER L143-110702

DESCRIPTION TAPER SHIM

CUSTOMER METALEX

DATE	SEQ	OPN		INSP CLK#	DRAWING DIM./TOLERANCE	ACTUAL MEASUREMENT NO 1	NO 2	NO 3	NO 4
					.394	.397	.3982		
					5.118 ±.007	5.124	5.125		
					RAD. .079 ±.008 2PL	.075	.082		
					.500 ±.008	.5032	.5045		
					.008	.009	.010		
					.004	.0045	.0061		
					.075 ±.008	.0752	.0756		
					.087 ±.008	.0872	.0876		
					⏥ .003	.0006	.0025		

OK TO SHIP JS 7-20-06

ANCHOR METAL FINISHING, INC.

BLACK OXIDE ON STEEL

"Specialists in the Field"

9355 ERNICE • SCHILLER PARK, ILLINOIS 60176 • PHONE: (708) 678-4304 • FAX: (708) 678-7331

Crafts technology

METALEX QUALITY
QA. DEPT.
ACCEPTED
DATE 8/7/06
BY KKB

Gentlemen:

This is to certify that parts listed below have been black oxided in accordance with AMS 2485J (Aerospace) specifications.

Very truly yours,

Alex

ANCHOR METAL FINISHING, INC.

Shipping Ticket No. 264262

Your P.O. NO. 7473

Date 07-31-06

Part NO. L143-110702

Quantity 300 pcs

PO 64975-BC-5681

Stripco Inc.

• STEEL SLITTING AND EDGE CONDITIONING
• PRECISION COLD ROLLING

5555 Magnolia Drive • Williamsville, NY 14545
Phone: (574) 269-7800 • Fax: (574) 259-7813

PACKING LIST

PACKING SLIP NUMBER: 187483

SOLD
D**

~~BILL TO:~~

SOLD TO:
Alro Steel Jackson
3100 East High Street
P.O. Box 927
Jackson, MI 49203

SHIP TO:
Alro Steel Potterville
5059 Alro Park Drive
Potterville, MI 48876

DUE DATE 3/24/05 TT

S OF ORDER	DATE SHIPPED	CUSTOMER ORDER NO.	SHIPPED VIA	DEPT.	TERMS
3/08/05	3/30/05	PO PO 5027044	HILLTOP FARMS	90	1/2-10 NET 30

QTY. ORD.	JOB NUMBER	DESCRIPTION	QTY. SHIPPED	QTY. B.O.
BILL-OF-LADING#:		TRK DRIVER#: HILLTOP	PREPAID/S	
2,000	6355301	1/8 X .437" X 144.00" CR 1018		
	OSS WGT	2,199		
	TAG#	337369	2,199	
	LOCATION	CKA		
	PCS/COIL	990		CNT TOTAL 990

CERTIFIED RECORD OF METALLURGICAL PROPERTIES

STR1#	Carb	Mang	Phos	Sulf	Sil	Alum	Chrm	Moly	Heat#
147220	.150	.61	.006	.007	.030	.029	.08	.027	H3689
Yld=	66,899 Ten=		77,427 Elg%=22.46 Dis= 0						

RECEIVED MAR 30 2005 BY

ALRO STEEL/METAL
RT04483400

REJECTIONS WILL BE HONORED ONLY IF RETURNED IN ORIGINAL FORM SOLD.

A Service Charge of 1½% per month (18% per year) will be added to all invoices that are 30 days past the Date of Invoice. Title to merchandise does not pass until goods are fully paid for.
Claims for errors, deficiencies, or imperfections must be made within 10 days after receipt of goods. The Seller's responsibility for material in transit ceases when it passes into the hands of the transportation company. "We hereby certify that we have complied with all requirements of the Fair Labor Standards Act of 1938, as amended."

CHECK BOX IF COLLECT ☐
Load Approved: CAT
Load must be secured and weather protected
Driver:

RECEIVED BY: X

DATE RECEIVED: 3-30-05

NSF 10-4.1.1 Rev7

CUSTOMER COPY

Job#5681/5725

METALEX
QA. DEPT.
ACCEPTED
DATE 8/7/06
BY KKB

CRAFTS TECHNOLOGY
Precision Fabrication of Ultra-Hard Materials

Crafts Technology
91 Joey Drive
Elk Grove Village, IL 60007
UPS ACCT# 4E3-E38

Ph: 847-758-3100
Fax: 847-758-0162

Pack List

Number: 8377 Date: 24-Jul-06

To

Metalex Manufacturing, Inc.
5750 Cornell Road
Cincinnati, OH 45242
USA

Ph: 513-489-0507 Fax: 513-489-1020

Ship To

Metalex Manufacturing, Inc.
5750 Cornell Road
Cincinnati, OH 45242
USA

Ph: 513-489-0507 Fax: 513-489-1020

Terms	Ship Via
Net 21 days	UPS

Quantity	Description
314 each	Part: L143-110702 Rev: 01 TAPER SHIM Job: 2717 PO: 64975-BL Line:

Thank you for your order

This is to certify that the materials, parts and/or processes furnished against the above referenced purchase order were manufactured in accordance with the customer drawing and revision level shown

Crafts Technology/Quality Control Department

Crafts Technology, Inc.

FINAL INSPECTION REPORT

DATE 7-20-06

INSPECTOR [signature]

JOB NUMBER 2717

PART NUMBER L143-110702

DESCRIPTION TAPER SHIM

CUSTOMER METALEX

DATE	SEQ	OPN		INSP CLK#	DRAWING DIM./TOLERANCE	ACTUAL MEASUREMENT NO 1	NO 2	NO 3	NO 4
					.394	.397 /	.3982		
					5.118 ±.007	5.124 /	5.125		
					RAD. .079 ±.008 2PL	.075 /	.082		
					.500 ±.008	.5032 /	.5045		
					.008	.009 /	.010		
					.004	.0045	.0061		
					.075 ±.0008	.0752 /	.0756		
					.087 ±.0008	.0872 /	.0876		
					⊏ .003	.0006 /	.0025		

OK to SHIP DS 7-20-06

ANCHOR METAL FINISHING, INC.

BLACK OXIDE ON STEEL

"Specialists in the Field"

9355 BERNICE • SCHILLER PARK, ILLINOIS 60176 • PHONE: (708) 678-4304 • FAX: (708) 678-7331

Crafts Technology

METALEX QA. DEPT. ACCEPTED DATE 8/7/06 BY KKB MTX OC 18

Gentlemen:

This is to certify that parts listed below have been black-oxided in accordance with AMS 2485J (Aerospace) specifications.

Very truly yours,

Alex

ANCHOR METAL FINISHING, INC.

Shipping Ticket No. 264279

Your P.O. NO. 7480

Date 07-31-06

Part NO. L143-110702

Quantity 314 pcs

PO 64975 - BC - 5681

Stripco Inc.

- STEEL SLITTING AND EDGE CONDITIONING
- PRECISION COLD ROLLING

5555 Magnolia Drive • Milwaukee, IN 46545
Phone: (574) 258-7800 • Fax: (574) 258-7813

PACKING LIST

PACKING SLIP NUMBER
GLED D** 187483

DUE DATE 3/24/05 TT

LD TO:
Alro Steel Jackson
3100 East High Street
P.O. Box 927
Jackson, MI 49203

SHIP TO:
Alro Steel Potterville
5859 Alro Park Drive
Potterville, MI 48876

E OF ORDER	DATE SHIPPED	CUSTOMER ORDER NO.	SHIPPED VIA	DEPT.	TERMS
3/08/05	3/30/05	PV PV 5077044	HILLTOP FARMS	90	1/2-10 NET 30

QTY. ORD.	JOB NUMBER	DESCRIPTION	QTY. SHIPPED	QTY. B.O.
		BILL-OF-LADING=> TRK DRIVER=> HILLTOP	PREPAID/S	
2,000	6355301	1/8 X .437" X 144.00" CR 1018		
	OSS WGT	2,199		
	TAG#	337369	2,199	
	LOCATION	DKA		
	PCS/COIL	990		CNT TOTAL 990

CERTIFIED RECORD OF METALLURGICAL PROPERTIES

STRID#	Carb	Mang	Phos	Sulf	Sil	Alum	Chrm	Moly	Heat#
147220	.150	.61	.006	.007	.030	.029	.08	.027	H3689
Yld=	66,899	Ten=	77,427	ElgX=22.45	Bls=	0			

RECEIVED MAR 30 2005 By

ALRO STEEL/METAL RT04483400

REJECTIONS WILL BE HONORED ONLY IF RETURNED IN ORIGINAL FORM SOLD.

A Service Charge of 1½% per month (18% per year) will be added to all invoices that are 30 days past the Date of Invoice. Title to merchandise does not pass until goods are fully paid for.
Claims for errors, deficiencies, or imperfections must be made within 10 days after receipt of goods. The Seller's responsibility for material in transit ceases when it passes into the hands of the transportation company. "We hereby certify that we have complied with all requirements of the Fair Labor Standards Act of 1938, as amended."

CHECK BOX IF COLLECT ☐
Load Approved: CPT
Load must be secured and weather protected
Driver: [signature]

RECEIVED BY: X

DATE RECEIVED: 3-30-05

NSF 10-4-13 Rev.

CUSTOMER COPY

15725

METALEX
QA. DEPT. BL 3D
ACCEPTED
DATE 8/7/06
BY KKB

CRAFTS TECHNOLOGY
Precision Fabricator of Ultra-Hard Materials

Crafts Technology
91 Joey Drive
Elk Grove Village, IL 60007
UPS ACCT# 4E3-E38

Ph: 847-758-3100
Fax: 847-758-0162

Pack List

Number: 8434 Date: 03-Aug-06

To

Metalex Manufacturing, Inc.
5750 Cornell Road
Cincinnati, OH 45242
USA

Ph: 513-489-0507 Fax: 513-489-1020

Ship To

Metalex Manufacturing, Inc.
5750 Cornell Road
Cincinnati, OH 45242
USA

Ph: 513-489-0507 Fax: 513-489-1020

Terms	Ship Via
Net 21 days	UPS

Quantity	Description
300 each	Part: L143-110702 Rev: 01 TAPER SHIM Job: 2717 PO: 64975-BL Line:

Thank you for your order

This is to certify that the materials, parts and/or processes furnished against the above referenced purchase order were manufactured in accordance with the customer drawing and revision level shown

Crafts Technology/Quality Control Department

Manufactured in the USA

Crafts Technology, Inc.

FINAL INSPECTION REPORT

DATE 08-02-04

INSPECTOR [signature]

JOB NUMBER 2717

PART NUMBER L143-110702

DESCRIPTION TAPER SHIM

CUSTOMER METALEX

DATE	SEQ	OPN		INSP CLK	DRAWING DIM./TOLERANCE	ACTUAL MEASUREMENT NO 1	NO 2	NO 3	NO 4
					.394	.395	.397	.396	.396
					5.118 ±.007	5.124	5.124	5.125	5.123
					RAD .079 ±.008 2PL	.075	.078	.080	.082
					.500 ±.008	.5025	.5042	.5035	.5035
					.008	.0102	.010	0102	.010
					.004	.0045	.0046	.0046	.0045
					.075 ±.0008	.0758	.0754	.0750	.0752
					.087 ±.0008	.0869	.0872	.0874	.0872
					⏥ .003	.0005	.0015	.002	.0015
						5	6	7	8
					.394	.395	.396	.395	.395
					5.118 ±.007	5.125	5.125	5.124	5.125
					RAD .079 ±.008 2PL	.082	.083	.080	.082
					.500 ±.008	.5035	.5030	.5045	.5024
					.008	.0102	.010	.0103	.010
					.004	.0049	.005	.0042	.0062
					.075 ±.0008	.0749	.0754	.0755	.0746
					.087 ±.0008	.0870	.0871	.0872	.0872
					⏥ .003	.0005	.0023	.001	.0015
						9			
					.394	.396			
					5.118 ±.007	5.124			
					RAD .079 ±.008 2PL	.083			
					.500 ±.008	.5035			
					.008	.010			
					.004	.0045			
					.075 ±.0008	.0751			
					.087 ±.0008	.0869			
					⏥ .003	.0005			

ANCHOR METAL FINISHING, INC.

BLACK OXIDE ON STEEL

"Specialists in the Field"

8355 SERVICE • SCHILLER PARK, ILLINOIS 60176 • PHONE: (708) 678-4304 • FAX: (708) 678-7331

Crafts Technology

METALEX
QA. DEPT.
ACCEPTED
DATE 8/7/06
BY KKB

Gentlemen:

This is to certify that parts listed below have been black-oxided in accordance with AMS 2485J (Aerospace) specifications.

Very truly yours,

Alex

ANCHOR METAL FINISHING, INC.

Shipping Ticket No. 269872

Your P.O. NO. 7525

Date 07-31-06

Part NO. L143-110702

Quantity 300 pcs

PO 64975 - BC - 5681

Stripco Inc.™

· STEEL SLITTING AND EDGE CONDITIONING
· PRECISION COLD ROLLING

50938 Alexander Drive • Wixom, MI 48393
Phone: (874) 668-7800 • Fax: (874) 668-7813

PACKING LIST

PACKING SLIP NUMBER
SOLD 187483

DUE DATE 3/24/05 TT

SOLD TO:
Alro Steel Jackson
3100 East High Street
P.O. Box 927
Jackson, MI 49203

SHIP TO:
Alro Steel Potterville
5059 Alro Park Drive
Potterville, MI 48876

S OF ORDER	DATE SHIPPED	CUSTOMER ORDER NO.	SHIPPED VIA	DEPT.	TERMS
3/08/05	3/30/05	PV PV 5027044	HILLTOP FARMS	90	1/2-10 NET 30

QTY. ORD.	JOB NUMBER	DESCRIPTION	QTY. SHIPPED	QTY. B.O.
BILL-OF-LADING#:		FRT DRIVER#) HILLTOP	PREPAID/S	
2,000	6355301	1/8 X .437" X 144.00" CR 1018		
	GRS WGT	2,199	2,199	
	TAG#	337369		
	LOCATION	CKA		
	PCS/COIL	990		CNT TOTAL 990

CERTIFIED RECORD OF METALLURGICAL PROPERTIES

STRIP#	Carb	Mang	Phos	Sulf	Sil	Alum	Chrm	Moly	Heat#
147250	.150	.61	.006	.007	.030	.029	.08	.027	H0689
Yld=	46,899 Ten=		77,427	Elg%=22.45	Dia=	0			

RECEIVED MAR 30 2005 BY

ALRO STEEL/METAL
RT04483400

REJECTIONS WILL BE HONORED ONLY IF RETURNED IN ORIGINAL FORM SOLD.

A Service Charge of 1½% per month (18% per year) will be added to all invoices that are 30 days past the Date of Invoice. Title to merchandise does not pass until goods are fully paid for.
Claims for errors, deficiencies, or imperfections must be made within 10 days after receipt of goods. The Seller's responsibility for material in transit ceases when it passes into the hands of the transportation company. "We hereby certify that we have complied with all requirements of the Fair Labor Standards Act of 1938, as amended."

CHECK BOX IF COLLECT ☐
Load Approved: CPT
Load must be secured and weather protected
Driver:

RECEIVED BY: X

DATE RECEIVED: 3-30-05

MSF 10-4 1/1 Rev1

CUSTOMER COPY

CRAFTS TECHNOLOGY
Precision Fabricator of Ultra-Hard Materials

Crafts Technology
91 Joey Drive
Elk Grove Village, IL 60007
UPS ACCT# 4E3-E38

Ph: 847-758-3100
Fax: 847-758-0162

Pack List

Number: 8536 Date: 28-Aug-06

To

Metalex Manufacturing, Inc.
5750 Cornell Road
Cincinnati, OH 45242
USA

Ph: 513-489-0507 Fax: 513-489-1020

Ship To

Metalex Manufacturing, Inc.
5750 Cornell Road
Cincinnati, OH 45242
USA

Ph: 513-489-0507 Fax: 513-489-1020

Terms	Ship Via
Net 21 days	UPS

Quantity	Description
300 each	Part: L143-110702 Rev: 01 TAPER SHIM Job: 2717 PO: 64975-BL Line:
	Thank you for your order This is to certify that the materials, parts and/or processes furnished against the above referenced purchase order were manufactured in accordance with the customer drawing and revision level shown Crafts Technology/Quality Control Department Manufactured in the USA

Job#5725
5681

METALEX
QA. DEPT. MTX QC 18
ACCEPTED
DATE 9/11/06
BY KKB

8-28-06

ANCHOR METAL FINISHING, INC.

BLACK OXIDE ON STEEL

"Specialists in the Field"

9355 BERNICE · SCHILLER PARK, ILLINOIS 60176 · PHONE: (708) 678-4304 · FAX: (708) 678-7331

METALFORMTX
QA. DEPT. QC 18
ACCEPTED
DATE 9/11/06
BY RRB

P.O.#64975
P/L#8534

Gentlemen:

This is to certify that parts listed below have been black-oxided in accordance with AMS 2485J (Aerospace) specifications.

Very truly yours,

Alex

ANCHOR METAL FINISHING, INC.

Shipping Ticket No. 269453

Your P.O. NO. 7633

Date 08/25/06

Part NO. L143-110702

Quantity 300

Claris Technology, Inc.

FINAL INSPECTION REPORT

DATE 08-25-04

INSPECTOR John

JOB NUMBER 2717

PART NUMBER L143-110702

DESCRIPTION TAPER SHIM

CUSTOMER METALEX

DATE	SEQ	OPN		INSP CLK#	DRAWING DIM./TOLERANCE	ACTUAL MEASUREMENT NO 1	NO 2	NO 3	NO 4
					.394	.396	.396	.3955	.3932
					5.118 ±.007	5.125	5.126	5.124	5.125
					RAD. .079 ±.008 2PL	.076	.074	.080	.082
					.500 ±.008	.501	.4999	.4996	.5015
					.008	.0102	.0108	.0109	.0106
					.004	.0053	.005	.0057	.0056
					.075 ±.0008	.0755	.0755	.0752	.0735
					.087 ±.0008	.0872	.0873	.0872	.0875
					⏥ .003	.0025	.003	.004	.0025
						5	6		
					.394	.3955	.3955		
					5.118 ±.007	5.125	5.126		
					RAD .079 ±.008 2PL	.075	.073		
					.500 ±.008	.5011	.5022		
					.008	.0092	.011		
					.004	.0039	.004		
					.075 ±.0008	.0756	.0755		
					.087 ±.0008	.0876	.087		
					⏥ .003	.003	.003		

Stripco Inc.

• STEEL SLITTING AND EDGE CONDITIONING
• PRECISION COLD ROLLING

Phone: (574) 258-7800 • Fax: (574) 258-7813

PACKING LIST

PACKING SLIP NUMBER
187483

--XH2-44C-9904--

DUE DATE 3/24/05 TT

SOLD TO:
Alro Steel Jackson
3100 East High Street
P.O. Box 927
Jackson, MI 49203

SHIP TO:
Alro Steel Potterville
5059 Alro Park Drive
Potterville, MI 48876

S OF ORDER	DATE SHIPPED	CUSTOMER ORDER NO.	SHIPPED VIA	DEPT.	TERMS
3/08/05	3/30/05	PU PU 5027044	HILLTOP FARMS	90	1/3-10 NET 30

QTY. ORD.	JOB NUMBER	DESCRIPTION	QTY. SHIPPED	QTY. B.O.
BILL-OF-LADING-->		FRT DRIVER--> HILLTOP	PREPAID/S	
2,000	6055301	1/8 X .437" X 144.00" CR 1018		
	ORD WGT	2,199		
	TAG#	337369	2,199	
	LOCATION	CKA		
	PCS/COIL	990		CNT TOTAL 990

CERTIFIED RECORD OF METALLURGICAL PROPERTIES

STRIP#	Carb	Mang	Phos	Sulf	Sil	Alum	Chrm	Moly	Heat#
147220	.150	.61	.006	.007	.030	.029	.08	.027	H3699
Yld=	66,899 Ten=		77,427 Elg%=22.45 Dia=		9				

RECEIVED MAR 30 2005 BY

ALRO STEEL/METAL
RT04483400

REJECTIONS WILL BE HONORED ONLY IF RETURNED IN ORIGINAL FORM SOLD.

A Service Charge of 1½% per month (18% per year) will be added to all invoices that are 30 days past the Date of Invoice. Title to merchandise does not pass until goods are fully paid for.
Claims for errors, deficiencies, or imperfections must be made within 10 days after receipt of goods. The Seller's responsibility for material in transit ceases when it passes into the hands of the transportation company. "We hereby certify that we have complied with all requirements of the Fair Labor Standards Act of 1938, as amended."

CHECK BOX IF COLLECT ☐
Load Approved: Cat
Load must be secured and weather protected
Driver:

RECEIVED BY: X
DATE RECEIVED: 3-30-05

CUSTOMER COPY

KKB 8/22/06

CRAFTS TECHNOLOGY
Precision Fabrication of Ultra-Hard Materials

Crafts Technology
91 Joey Drive
Elk Grove Village, IL 60007
UPS ACCT# 4E3-E38

Ph: 847-758-3100
Fax: 847-758-0162

MET ALEX QTY OK'D
QA. DEPT.
ACCEPTED
DATE 8/22/06
BY KKB

Job# 5681

Pack List 5725

Number: 8455 Date: 09-Aug-06

To

Metalex Manufacturing, Inc.
5750 Cornell Road
Cincinnati, OH 45242
USA

Ph: 513-489-0507 Fax: 513-489-1020

Ship To

Metalex Manufacturing, Inc.
5750 Cornell Road
Cincinnati, OH 45242
USA

Ph: 513-489-0507 Fax: 513-489-1020

Terms	Ship Via
Net 21 days	UPS

Quantity	Description
300 each	Part: L143-110702 Rev: 01 TAPER SHIM Job: 2717 PO: 64975-BL Line:

Thank you for your order

This is to certify that the materials, parts and/or processes furnished against the above referenced purchase order were manufactured in accordance with the customer drawing and revision level shown

Crafts Technology/Quality Control Department

Manufactured in the USA

Crafts Technology, Inc.

FINAL INSPECTION REPORT

DATE 08-8-06

INSPECTOR [signature]

JOB NUMBER 2717

PART NUMBER L143-110702

DESCRIPTION TAPER SHIM

CUSTOMER METALEX

DATE	SEQ	OPN		INSP CLK	DRAWING DIM./TOLERANCE	ACTUAL MEASUREMENT			
						NO 1	NO 2	NO 3	NO 4
					.394	.3935	.3976	.3965	.3975
					5.118 ±.007	5.123	5.125	5.125	5.125
					RAD .079 ±.008 2PL	.0720	.079	.082	.081
					.500 ±.008	.501	.503	.502	.501
					.008	.010	.011	.010	.010
					.004	.006	.005	.006	.005
					.075 ±.008	.0754	.0757	.0755	.0758
					.087 ±.008	.0875	.0872	.0871	.0872
					⏥ .003	.0006	.001	.0015	.0015
						5	6	7	8
					.394	.3962	.3961	.3959	.3968
					5.118 ±.007	5.124	5.125	5.123	5.124
					RAD .079 ±.008 2PL	.082	.079	.081	.082
					.500 ±.008	.502	.503	.503	.504
					.008	.010	.011	.009	.011
					.004	.006	.005	.006	.005
					.075 ±.008	.0755	.0757	.0757	.0756
					.087 ±.008	.0872	.0872	.0870	.0872
					⏥ .003	.0017	.002	.0015	.0020
						9			
					.394	.3925			
					5.118 ±.007	5.125			
					RAD .079 ±.008 2PL	.084			
					.500 ±.008	.503			
					.008	.010			
					.004	.006			
					.075 ±.008	.0752			
					.087 ±.008	.0871			
					⏥ .003	.0015			

QTY 300 P/S# 9455

Stripco Inc.

- STEEL SLITTING AND EDGE CONDITIONING
- PRECISION COLD ROLLING

35598 Magnolia Drive • Milwaukee, WI 48545
Phone: (874) 258-7800 • Fax: (874) 258-7612

PACKING LIST

PACKING SLIP NUMBER
SLED D** 187483

DUE DATE 3/24/05 TT

D TO:
Alro Steel Jackson
3100 East High Street
P.O. Box 927
Jackson, MI 49203

SHIP TO:
Alro Steel Potterville
5059 Alro Park Drive
Potterville, MI 48876

E OF ORDER	DATE SHIPPED	CUSTOMER ORDER NO.	SHIPPED VIA	DEPT.	TERMS
3/08/05	3/30/05	PV PV 5077044	HILLTOP FARMS	90	1/2-10 NET 30

QTY. ORD.	JOB NUMBER	DESCRIPTION	QTY. SHIPPED	QTY. B.O.
	BILL-OF-LADING=>	TRK DRIVER=> HILLTOP	PREPAID/S	
2,000	6355301	1/8 X .437" X 144.00" CR 1018		
	OKS WGT	2,199	2,199	
	TAG#	337369		
	LOCATION	CKA		CNT TOTAL
	PCS/COIL	990		990

CERTIFIED RECORD OF METALLURGICAL PROPERTIES

STRID#	Carb	Mang	Phos	Sulf	Sil	Alum	Chrm	Moly	Heat#
147220	.150	.61	.006	.007	.030	.029	.08	.027	H3689

Yld= 66,899 Ten= 77,427 ElgX=22.45 Ols= 0

RECEIVED MAR 30 2005 By

ALRO STEEL/METAL RT04483400

REJECTIONS WILL BE HONORED ONLY IF RETURNED IN ORIGINAL FORM SOLD.

A Service Charge of 1½% per month (18% per year) will be added to all invoices that are 30 days past the Date of Invoice. Title to merchandise does not pass until goods are fully paid for.
Claims for errors, deficiencies, or imperfections must be made within 10 days after receipt of goods. The Seller's responsibility for material in transit ceases when it passes into the hands of the transportation company. "We hereby certify that we have complied with all requirements of the Fair Labor Standards Act of 1938, as amended."

CHECK BOX IF COLLECT ☐
Load Approved: CPT
Load must be secured and weather protected
Driver: [signature]

RECEIVED BY: X

DATE RECEIVED: 3-30-05

MSF 10.4.1.1 Rev.1

CUSTOMER COPY

ANCHOR METAL FINISHING, INC.

BLACK OXIDE ON STEEL

"Specialists in the Field"

5355 BERNICE • SCHILLER PARK, ILLINOIS 60176 • PHONE: (708) 678-4304 • FAX: (708) 678-7331

Crafts Technology

P.O# 64975

METALEX
QA. DEPT.
ACCEPTED
DATE 8/22/06
BY KKB

P/L# 8455

Gentlemen:

This is to certify that parts listed below have been black-oxided in accordance with AMS 2485J (Aerospace) specifications.

Very truly yours,

Jonathan

ANCHOR METAL FINISHING, INC.

Shipping Ticket No. 269615

Your P.O. NO. 7530

Date 8-4-06

Part NO. L143-110702

Quantity 300

Date.08/15/06

Job#5081/5725

METALEX MTX QA. DEPT. ACCEPTED DATE 8/22/06 BY ICB

Certificate of Compliance

METALEX
5750 CORNELL RD.
CINCINNATI, OH 45242

To METALEX Quality Assurance,

This is to certify that ***321*** pieces of Part No. ***L143-110703*** covered by your P.O. No. ***65852-BL*** have been manufactured and inspected to the highest standards in accordance with all specifications stated on supplied print and P.O.

Hi-Tech Manufacturing
4637 North 25th Avenue
Schiller Park, Illinois 60176
JOSEPH J. BOURKE

HI-TECH Manufacturing Inc.

INSPECTION REPORT

PART# L143-110703 REV# — DESCRIPTION: PEAK FILED SHIM

JOB # 52669 CUSTOMER : ARGONNE DATE 08-08-06

QUANTITY: 300 PCS INSPECTED BY:ILYA SAMPLE SIZE 10 pcs

Inspection Report First Article

Inspected Criteria		Inspection Results	Disposition	
#	Inspected Dimension	Range	Accepted	Rejected
1	9. 0 +0 /-0.1	8.915 – 8.9948	✓	
2	6.2 +0.1 / -0	6.108 -6.0706	✓	
3	2X156.5 +0.5 /-0 DEGREE	2X158.0 – 158.5	✓	
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

Remarks : Decimal:. Accepted by Emil Trachtenberg

Form IR Rev. 08/98

CINCINNATI BLACK OXIDE CERTIFICATION

THIS IS TO CERTIFY THAT THE FOLLOWING PARTS HAVE BEEN PROCESSED AND INSPECTED TO MEET AMS 2485 J CERTIFICATION

COMPANY NAME: METALEX
PURCHASE ORDER NUMBER: 65536-JS
PARTS PROCESSED:

QUANTITY	PART NUMBER	DESCRIPTION
44	L143-110112	

Job#56811

METALEX
QA. DEPT MTX
ACCEPTED
DATE 7/31/06
BY KKB

SIGNATURE Thomas Vitale

DATE CERTIFIED: 07.20.06

CERTIFICATION NO. 072006-003

CINCINNATI BLACK OXIDE
4510 MUHLHAUSER ROAD
CINCINNATI, OHIO 45011
PHONE 513-874-1333
FAX 513-874-4846

CINCINNATI BLACK OXIDE CERTIFICATION

THIS IS TO CERTIFY THAT THE FOLLOWING PARTS HAVE BEEN PROCESSED AND INSPECTED TO MEET AMS 2485 J CERTIFICATION

Job#5681

METALEX
QA. DEPT
ACCEPTED
DATE 8/7/06
BY KKB

COMPANY NAME: METALEX
PURCHASE ORDER NUMBER: 65506-JS
PARTS PROCESSED:

QUANTITY	PART NUMBER	DESCRIPTION
32	L143-110100-**	

SIGNATURE _____

DATE CERTIFIED: 07.12.06

CERTIFICATION NO. 071206-003

CINCINNATI BLACK OXIDE
4510 MUHLHAUSER ROAD
CINCINNATI, OHIO 45011
PHONE 513-874-1333
FAX 513-874-4846

"REVISED CERTIFICATION"

RECEIVED
AUG 04 2006

CINCINNATI BLACK OXIDE CERTIFICATION

THIS IS TO CERTIFY THAT THE FOLLOWING PARTS HAVE BEEN PROCESSED AND INSPECTED TO MEET AMS 2485 J CERTIFICATION

COMPANY NAME: METALEX
PURCHASE ORDER NUMBER: 65553-JS
PARTS PROCESSED:

Job# 5681

METALEX MTX
QA. DEPT QC 18
ACCEPTED
DATE 8/7/06
BY KKB

QUANTITY	PART NUMBER	DESCRIPTION
282	L143-110111	
14	L143-110114	REV#01
100	L143-110119	

SIGNATURE Maria Vitolo

DATE CERTIFIED: 07.24.06

CERTIFICATION NO. 072406-002

CINCINNATI BLACK OXIDE
4510 MUHLHAUSER ROAD
CINCINNATI, OHIO 45011
PHONE 513-874-1333
FAX 513-874-4846

TECHMETALS, INC.

METALEX
QA. DEPT
ACCEPTED
DATE 8/11/06
BY KKB

REVISED *Metal Finishing Certification*

To: METALEX MANUFACTURING INC
5750 CORNELL ROAD
CINCINNATI, OH 45242

United States

From: Techmetals Incorporated
2200 EAST FIRST STREET
Dayton, OH 45403

Packing List No: 21176
Shipping Date: 07/20/06

Today's Date: 08/10/06
PO Number: 65526-JS-5681

7	EA	L143-110801 BASE, HOLDER MAGNET STRUCT 7.75 X 5 X 2 MIC-6 CAST ALUMINUM CERT CLEAR ANODIZE ***CRITICAL PART**HANDLE VERY CAREFULLY*** CLEAR ANODIZE PER AMS-2471, REV F SODIUM DICHROMATE SEAL REQUIRED CERTIFICATION REQUIRED OPERATION# 70 1 CRATE LOC# 5-107	18114-01
7	EA	L143-111201 BASE, HOLDER MAGNET STRUCT 7.75 X 5 X 2 MIC-6 CAST ALUMINUM CERT CLEAR ANODIZE ***CRITICAL PART**HANDLE VERY CAREFULLY*** CLEAR ANODIZE PER AMS-2471, REV F SODIUM DICHROMATE SEAL REQUIRED CERTIFICATION REQUIRED OPERATION# 70 1 CRATE LOC# 5-107	18114-02
7	EA	L143-111301 BASE, HOLDER MAGNET STRUCT 7.75 X 5 X 2 MIC-6 CAST ALUMINUM CERT CLEAR ANODIZE	18114-03

CRITICAL PART**HANDLE VERY CAREFULLY
CLEAR ANODIZE PER AMS-2471, REV F
SODIUM DICHROMATE SEAL REQUIRED
CERTIFICATION REQUIRED
OPERATION# 70
1 CRATE
LOC# 5-107

7 EA L143-110901 BASE, HOLDER MAGNET STRUCT 18114-04
7.75 X 5 X 2
MIC-6 CAST ALUMINUM
CERT CLEAR ANODIZE

CRITICAL PART**HANDLE VERY CAREFULLY
CLEAR ANODIZE PER AMS-2471, REV F
SODIUM DICHROMATE SEAL REQUIRED
CERTIFICATION REQUIRED
OPERATION# 70
1 CRATE
LOC# 5-107

METALEX
QA. DEPT.
ACCEPTED
DATE 8/11/06
BY KKB

THIS CERTIFIES THAT THE ABOVE PARTS, METAL FINISHED BY TECHMETALS, INC., WERE PLATED/PROCESSED IN ACCORDANCE WITH THE PURCHASE ORDER SHOWN ABOVE.

OBJECTIVE EVIDENCE FOR THIS ORDER IS ON FILE AT OUR FACILITY AND AVAILABLE FOR CUSTOMER/GOVERNMENT REVIEW.

Mark O. Phillips TM QA 41

Inspector's Initials
Techmetals Incorporated

Techmetals Incorporated

2200 EAST FIRST STREET
Dayton, OH 45403
Phone: 937-253-5311
Fax: 937-253-1982

METALEX
QA. DEPT. MTX QC 18
ACCEPTED
DATE 8/7/06
BY KKB

REVISED Metal Finishing Certification

To: METALEX MANUFACTURING INC
5750 CORNELL ROAD
CINCINNATI, OH 45242

United States

From: Techmetals Incorporated
2200 EAST FIRST STREET
Dayton, OH 45403

Packing List No: 21280
Shipping Date: 07/21/06

Today's Date: 07/28/06
PO Number: 65535-JS-5681

74	EA	L143-110109 BRACKET 1 2.625 X 1.25 X 0.625 6061-T651 ALUMINUM CERT CLEAR ANODIZE ***CRITICAL PART**HANDLE VERY CAREFULLY*** **WRAP TO PROTECT & KEEP CLEAN** CLEAR ANODIZE PER AMS-2471 REV F SODIUM DICHROMATE SEAL REQUIRED CERTIFICATION REQUIRED OPERATION# 60 1 SKID / 2 BOXES LOC# 5-164	02V 18191-01 KKB 8/7/06 MTX QC 18
75	EA	L143-110110 BRACKET 2 2.625 X 1.25 X 0.625 6061-T651 ALUMINUM CERT CLEAR ANODIZE ***CRITICAL PART**HANDLE VERY CAREFULLY*** **WRAP TO PROTECT & KEEP CLEAN** CLEAR ANODIZE PER AMS-2471 REV F SODIUM DICHROMATE SEAL REQUIRED CERTIFICATION REQUIRED OPERATION# 60 1 SKID / 2 BOXES	KKB 8/7/06 02V MTX QC 18 18191-02

3	EA	LOC# 5-164 L143-111001 HOLDER MAGNET STRUCT 39.50 X 5 X 2.50 MIC-6 ALUMINUM CERT CLEAR ANODIZE	01	18191-03

METALEX
QA. DEPT.
ACCEPTED
DATE 8/7/06
BY KKB

		CRITICAL PART**HANDLE VERY CAREFULLY **WRAP TO PROTECT & KEEP CLEAN** CLEAR ANODIZE PER AMS-2471 REV F SODIUM DICHROMATE SEAL REQUIRED CERTIFICATION REQUIRED OPERATION# 70 1 SKID / 2 BOXES LOC# 5-164			
3	EA	L143-111101 HOLDER MAGNET STRUCT 39.50 X 5 X 2.50 MIC-6 ALUMINUM CERT CLEAR ANODIZE	01	18191-04	---
		CRITICAL PART**HANDLE VERY CAREFULLY **WRAP TO PROTECT & KEEP CLEAN** CLEAR ANODIZE PER AMS-2471 REV F SODIUM DICHROMATE SEAL REQUIRED CERTIFICATION REQUIRED OPERATION# 70 1 SKID / 2 BOXES LOC# 5-164			
1	EA	510EXP NEXT DAY EXPEDITE		18191-05	

THIS CERTIFIES THAT THE ABOVE PARTS, METAL FINISHED BY TECHMETALS, INC., WERE PLATED/PROCESSED IN ACCORDANCE WITH THE PURCHASE ORDER SHOWN ABOVE.

OBJECTIVE EVIDENCE FOR THIS ORDER IS ON FILE AT OUR FACILITY AND AVAILABLE FOR CUSTOMER/GOVERNMENT REVIEW.

Thomas A Stark

Inspector's Initials
Techmetals Incorporated

METALEX
QA. DEPT. AUG 18 MTY.
ACCEPTED
DATE_____
BY_____

S/N(S): -112, -212, -312
-114, -214, -314
-116-216, -316
For Both Parts TR 10/10/06

MTX QC 12

Techmetals Incorporated

TECHMETALS, INC.

2200 EAST FIRST STREET
Dayton, OH 45403
Phone: 937-253-5311
Fax: 937-253-1982

METALEX QA. DEPT ACCEPTED DATE 10/12/06 BY KKB 01 JD XLM

Revised Metal Finishing Certification

To: METALEX MANUFACTURING INC
5750 CORNELL ROAD
CINCINNATI, OH 45242

United States

From: Techmetals Incorporated
2200 EAST FIRST STREET
Dayton, OH 45403

Packing List No: 24533
Shipping Date: 09/20/06

Today's Date: 10/11/06
PO Number: 66464-JS

Quantity Shipped	Unit	Description	Revision	Job Number
9	EA	L143-111101 HOLDER MAGNET STRUCT 39.50 X 5 X 2.50 MIC-6 ALUMINUM CERT CLEAR ANODIZE / SODIUM DICHROMATE SEAL ***CRITICAL PART**HANDLE VERY CAREFULLY*** **WRAP TO PROTECT & KEEP CLEAN** CLEAR ANODIZE PER AMS-2471 F, SODIUM DICHROMATE SEAL REQUIRED CERTIFICATION REQUIRED OPERATION# 70 JO# 5681 3 BOXES LOC# 5-183	01	20759-01
9	EA	L143-111001 HOLDER MAGNET STRUCT 39.50 X 5 X 2.50 MIC-6 ALUMINUM CERT CLEAR ANODIZE / SODIUM DICHROMATE SEAL ***CRITICAL PART**HANDLE VERY CAREFULLY*** **WRAP TO PROTECT & KEEP CLEAN** CLEAR ANODIZE PER AMS-2471 F, SODIUM DICHROMATE SEAL REQUIRED CERTIFICATION REQUIRED OPERATION# 70 JO# 5681 3 BOXES LOC# 5-183	01	20759-02

FROM :BIA S PRODUCTION TECHMETALS FAX NO. :9372531982 Oct. 11 2006 02:55PM P6

Quantity Shipped	Unit	Description	Revision	Job Number
6	EA	L143-111301 BASE, HOLDER MAGNET STRUCT 7.75 X 5 X 2 MIC-6 CAST ALUMINUM CERT CLEAR ANODIZE / SODIUM DICHROMATE SEAL	00	20759-03

CRITICAL PART**HANDLE VERY CAREFULLY
CLEAR ANODIZE PER AMS-2471, REV F
SODIUM DICHROMATE SEAL REQUIRED
CERTIFICATION REQUIRED
OPERATION# 70
JO# 5725
3 BOXES
LOC# 6-183

METALEX
QA. DEPT.
ACCEPTED
DATE 10/11/06
BY KKB

THIS CERTIFIES THAT THE ABOVE PARTS, METAL FINISH BY TECHMETALS INCORPERATED WERE PLATED/PROCESSED IN ACCORDANCE WITH THE PURCHASE ORDER SHOWN ABOVE. OBJECTIVE QUALITY EVIDENCE FOR THIS ORDER IS ON FILE AT OUR FACILITY AND AVAILIBLE FOR CUSTOMER/GOVERMENT REVIEW.

CERTIFING THE PROCESS ONLY

Thomas A. Stahl

Inspector's Initials
Techmetals Incorporated

FROM :BID 5 PRODUCTION TECHMETALS FAX NO. :9372531982 Oct. 11 2006 02:55PM P2

TECHMETALS, INC.

REVISED *Metal Finishing Certification*

To: METALEX MANUFACTURING INC
5750 CORNELL ROAD
CINCINNATI, OH 45242

United States

From: Techmetals Incorporated
2200 EAST FIRST STREET
Dayton, OH 45403

Packing List No: 21092
Shipping Date: 07/19/06

Today's Date: 08/10/06
PO Number: 65381 - JS - 5681

116 EA L413-110115-01 STOPPER
2 X 1.375 X 0.50
6061-T651 ALUMINUM
CERT CLEAR ANODIZE

METALEX QA. DEPT. ACCEPTED DATE 8/11/06 BY KKB

17202-02

CRITICAL PART**HANDLE VERY CAREFULLY
CLEAR ANODIZE PER AMS-2471, REV F
SODIUM DICHROMATE SEAL REQUIRED
CERTIFICATION REQUIRED
OPERATION# 40
BOX 1
LOC# 5-090

THIS CERTIFIES THAT THE ABOVE PARTS, METAL FINISHED BY TECHMETALS, INC., WERE PLATED/PROCESSED IN ACCORDANCE WITH THE PURCHASE ORDER SHOWN ABOVE.

OBJECTIVE EVIDENCE FOR THIS ORDER IS ON FILE AT OUR FACILITY AND AVAILABLE FOR CUSTOMER/GOVERNMENT REVIEW.

Mark D. Phillips QA 11

Inspector's Initials
Techmetals Incorporated

Metalex
Customized Machinery and Parts
CERTIFIED ISO 9001 QUALITY MANAGEMENT

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

Job No. 2006-5601 | Qty 451

Inspection Origin	Vendor (Sub-Tier Source) Identification		Customer Identification		
☐ Receiving ☐ In-Process ■ Final ☐ Rework/Repair ☐ First Article	Vendor Name: N/A		Part No.: L143-110104	REV: XX	P.O. Number: SAI3059
	Date Rec'd: N/A	P.O. No.: N/A	Part Name: UPPER LEFT MAGNET STRUCTURE MAGNET CLAMP		
At Oper.: N/A	Serial Numbers: N/A		Customer Name: ARGONNE		

SPECIFICATION	B/P ZONE	INSPECTION METHOD / GAGE NO.	ACTUAL DIMENSION / GAGE VERIFICATION (Range of Readings or Accept Status)	QTY ACC	QTY REJ
ALL DIMENSIONS ARE IN MILLIMETERS, SURFACE FINISH IN MICRONS.	NOTE #1		CONFORMS	451	
REMOVE ALL BURRS AND BREAK SHARP EDGES 0.3mm MAX.	NOTE #2		CONFORMS	451	
UNLESS OTHERWISE SPECIFIED, SURFACE FINISH TO BE 6.3 MICRONS.	NOTE #3		CONFORMS	451	
MATERIAL 5/16 AMPCO 8 ALUMINUM BRONZE PLATE			CONFORMS	451	
7.94			7.86 - 8.02	451	
3.97			3.89 - 4.05	451	
23.00			22.92 - 23.08	451	
Ø4.20 THRU			4.17 - 4.20	451	
Ø			CONFORMS	451	
Ø			CONFORMS	451	
2X 45°			2X 45°	451	
54.00			53.92 - 55.08	451	
6.50			6.42 - 6.58	451	
6.50			6.42 - 6.58	451	
12.00			11.92 - 12.08	451	
1.00			9.92 - 1.08	451	
2X R.20			2X .20	451	
2X R3.00			2X 3.0	451	
3.2√			3.2√ OR BETTER	451	

STAMP	INSPECTED BY	DATE	PAGE 1 OF 1	QTY ACC	QTY REJ
	James [illegible]	7-24-06		451	—

MX1010 (7/98)

Metalex
Customized Machinery and Parts
CERTIFIED ISO 9001 QUALITY MANAGEMENT

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

Job No. 2006-5681 | Qty 454

Inspection Origin	Vendor (Sub-Tier Source) Identification		Customer Identification		
☐ Receiving ☐ In-Process ■ Final ☐ Rework/Repair ☐ First Article	Vendor Name: N/A		Part No.: L143-110104	REV: ~~K~~	P.O. Number: 5410359
	Date Rec'd: N/A	P.O. No.: N/A	Part Name: UPPER LEFT MAGNET STRUCTURE MAGNET CLAMP		
At Oper.: N/A	Serial Numbers: N/A		Customer Name: ARGONNE		

SPECIFICATION	B/P ZONE	INSPECTION METHOD / GAGE NO.	ACTUAL DIMENSION / GAGE VERIFICATION (Range of Readings or Accept Status)	QTY ACC	QTY REJ
ALL DIMENSIONS ARE IN MILLIMETERS, SURFACE FINISH IN MICRONS.	NOTE #1		CONFORMS	454	
REMOVE ALL BURRS AND BREAK SHARP EDGES 0.3mm MAX.	NOTE #2		CONFORMS	454	
UNLESS OTHERWISE SPECIFIED, SURFACE FINISH TO BE 6.3 MICRONS.	NOTE #3		CONFORMS	454	
MATERIAL 5/16 AMPCO 8 ALUMINUM BRONZE PLATE			CONFORMS	454	
7.94			7.94 - 8.02	454	
3.97			3.93 - 4.00	454	
23.00			22.981 - 23.04	454	
Ø4.20 THRU			4.20 - 4.24	454	
Ø			CONFORMS	454	
Ø			CONFORMS	454	
2X 45°			45°	454	
54.00			53.975 - 54.0386	454	
6.50			6.48 - 6.520	454	
6.50			6.470 - 6.530	454	
12.00			11.970 - 12.030	454	
1.00			1.00	454	
2X R.20			R.2	454	
2X R3.00			R.3	454	
3.2√			3.2√ OR BETTER	454	

STAMP	INSPECTED BY	DATE	PAGE	QTY ACC	QTY REJ
MTX	[signature]	8/1/06	1 OF 1	454	0

MX1010 (7/98)

Metalex
Customized Machinery and Parts
CERTIFIED ISO 9001 QUALITY MANAGEMENT

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

Job No. 2006 5681 | Qty 70

Inspection Origin	Vendor (Sub-Tier Source) Identification		Customer Identification		
☐ Receiving ☐ In-Process ■ Final ☐ Rework/Repair ☐ First Article	Vendor Name: N/A		Part No.: L143-110109	REV: 02V	P.O. Number: SA10359
	Date Rec'd: N/A	P.O. No.: N/A	Part Name: UNDULATOR UNIT ASSEMBLY BRACKET 1		
At Oper. 50	Serial Numbers: N/A		Customer Name: ARGONNE		

SPECIFICATION	B/P ZONE	INSPECTION METHOD / GAGE NO.	ACTUAL DIMENSION / GAGE VERIFICATION (Range of Readings or Accept Status)	QTY ACC	QTY REJ
CLEAR ANODIZE	NOTE		CONFORMS	70	MTX QC 12
MATERIAL: AL CAST TOOL & JIG PLATE 1.25 PLATE	A2		CONFORMS	70	
36.5			36.449 - 36.514	70	
4			3.962 - 4.013	70	
8			7.988 - 8.013	70	
16			15.989 - 16.017	70	
7			6.979 - 7.048	70	
8			7.961 - 8.024	70	
10			9.936 - 10.051	70	
⌀5 ↧22 3.5 DRILL ↧ THRU M4x.5 ISO – H TAP ↧ THRU 1 PLACE			CONFORMS	70	
⌀7 ↧ 18 5 DRILL ↧ THRU M6x1 ISO – H TAP ↧ THRU 2 PLACES			CONFORMS	70	
⌀7 THRU			6.985 - 7.00 THRU	70	
14			13.914 - 14.036	70	
4			3.954 - 4.072	70	
1.5 (CUT AFTER FINAL MACHINING)			1.4960 - 1.559	70	
⌀			CONFORMS	70	
⌀			CONFORMS	70	
(31.75 [1.250])			REFERENCE	70	
27.5			27.477 - 27.548	70	

STAMP	INSPECTED BY	DATE	PAGE	QTY ACC	QTY REJ
	James Lafferty	7-19-06	1 OF 2	70	

MX1010 (7/98)

Metalex
Customized Machinery and Parts
CERTIFIED ISO 9001 QUALITY MANAGEMENT

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

Job No. 20064 56081 | Qty 70

Inspection Origin	Vendor (Sub-Tier Source) Identification		Customer Identification		
☐ Receiving ☐ In-Process ■ Final ☐ Rework/Repair ☐ First Article	Vendor Name: N/A		Part No.: L143-110109	REV: 02V	P.O. Number: 5A10359
	Date Rec'd: N/A	P.O. No.: N/A	Part Name: UNDULATOR UNIT ASSEMBLY BRACKET 1		
At Oper. 50	Serial Numbers: N/A		Customer Name: ARGONNE		

SPECIFICATION	B/P ZONE	INSPECTION METHOD / GAGE NO.	ACTUAL DIMENSION / GAGE VERIFICATION (Range of Readings or Accept Status)	QTY ACC	QTY REJ
16.5			16.484 - 16.526	70	
20.75			20.726 - 20.772	70	
16.5			16.491 - 16.507	70	
27.4			27.387 - 27.404	70	
20.45			20.431 - 20.452	70	
25.45			25.446 - 25.459	70	
(45°)			REFERENCE	70	
45° X 4.5			4.5 x 45°	70	
43			42.990 - 43.326	70	

STAMP	INSPECTED BY	DATE	PAGE 2 OF 2	QTY ACC	QTY REJ
	James [illegible]	7-19-06		70	—

MX1010 (7/98)

Metalex
Customized Machinery and Parts
CERTIFIED ISO 9001 QUALITY MANAGEMENT

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

Job No. 2006 5681 | Qty 7075 JEJ 7-20-06

Inspection Origin	Vendor (Sub-Tier Source) Identification		Customer Identification		
☐ Receiving ☐ In-Process ☒ Final ☐ Rework/Repair ☐ First Article	Vendor Name: N/A		Part No.: L143-110110	REV: 02V	P.O. Number: 5A10359
	Date Rec'd: N/A	P.O. No.: N/A	Part Name: UNDULATOR UNIT ASSEMBLY BRACKET 2		
At Oper.: 50	Serial Numbers: N/A		Customer Name: ARGONNE		

Sample 10 out of 70

SPECIFICATION	B/P ZONE	INSPECTION METHOD / GAGE NO.	ACTUAL DIMENSION / GAGE VERIFICATION (Range of Readings or Accept Status)	QTY ACC	QTY REJ
CLEAR ANODIZE	NOTE		CONFORMS	75	MTX QC-12
MATERIAL: AL CAST TOOL & JIG PLATE 1.25 PLATE			CONFORMS	10	
36.5			36.424 - 36.510	10	
8			7.991 - 8.000	10	
4			3.978 - 4.026	10	
16			15.953 - 16.060	10	
7			6.988 - 7.018	10	
3.5 R			3.473 - 3.50 R	10	
7			6.947 - 7.000	10	
10			9.995 - 10.076	10	
⌴ ⌀5 ↧22 3.3 DRILL ↧ THRU M4x.5 ISO – H TAP ↧ THRU 1 PLACE			⌴ 5.156⌀ ↧ 22.0 3.404 ↧ Thru Conforms to Gage	10	
⌴ ⌀7 ↧ 18 5 DRILL ↧ THRU M6x1 ISO – H TAP ↧ THRU 2 PLACES			⌴ 7.163⌀ ↧ 17.983/18.0594 4.902⌀ ↧ Thru Conforms to Gage	10	
⌀7 THRU			6.934 - 6.960⌀ Thru	10	
14			13.97	10	
4			3.861 - 4.013	10	
1.5 (CUT AFTER FINAL MACHINING)			1.524 - 1.606	10	

STAMP	INSPECTED BY	DATE	PAGE	QTY ACC	QTY REJ
	THOMAS G COOK	7/20/06	1 OF 2	10	

MX1010 (7/98) Thomas A. Tully 7/20/06

Metalex
Customized Machinery and Parts
CERTIFIED ISO 9001 QUALITY MANAGEMENT

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

Job No.	Qty
2006 5681	1075 Test 7-21-06

Inspection Origin	Vendor (Sub-Tier Source) Identification		Customer Identification		
☐ Receiving ☐ In-Process ☒ Final ☐ Rework/Repair ☐ First Article	Vendor Name: N/A		Part No.: L143-110110	REV: 02✓	P.O. Number: SA10359
	Date Rec'd: N/A	P.O. No.: N/A	Part Name: UNDULATOR UNIT ASSEMBLY BRACKET 2		
At Oper.: 50	Serial Numbers: N/A		Customer Name: ARGONNE		

Sample 10 out of 70

SPECIFICATION	B/P ZONE	INSPECTION METHOD / GAGE NO.	ACTUAL DIMENSION / GAGE VERIFICATION (Range of Readings or Accept Status)	QTY ACC	QTY REJ
✓			Conform	10	
✓			Conform	10	
31.75			31.648 - 31.801	10	
27.5			27.330 - 27.483	10	
2.5			2.540 - 2.667	10	
16.5			16.383 - 16.637	10	
20.75			20.625 - 20.879	10	
(45 DEGREES.)			**REFERENCE**	10	
1.5			1.5	10	
20.45			20.396 - 20.498	10	
25.45			25.349 - 25.5016	10	
10 DEGREES			10°	10	
16.5			16.4338 - 16.535	10	
26.5			26.492 - 26.543	10	
45 DEGREES X 4.5			45° x 4.5	10	
8			7.950 - 8.052	10	
43			43.002 - 43.053	10	

STAMP	INSPECTED BY	DATE	PAGE2 OF2	QTY ACC	QTY REJ
	THOMAS G COOK	7/20/06		10	

MX1010 (7/98) Thomas A. Tully 7/20/06

DATE 5/24/06 METALEX INSPECTION RECORD JCRJ2

Job# 2006- 5681
Drawing/part# L143-110114
Drw.rev.# 01
Description SCREEN
Serial# _____
Rtg.rev.# 0 by _____
Originated by ROB SCHUERMAN 11/07/05

Customer Argonne Nat'l Laboratory
Proc.Eng.
Expeditor MIKE LORENZ
Cust. PO# 5A10359
Qty. Required 14
Approved by: _____
V.S.E. reqd. (Y/N) _

Geometric characteristics & tolerances must be recorded if they fall within the following ranges:

* Form, orientation, or profile characteristics less than .002
* Positional tolerances less than +/-.0025 linear or .005 true position
* Size, concentricity, or runout tolerances less than:
  +/- .001 for features less than 8.00
  +/- .002 for features 8.00 to 24.00
  +/- .005 for features greater than 24.00

*NOTE: NONCONFORMING DIMENSIONS ARE ONLY RECORDED ON BLUE CARDS

Drawing Dimension	< < < Serial Numbers > > >					Operator Sign/Date
Plate Thk .197	.183-.185					
(7x) .376Ø	.376-.386Ø					
⌖ .001Ø A B	⌖ .006					
All other Dim.	Acceptable to Print					

Final Inspection Verification: JA Tull 7-20-06
Q.E. Sign./Date

MX1035B (7/94)

Metalex
Customized Machinery and Parts
CERTIFIED ISO 9001 QUALITY MANAGEMENT

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

Job No. 20060-5681 | Qty 7

Inspection Origin	Vendor (Sub-Tier Source) Identification		Customer Identification		
☐ Receiving ☐ In-Process ■ Final ☐ Rework/Repair ☐ First Article	Vendor Name: N/A		Part No.: L143-110801	REV: XX	P.O. Number: SA-10369
	Date Rec'd: N/A	P.O. No.: N/A	Part Name: UPPER LEFT MAGNET STRUCTURE BASE		
At Oper. 60	Serial Numbers: 12714-16 04-06-CP-2 NHA TE 07466		Customer Name: ARGONNE		

SPECIFICATION	B/P ZONE	INSPECTION METHOD / GAGE NO.	ACTUAL DIMENSION / GAGE VERIFICATION (Range of Readings or Accept Status)	QTY ACC	QTY REJ
AL CAST TOOL & JIG PLATE 2.5" PLATE	A2		CONFORMS	7	
NOTE: CLEAR ANODIZE	A1		CONFORMS	7	MTX QC 12
128 0 / -0.1	A3		5.0367 - 5.0371	7	
60	B3		60	7	
⌀4.1 THRU ⌀6.35 ↧ 17 26 PLACES	A3		4.1 6.35 x 17 (x26)	7	
⌖ 0.04 A	A3		W/IN .04	7	
195 0 / -0.1	A4		194.9374 - 194.9501	7	
165.6 ±0.1	A4		165.011 - 165.008	7	
82.8 ±0.1	A4		82.773 - 82.809	7	
12.7 ±0.1	A5		12.696 - 12.719	7	
10.8 DRILL ↧ 20.500 M12x1.25 ISO – H TAP ↧ 13.5 6 PLACES	A5		CONFORMS	7	
26 ±0.1	A5		25.996 - 26.047	7	
56 ±0.1	A6		55.973 - 56.024	7	
32 ±0.1	B6		31.973 - 32.044	7	
47 ±0.1	B5		46.941 - 47.019	7	
2X 6.35	B5		6.359 - 6.371	7	
126.9 ±0.1	B4		126.871 - 126.899	7	
20 ±0.08	B3		19.984 - 20.030	7	
5	B3		5	7	
5	B3		5	7	

STAMP	INSPECTED BY	DATE	PAGE	QTY ACC	QTY REJ
	James Kiffmeyer	7-18-06	1 OF 3	7	

MX1010 (7/98)

Metalex Customized Machinery and Parts CERTIFIED ISO 9001 QUALITY MANAGEMENT	INSPECTION PLANNING & REPORT FORM Metalex Mfg. 5750 Cornell Rd ! Cincinnati, OH 45242 ! (513) 489-0507	Job No. 2004 5681	Qty 7

Inspection Origin	Vendor (Sub-Tier Source) Identification		Customer Identification		
☐ Receiving ☐ In-Process ■ Final ☐ Rework/Repair ☐ First Article	Vendor Name: N/A		Part No.: L143-110801	REV: **	P.O. Number: 5A 10359
	Date Rec'd: N/A	P.O. No.: N/A	Part Name: UPPER LEFT MAGNET STRUCTURE BASE		
At Oper. 60	Serial Numbers: 14-16 04-06-08-10-12 N/A R 8/1/06		Customer Name: ARGONNE		

SPECIFICATION	B/P ZONE	INSPECTION METHOD / GAGE NO.	ACTUAL DIMENSION / GAGE VERIFICATION (Range of Readings or Accept Status)	QTY ACC	QTY REJ
5 HIGH CHARACTER ENGRAVE ASSEMBLY NO. AND SERIAL NO.	B3		CONFORMS	7	
5 DRILL ↓ 15 M6x1 ISO – H TAP ↓ 12.7 8 PLACES	C3		CONFORMS	7	
2X 60 ±0.1	C4		59.9948 – 60.015	7	
3X 15 ± 0.1	C5		15.001 – 15.079	7	
33 ± 0.1	C5		32.999 – 32.989	7	
10	B5		9.997 – 10.014	7	
15	B5		14.998 – 15.001	7	
10.5 ± 0.1	D5		10.55 – 10.502	7	
15 ± 0.1	D5		15.006 – 15.074	7	
12X 9.5	D5		9.438 – 9.458	7	
10X 15 ± 0.1= 150 ± 0.1	D4		14.998 – 15.001 149.991 – 150.002	7	
22X 45° X .2 FOUR SIDES	D4		.2 X 45°	7	
29 DRILL ↓ THRU 8-32 UNC-2B TAP ↓ 10 12 PLACES	D3		CONFORMS	7	
4X 45° X .2 THREE SIDES	D3		12 X 45°	7	
12	C3		12	7	
5 HIGH CHARACTER ENGRAVE MAGNET NO.	C3		CONFORMS	7	
11 X 15 ± 0.05 = 165 ± 0.05	C4		14.999 165.001	7	
15 ± 0.05	C5		14.998 – 15.003	7	
3 ± 0.05	C5		.118 – .120	7	
4.2 0 / -0.1	D2		4.150	7	

STAMP	INSPECTED BY	DATE	PAGE 2 OF 3	QTY ACC	QTY REJ
	James Giffen	7-18-06		7	

MX1010 (7/98)

Metalex
Customized Machinery and Parts
CERTIFIED ISO 9001 QUALITY MANAGEMENT

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

Job No. 2004 51681 | Qty 7

Inspection Origin	Vendor (Sub-Tier Source) Identification		Customer Identification		
☐ Receiving ☐ In-Process ■ Final ☐ Rework/Repair ☐ First Article	Vendor Name: N/A		Part No.: L143-110801	REV: **	P.O. Number: SA-10359
	Date Rec'd: N/A	P.O. No.: N/A	Part Name: UPPER LEFT MAGNET STRUCTURE BASE		
At Oper. 60	Serial Numbers: 04-06-06-R-1274-16 Alloy K eldrow		Customer Name: ARGONNE		

SPECIFICATION	B/P ZONE	INSPECTION METHOD / GAGE NO.	ACTUAL DIMENSION / GAGE VERIFICATION (Range of Readings or Accept Status)	QTY ACC	QTY REJ
45°	D2		45°	7	
(63.5)	D1		REFERENCE	7	
45° X 10	D1		10 x 45°	7	
0.5	D1		.480 - .460	7	
2X 7.94	D1		7.912 - 7.924	7	
48 ± 0.1	D1		47.904 - 48.016	7	
5/16 DRILL ⇓ 21 3/8 -16 UNC-2B TAP ⇓ 17 2 PLACES	C1		CONFORMS	7	
-A-	C1		DATUM	7	
⌭ | 0.04	C1		.014	7	
29 ±0.1	C1		29.009 - 29.022	7	
10 ± 0.1	C2		9.999 - 10.025	7	
3X 29	C2		28.997 - 29.021	7	
30 0 / -0.03	C1		29.987 - 30.015	7	
49 0 / -0.1	C1		48.961 - 48.986	7	
10 ± 0.1	C2		9.999 - 10.025	7	
27 0 / -0.1	C2		26.964 26.984	7	
67 +0.1 / 0	D2		67.010 - 67.030	7	
32	D2		31.955 32.016	7	
8 0 / -0.1	D2		7.926 - .7.975	7	
SECTION A-A					
24X 9.5 +0.05 / 0	D6		9.50 - 9.512		

STAMP	INSPECTED BY	DATE	PAGE 3 OF 3	QTY ACC	QTY REJ
	James L. Gifford	7-18-06		7	

MX1010 (7/98)

Metalex
Customized Machinery and Parts
CERTIFIED ISO 9001 QUALITY MANAGEMENT

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

Job No. 20064 5681 | Qty 7

Inspection Origin	Vendor (Sub-Tier Source) Identification		Customer Identification		
☐ Receiving ☐ In-Process ■ Final ☐ Rework/Repair ☐ First Article	Vendor Name: N/A	Date Rec'd: N/A / P.O. No.: N/A	Part No.: L143-110901	REV: XX	P.O. Number: 5A10389
			Part Name: LOWER LEFT MAGNET STRUCTURE BASE		
At Oper. 60	Serial Numbers: 04-06-08-10-12-14-16 TOP & BTM		Customer Name: ARGONNE		

SPECIFICATION	B/P ZONE	INSPECTION METHOD / GAGE NO.	ACTUAL DIMENSION / GAGE VERIFICATION (Range of Readings or Accept Status)	QTY ACC	QTY REJ
AL CAST TOOL & JIG PLATE 2.5" PLATE	A2		CONFORMS	7	
NOTE: CLEAR ANODIZE	A1		CONFORMS	7	MTX QC 12
128 0 / -0.1	A5		127.965 - 128.024	7	
60	B2		59.945 - 60.077	7	
⌀4.1 THRU ⌖ ⌀6.35 ↧ 17 26 PLACES	A4		4.1 6.35 X 17 (26X)	7	
⌖ 0.04 A	A4		.012	7	
195 0 / -0.1	A3		194.945 - 195.055	7	
165.6 ±0.1	A3		165.525 - 165.571	7	
82.8 ±0.1	A3		82.719 - 82.804	7	
12.7 ±0.1	A3		12.672 - 12.744	7	
10.8 DRILL ↧ 20.500 M12x1.25 ISO – H TAP ↧ 13.5 6 PLACES	A4		CONFORMS	7	
26 ±0.1	A4		25.999 - 26.084	7	
56 ±0.1	A5		56.003 - 56.043	7	
32 ±0.1	B5		31.987 - 32.004	7	
47 ±0.1	B4		46.981 - 47.017	7	
2X 6.35	B3		6.349 - 6.358	7	
126.9 ±0.1	B3		126.811 - 126.901	7	
20 ±0.1	B3		19.994 - 20.019	7	
5	B4		5	7	
5	B4		5	7	

STAMP	INSPECTED BY	DATE	PAGE	QTY ACC	QTY REJ
	James	7-18-06	1 OF 3	7	

Metalex
Customized Machinery and Parts
CERTIFIED ISO 9001 QUALITY MANAGEMENT

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

Job No.	Qty
	7

Inspection Origin	Vendor (Sub-Tier Source) Identification		Customer Identification		
☐ Receiving ☐ In-Process ☒ Final ☐ Rework/Repair ☐ First Article	Vendor Name: N/A		Part No.: L143-110901	REV:	P.O. Number:
	Date Rec'd: N/A	P.O. No.: N/A	Part Name: LOWER LEFT MAGNET STRUCTURE BASE		
At Oper.	Serial Numbers: 04-06-08-10-12-14-16		Customer Name: ARGONNE		

SPECIFICATION	B/P ZONE	INSPECTION METHOD / GAGE NO.	ACTUAL DIMENSION / GAGE VERIFICATION (Range of Readings or Accept Status)	QTY ACC	QTY REJ
5 HIGH CHARACTER ENGRAVE ASSEMBLY NO. AND SERIAL NO.	B4		CONFORMS	7	
5 DRILL ↓ 15 M6x1 ISO – H TAP ↓ 12.7 8 PLACES	C4		CONFORMS	7	
2X 60 ±0.1	C4		60.004 - 60.036	7	
3X 15 ± 0.1	C2		14.991 - 15.021	7	
33 ± 0.1	C2		32.971 - 33.006	7	
10	C4		10.001 - 10.020	7	
15	B4		15.007 - 15.009	7	
10.5 ± 0.1	D2		10.477 - 10.567	7	
15 ± 0.1	D2		15.007 - 15.074	7	
12X 9.5	D2		9.479 - 9.531	7	
10X 15 ± 0.1= 150 ± 0.1	D3		14.995-15.000 = 149.995 - 150.000	7	
22X 45° X .2 FOUR SIDES	D3		.2 X 45°	7	
29 DRILL ↓ THRU 8-32 UNC-2B TAP ↓ 10 12 PLACES	D4		CONFORMS	7	
4X 45° X .2 THREE SIDES	D4		.2 X 45°	7	
15.5	C4		15.5	7	
5 HIGH CHARACTER ENGRAVE MAGNET NO.	C4		CONFORMS	7	
11 X 15 ± 0.05 = 165 ± 0.05	C3		15.001-15.006 165.019-165.027	7	
15 ± 0.05	C3		14.991 - 15.014	7	
3 ± 0.05	C3		2.97 - 3.01	7	
4.2 0 / -0.1	D5		4.141 - ~~4.193~~ 4.193	7	

STAMP	INSPECTED BY	DATE	PAGE 2 OF 3	QTY ACC	QTY REJ
	James [signature]	7-18-04		7	

Metalex
Customized Machinery and Parts
CERTIFIED ISO 9001 QUALITY MANAGEMENT

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

Job No. 2006 5681 | Qty 7

Inspection Origin	Vendor (Sub-Tier Source) Identification		Customer Identification		
☐ Receiving ☐ In-Process ☒ Final ☐ Rework/Repair ☐ First Article	Vendor Name: N/A		Part No.: L143-110901	REV: A*	P.O. Number: 84103 59
	Date Rec'd: N/A	P.O. No.: N/A	Part Name: LOWER LEFT MAGNET STRUCTURE BASE		
At Oper. 60	Serial Numbers: 04-06-08-10-12-14-16		Customer Name: ARGONNE		

SPECIFICATION	B/P ZONE	INSPECTION METHOD / GAGE NO.	ACTUAL DIMENSION / GAGE VERIFICATION (Range of Readings or Accept Status)	QTY ACC	QTY REJ
45°	D6		45°	7	
(63.5)	D6		REFERENCE	7	
45° X 10	D6		10X45°	7	
0.5	D6		.469 - 490	7	
2X 7.94	D6		7.949 - 7.996	7	
48 ± 0.1	D6		48.009 - 48.027	7	
5/16 DRILL ↧ 21 3/8 -16 UNC-2B TAP ↧ 17 2 PLACES	C6		CONFORMS	7	
-A-	C6		DATUM	7	
/ / 0.04	C6		W/IN .030	7	
29 ±0.1	C6		29.006 - 29.082	7	
10 ± 0.1	C5		9.991 - 10.032	7	
3X 29	C5		28.916 - 29.201	7	
30 0 / -0.03	C6		29.988 - 29.999	7	
49 0 / -0.1	B6		48.971 - 48.995	7	
10 ± 0.1	C5		9.941 - 10.013	7	
27 0 / -0.1	C5		26.923 - 26.964	7	
67 +0.1 / 0	D5		67.014 - 67.046	7	
32	D5		32.014 - 32.031	7	
8 0 / -0.1	D5		7.954 - 7.983	7	
SECTION A-A					
24X 9.5 +0.05 / 0	D1		9.50 - 9.509	7	

STAMP	INSPECTED BY	DATE	PAGE	QTY ACC	QTY REJ
	James L.	7-18-06	3 OF 3		

MX1010 (7/98)

Metalex
Customized Machinery and Parts
CERTIFIED ISO 9001 QUALITY MANAGEMENT

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

Job No.	Qty
2006 – 5681	9

Inspection Origin	Vendor (Sub-Tier Source) Identification		Customer Identification		
☐ Receiving ☐ In-Process ■ Final ☐ Rework/Repair ☐ First Article	Vendor Name: N/A		Part No.: L143-111001	REV: 01	P.O. Number: 5A10359
	Date Rec'd: N/A	P.O. No.: N/A	Part Name: UPPER MIDDLE MAGNET STRUCTURE BASE		
At Oper.: N/A	Serial Numbers: L143-111000 / -112,-212,-312,-114,-214,-314,-116,-216,-316		Customer Name: ARGONNE		

SPECIFICATION	B/P ZONE	INSPECTION METHOD / GAGE NO.	ACTUAL DIMENSION / GAGE VERIFICATION (Range of Readings or Accept Status)	QTY ACC	QTY REJ
AL CAST TOOL & JIG PLATE 2.5" PLATE	A2		Conforms	MTX QC 16	
NOTE: 1. CLEAR ANODIZE	A1		Conforms	MTX QC 12	
NOTE 2. ONE THIRD OF THE PARTS SHOULD HAVE NUMBERS FROM 13 TO 79. ONE THIRD OF THE PARTS SHOULD HAVE NUMBERS FROM 80 TO 146. ONE THIRD OF THE PARTS SHOULD HAVE NUMBERS FROM 147 TO 213.	A2		Conforms ↓	MTX QC 16	
128 0 / -0.1	B2		127.925 - 128	MTX QC 16	
60	C3		59.982 - 60.03	MTX QC 16	
Ø4.1 THRU Ø6.35 ↓ 17 132 PLACES	B3		4.07 - 4.13 6.34 - 6.39 X 16.97 - 16.99	MTX QC 16	
⌖ 0.04 A	B3		W/in .04	MTX QC 16	
1005 0 / -0.1	A3		1004.94 - 1005	MTX QC 16	
979.6 ±0.1	B5		979.56 - 979.63	MTX QC 16	
132.55 ±0.1	B6		132.51 - 132.59	MTX QC 16	
6X 120 ±0.1	B6		119.963 - 120.035	MTX QC 16	
12.7 ±0.1	B7		12.64 - 12.725	MTX QC 16	
10.8 DRILL ↓ 20.5 M12x1.25 ISO – H TAP ↓ 13.5 18 PLACES	A4		Conforms	MTX QC 16	
26 ±0.1	B7		25.96 - 26.03	MTX QC 16	
56 ±0.1	B8		55.94 - 56.04	MTX QC 16	
32 ±0.1	C8		31.96 - 32.04	MTX QC 16	

STAMP	INSPECTED BY	DATE	PAGE	QTY ACC	QTY REJ
MTX QC 16	[signature]	9/13/06	1 OF 4	9	ø

Metalex
Customized Machinery and Parts
CERTIFIED ISO 9001 QUALITY MANAGEMENT

INSPECTION PLANNING & REPORT FORM

Metalex Mfg.
5750 Cornell Rd ! Cincinnati, OH 45242 ! (513) 489-0507

Job No.	Qty
2006 – 5681	9

Inspection Origin	Vendor (Sub-Tier Source) Identification		Customer Identification		
☐ Receiving ☐ In-Process ■ Final ☐ Rework/Repair ☐ First Article	Vendor Name: N/A		Part No.: L143-111001	REV: 01	P.O. Number: 5A10359
	Date Rec'd: N/A	P.O. No.: N/A	Part Name: UPPER MIDDLE MAGNET STRUCTURE BASE		
At Oper.: N/A	Serial Numbers: L143-111000 / -112,-212,-312,-114,-214,-314,-116,-216,-316		Customer Name: ARGONNE		

SPECIFICATION	B/P ZONE	INSPECTION METHOD / GAGE NO.	ACTUAL DIMENSION / GAGE VERIFICATION (Range of Readings or Accept Status)	QTY ACC	QTY REJ
47 ±0.1	C7		46.962 - 47.00	MTX QC 16	
2X 6.35	C7		6.317 - 6.39	MTX QC 16	
75.5 ±0.1	C6		75.47 - 75.53	MTX QC 16	
20 ±0.1	C6		19.98 - 20.01	MTX QC 16	
909.5 ± 0.1	C5		909.455 - 909.5	MTX QC 16	
20 ±0.1	C3		19.975 - 20.023	MTX QC 16	
5	C3		5	MTX QC 16	
5	C3		5	MTX QC 16	
5 HIGH CHARACTER ENGRAVE ASSEMBLY NO. AND SERIAL NO.	C3		CONFORMS	MTX QC 16	
5 DRILL ⌵ 15 M6x1 ISO – H TAP ⌵ 12.7 38 PLACES	D3		CONFORMS	MTX QC 16	
16X 60 ±0.1	D7		59.97 - 60.03	MTX QC 16	
17X 15 ± 0.1	D7		14.975 - 15.04	MTX QC 16	
18 ± 0.1	D7		17.93 - 18.035	MTX QC 16	
10	D7		9.97 - 10.04	MTX QC 16	
15	C7		14.93 - 15.05	MTX QC 16	
10.5 ± 0.1	E7		10.46 - 10.53	MTX QC 16	
15 ± 0.1	E7		14.972 - 15.023	MTX QC 16	
66X 9.5	E7		9.456 - 9545	MTX QC 16	
65X 15 ± 0.1= 975 ± 0.1	E5		14.973 15.032 = 974.98 - 975.04	MTX QC 16	
132X 45° X .2 FOUR SIDES	E7		45° X .2 FOUR SIDES	MTX QC 16	

STAMP	INSPECTED BY	DATE	PAGE	QTY ACC	QTY REJ
MTX QC 16	[signature]	9/13/04	2 OF 4	9	0

Metalex
Customized Machinery and Parts
CERTIFIED ISO 9001 QUALITY MANAGEMENT

INSPECTION PLANNING & REPORT FORM

Metalex Mfg.
5750 Cornell Rd ! Cincinnati, OH 45242 ! (513) 489-0507

Job No.	Qty
2006 – 5681	9

Inspection Origin	Vendor (Sub-Tier Source) Identification		Customer Identification		
☐ Receiving ☐ In-Process ☑ Final ☐ Rework/Repair ☐ First Article	Vendor Name: N/A		Part No.: L143-111001	REV: 01	P.O. Number: 5A10359
	Date Rec'd: N/A	P.O. No.: N/A	Part Name: UPPER MIDDLE MAGNET STRUCTURE BASE		
At Oper.: N/A	Serial Numbers: L143-111000 / -112,-212,-312,-114,-214,-314,-116,-216,-316		Customer Name: ARGONNE		

SPECIFICATION	B/P ZONE	INSPECTION METHOD / GAGE NO.	ACTUAL DIMENSION / GAGE VERIFICATION (Range of Readings or Accept Status)	QTY ACC	QTY REJ
29 DRILL ⇓ THRU 8-32 UNC-2B TAP ⇓ 10 67 PLACES	E5		CONFORMS	MTX QC 16	
2X 45° X .2 THREE SIDES	E7		45° X .2	MTX QC 16	
12	E3		12	MTX QC 16	
5 HIGH CHARACTER ENGRAVE MAGNET NO.	D3		CONFORMS	MTX QC 16	
65 X 15 ± 0.05 = 975 ± 0.05	D5		14.953 - 15.032 = 974.905 - 975.04	MTX QC 16	
15 ± 0.05	D7		14.97 - 15.02	MTX QC 16	
3 ± 0.05	D7		2.981 - 3.043	MTX QC 16	
4.2 0 / -0.1	E2		4.14 - 4.20	MTX QC 16	
45°	E1		45°	MTX QC 16	
(63.5)	E1		REFERENCE	MTX QC 16	
45° X 10	E1		45° X 10	MTX QC 16	
0.5	E1		.457 - .538	MTX QC 16	
2X 7.94	E1		7.917 - 7.993	MTX QC 16	
48 ± 0.1	E1		47.97 - 48.043	MTX QC 16	
5/16 DRILL ⇓ 21 3/8 -16 UNC-2B TAP ⇓ 17 2 PLACES	D1		CONFORMS	MTX QC 16	
-A-	D1		DATUM	MTX QC 16	
⌖ | 0.04 |	D1		W/IN .04 RESTRAINED	MTX QC 16	
29 ±0.1	D1		28.935 - 29.045	MTX QC 16	
10 ± 0.1	D2		9.975 - 10.023	MTX QC 16	
3X 29	D2		28.94 - 29.03	MTX QC 16	
30 0 / -0.03	D1		29.97 - 30	MTX QC 16	

STAMP	INSPECTED BY	DATE	PAGE	QTY ACC	QTY REJ
MTX QC 16	[signature]	9/13/06	3 OF 4	9	0

Metalex
Customized Machinery and Parts
CERTIFIED ISO 9001 QUALITY MANAGEMENT

INSPECTION PLANNING & REPORT FORM

Metalex Mfg.
5750 Cornell Rd ! Cincinnati, OH 45242 ! (513) 489-0507

Job No.	Qty
2006 – 5681	9

Inspection Origin	Vendor (Sub-Tier Source) Identification		Customer Identification		
☐ Receiving ☐ In-Process ■ Final ☐ Rework/Repair ☐ First Article	Vendor Name: N/A		Part No.: L143-111001	REV: 01	P.O. Number: 5A10359
	Date Rec'd: N/A	P.O. No.: N/A	Part Name: UPPER MIDDLE MAGNET STRUCTURE BASE		
At Oper.: N/A	Serial Numbers: L143-111000 / -112,-212,-312,-114,-214,-314,-116,-216,-316		Customer Name: ARGONNE		

SPECIFICATION	B/P ZONE	INSPECTION METHOD / GAGE NO.	ACTUAL DIMENSION / GAGE VERIFICATION (Range of Readings or Accept Status)	QTY ACC	QTY REJ
49 0 / -0.1	D1		48.946 - 48.981	MTX QC 16	
10 ± 0.1	D2		9.982 - 10.04	MTX QC 16	
27 0 / -0.1	E2		26.932 - 26.990	MTX QC 16	
67 +0.1 / 0	E2		67.0 - 67.075	MTX QC 16	
32	E2		31.958 - 32.065	MTX QC 16	
8 0 / -0.1	E2		7.947 - 8.00	MTX QC 16	
SECTION A-A					
134X 9.5 +0.05 / 0	E8		9.512 - 9.545	MTX QC 16	

STAMP	INSPECTED BY	DATE	PAGE	QTY ACC	QTY REJ
MTX QC 16	[signature]	9/13/06	4 OF 4	9	0

Metalex
Customized Machinery and Parts
CERTIFIED ISO 9001 QUALITY MANAGEMENT

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

Job No.	Qty
2006 – 5681	9

Inspection Origin	Vendor (Sub-Tier Source) Identification		Customer Identification		
☐ Receiving ☐ In-Process ■ Final ☐ Rework/Repair ☐ First Article	Vendor Name: N/A		Part No.: L143-111101	REV: 01	P.O. Number: 5A10359
	Date Rec'd: N/A	P.O. No.: N/A	Part Name: LOWER MIDDLE MAGNET STRUCTURE BASE		
At Oper.: N/A	Serial Numbers: L143-111100 / -112,-212,-312,-114,-214,-314,-116,-216,-316		Customer Name: ARGONNE		

SPECIFICATION	B/P ZONE	INSPECTION METHOD / GAGE NO.	ACTUAL DIMENSION / GAGE VERIFICATION (Range of Readings or Accept Status)	QTY ACC	QTY REJ
AL CAST TOOL & JIG PLATE 2.5" PLATE	A2		CONFORMS	MTX QC 16	
NOTE: 1. CLEAR ANODIZE	A1		CONFORMS	MTX QC 12	
NOTE 2. ONE THIRD OF THE PARTS SHOULD HAVE NUMBERS FROM 13 TO 79. ONE THIRD OF THE PARTS SHOULD HAVE NUMBERS FROM 80 TO 146. ONE THIRD OF THE PARTS SHOULD HAVE NUMBERS FROM 147 TO 213.	A2		CONFORMS	MTX QC 16	
128 0 / -0.1	B1		127.93 - 127.99	MTX QC 16	
60	C2		59.97 - 60.02	MTX QC 16	
⌀4.1 THRU ⌀6.35 ↧ 17 132 PLACES	B2		4.018 - 4.140 6.325 - 6.370 X 16.967 - 17.031	MTX QC 16	
⌖ 0.04 A	B6		WITH .04	MTX QC 16	
1005 0 / -0.1	B4		1004.94 - 1005	MTX QC 16	
979.6 ±0.1	B4		979.54 - 979.63	MTX QC 16	
132.55 ±0.1	B3		132.48 - 132.62	MTX QC 16	
6X 120 ±0.1	B4		119.99 - 120.04	MTX QC 16	
12.7 ±0.1	B2		12.67 - 12.74	MTX QC 16	
10.8 DRILL ↧ 20.5 M12x1.25 ISO – H TAP ↧ 13.5 18 PLACES	B6		CONFORMS	MTX QC 16	
26 ±0.1	B7		25.97 - 26.03	MTX QC 16	
56 ±0.1	B7		55.98 - 56.04	MTX QC 16	
32 ±0.1	C7		31.95 - 32.04	MTX QC 16	

STAMP	INSPECTED BY	DATE	PAGE	QTY ACC	QTY REJ
MTX QC 16	[signature]	9/13/06	1 OF 4	9	0

Metalex
Customized Machinery and Parts
CERTIFIED ISO 9001 QUALITY MANAGEMENT

INSPECTION PLANNING & REPORT FORM

Metalex Mfg.
5750 Cornell Rd ! Cincinnati, OH 45242 ! (513) 489-0507

Job No.	Qty
2006 – 5681	9

Inspection Origin	Vendor (Sub-Tier Source) Identification		Customer Identification		
☐ Receiving ☐ In-Process ■ Final ☐ Rework/Repair ☐ First Article	Vendor Name: N/A		Part No.: L143-111101	REV: 01	P.O. Number: 5A10359
	Date Rec'd: N/A	P.O. No.: N/A	Part Name: LOWER MIDDLE MAGNET STRUCTURE BASE		
At Oper.: N/A	Serial Numbers: L143-111100 / -112,-212,-312,-114,-214,-314,-116,-216,-316		Customer Name: ARGONNE		

SPECIFICATION	B/P ZONE	INSPECTION METHOD / GAGE NO.	ACTUAL DIMENSION / GAGE VERIFICATION (Range of Readings or Accept Status)	QTY ACC	QTY REJ
47 ±0.1	C7		46.97 - 47.025	MTX QC 16	
2X 6.35	C2		6.32 - 6.37	MTX QC 16	
75.5 ±0.1	C3		75.47 - 75.552	MTX QC 16	
20 ±0.1	C3		19.955 - 20.042	MTX QC 16	
909.5 ± 0.1	C4		909.473 - 909.525	MTX QC 16	
20 ±0.1	C6		19.945 - 20.038	MTX QC 16	
5	C6		5	MTX QC 16	
5	C6		5	MTX QC 16	
5 HIGH CHARACTER ENGRAVE ASSEMBLY NO. AND SERIAL NO.	C6		Conforms	MTX QC 16	
5 DRILL ↓ 15 M6x1 ISO – H TAP ↓ 12.7 38 PLACES	D4		Conforms	MTX QC 16	
16X 60 ±0.1	D2		59.972 - 60.055	MTX QC 16	
17X 15 ± 0.1	D2		14.983 - 15.048	MTX QC 16	
18 ± 0.1	D2		17.948 - 18.052	MTX QC 16	
10	D6		9.97 - 10.04	MTX QC 16	
15	C7		14.982 - 15.054	MTX QC 16	
10.5 ± 0.1	E2		10.442 - 10.55	MTX QC 16	
15 ± 0.1	E2		14.96 - 15.04	MTX QC 16	
66X 9.5	E2		9.44 - 9.49	MTX QC 16	
65X 15 ± 0.1= 975 ± 0.1	E4		14.962 - 15.033 = 974.94 - 975.032	MTX QC 16	
132X 45° X .2 FOUR SIDES	E2		45° X .2	MTX QC 16	

STAMP	INSPECTED BY	DATE	PAGE	QTY ACC	QTY REJ
MTX QC 16	[signature]	9/13/06	2 OF 4	9	0

Metalex
Customized Machinery and Parts
CERTIFIED ISO 9001 QUALITY MANAGEMENT

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

Job No.	Qty
2006 – 5681	9

Inspection Origin	Vendor (Sub-Tier Source) Identification		Customer Identification		
☐ Receiving ☐ In-Process ■ Final ☐ Rework/Repair ☐ First Article	Vendor Name: N/A		Part No.: L143-111101	REV: 01	P.O. Number: 5A10359
	Date Rec'd: N/A	P.O. No.: N/A	Part Name: LOWER MIDDLE MAGNET STRUCTURE BASE		
At Oper.: N/A	Serial Numbers: L143-111100 / -112,-212,-312,-114,-214,-314,-116,-216,-316		Customer Name: ARGONNE		

SPECIFICATION	B/P ZONE	INSPECTION METHOD / GAGE NO.	ACTUAL DIMENSION / GAGE VERIFICATION (Range of Readings or Accept Status)	QTY ACC	QTY REJ
29 DRILL ⇓ THRU 8-32 UNC-2B TAP ⇓ 10 67 PLACES	E5		CONFORMS	MTX QC 16	
2X 45° X .2 THREE SIDES	E2		45° X .2	MTX QC 16	
15.5	E3		15.5	MTX QC 16	
5 HIGH CHARACTER ENGRAVE MAGNET NO.	D6		CONFORMS	MTX QC 16	
65 X 15 ± 0.05 = 975 ± 0.05	D5		14.963-15.022=974.97-976.032	MTX QC 16	
15 ± 0.05	D2		14.972-15.023	MTX QC 16	
9.25	E6		9.25	MTX QC 16	
3 ± 0.05	D2		2.983-3.022	MTX QC 16	
4.2 0 / -0.1	E7		4.127-4.192	MTX QC 16	
45°	E8		45°	MTX QC 16	
(63.5)	E8		REFERENCE	MTX QC 16	
45° X 10	E8		45°X10	MTX QC 16	
0.5	E8		475-.541	MTX QC 16	
2X 7.94	E8		7.920-7.980	MTX QC 16	
48 ± 0.1	E8		47.93-48.075	MTX QC 16	
5/16 DRILL ⇓ 21 3/8 -16 UNC-2B TAP ⇓ 17 2 PLACES	D7		CONFORMS	MTX QC 16	
-A-	D8		DATUM	MTX QC 16	
⌭ | 0.04	D8		WITH 04 (RESTRAINED)	MTX QC 16	
29 ±0.1	D8		28.935-29.076	MTX QC 16	
10 ± 0.1	D7		9.94-10.07	MTX QC 16	
3X 29	D7		28.956-29.068	MTX QC 16	

STAMP	INSPECTED BY	DATE	PAGE	QTY ACC	QTY REJ
MTX QC 16	[signature]	9/15/06	3 OF 4	9	0

Metalex
Customized Machinery and Parts
CERTIFIED ISO 9001 QUALITY MANAGEMENT

INSPECTION PLANNING & REPORT FORM

Metalex Mfg.
5750 Cornell Rd ! Cincinnati, OH 45242 ! (513) 489-0507

Job No.	Qty
2006 – 5681	9

Inspection Origin	Vendor (Sub-Tier Source) Identification		Customer Identification		
☐ Receiving ☐ In-Process ■ Final ☐ Rework/Repair ☐ First Article	Vendor Name: N/A		Part No.: L143-111101	REV: 01	P.O. Number: 5A10359
	Date Rec'd: N/A	P.O. No.: N/A	Part Name: LOWER MIDDLE MAGNET STRUCTURE BASE		
At Oper.: N/A	Serial Numbers: L143-111100 / -112,-212,-312,-114,-214,-314,-116,-216,-316		Customer Name: ARGONNE		

SPECIFICATION	B/P ZONE	INSPECTION METHOD / GAGE NO.	ACTUAL DIMENSION / GAGE VERIFICATION (Range of Readings or Accept Status)	QTY ACC	QTY REJ
30 0 / -0.03	D8		29.972 - 30.0	MTX QC 16	
49 0 / -0.1	D8		48.94 - 48.976	MTX QC 16	
10 ± 0.1	E8		9.935 - 10.042	MTX QC 16	
27 0 / -0.1	E7		26.94 - 26.98	MTX QC 16	
67 +0.1 / 0	E7		67 - 67.08	MTX QC 16	
32	E7		31.94 - 32.072	QC 16	
8 0 / -0.1	E7		7.93 - 7.982	MTX QC 16	
SECTION A-A					
134X 9.5 +0.05 / 0	E1		9.5 - 9.54	MTX QC 16	

STAMP	INSPECTED BY	DATE	PAGE	QTY ACC	QTY REJ
MTX QC 16		9/13/06	4 OF 4	9	0

Metalex
Customized Machinery and Parts
CERTIFIED ISO 9001 QUALITY MANAGEMENT

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

Job No. 2006-5681 | Qty 7

Inspection Origin	Vendor (Sub-Tier Source) Identification		Customer Identification		
☐ Receiving ☐ In-Process ■ Final ☐ Rework/Repair ☐ First Article	Vendor Name: N/A		Part No.: L143-111201	REV:	P.O. Number: SA10259
	Date Rec'd: N/A	P.O. No.: N/A	Part Name: UPPER RIGHT MAGNET STRUCTURE BASE		
At Oper.: 60	Serial Numbers: 04-06-08-10-12-14-16		Customer Name: ARGONNE		

SPECIFICATION	B/P ZONE	INSPECTION METHOD / GAGE NO.	ACTUAL DIMENSION / GAGE VERIFICATION (Range of Readings or Accept Status)	QTY ACC	QTY REJ
AL CAST TOOL & JIG PLATE 2.5" PLATE	A2		CONFORMS	7	
NOTE: CLEAR ANODIZE	A1		CONFORMS	7	MTX QC 12
128 0 / -0.1	A3		127.923 - 127.979	7	
60	B3		59.991 - 60.007	7	
⌀4.1 THRU ⌴ ⌀6.35 ⇓ 17 24 PLACES	A3		4.1 6.35 X17 24 PLACES	7	
⌖ 0.04 A	A3		.019	7	
189 0 / -0.1	A4		188.961 - 188.999	7	
154.6 ±0.1	A4		154.573 - 155.609	7	
77.3 ±0.1	A4		77.284 77.314	7	
12.7 ±0.1	A3		12.691 - 12.712	7	
10.8 DRILL ⇓ 20.500 M12x1.25 ISO – H TAP ⇓ 13.5 6 PLACES	A5		CONFORMS	7	
26 ±0.1	A5		26.004 - 26.017	7	
56 ±0.1	A6		55.941 - 55.987	7	
32 ±0.1	B6		31.965 - 31.994	7	
47 ±0.1	B5		47.014 47.055	7	
50.35 ±0.1	B5		50.33 - 50.36	7	
20 ±0.1	B4		20.006 - 20.019	7	
5	B3		5	7	
5	B3		5	7	
5 HIGH CHARACTER ENGRAVE ASSEMBLY NO. AND SERIAL NO.	B3		CONFORMS	7	

STAMP	INSPECTED BY	DATE	PAGE 1 OF 3	QTY ACC	QTY REJ
	James Siffo	7-18-06		7	—

Metalex
Customized Machinery and Parts
CERTIFIED ISO 9001 QUALITY MANAGEMENT

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

Job No. 2006-5681 | Qty 7

Inspection Origin	Vendor (Sub-Tier Source) Identification		Customer Identification		
☐ Receiving ☐ In-Process ■ Final ☐ Rework/Repair ☐ First Article	Vendor Name: N/A		Part No.: L143-111201	REV:	P.O. Number: 5A10359
	Date Rec'd: N/A	P.O. No.: N/A	Part Name: UPPER RIGHT MAGNET STRUCTURE BASE		
At Oper. 60	Serial Numbers: 04-06-08-10-12-14-16		Customer Name: ARGONNE		

SPECIFICATION	B/P ZONE	INSPECTION METHOD / GAGE NO.	ACTUAL DIMENSION / GAGE VERIFICATION (Range of Readings or Accept Status)	QTY ACC	QTY REJ
5 DRILL ⇓ 15 M6x1 ISO – H TAP ⇓ 12.7 8 PLACES	C3		CONFORMS	7	
2X 60 ±0.1	C4		59.991 - 60.047	7	
3X 15 ± 0.1	C5		14.973 - 15.011	7	
27 ± 0.1	C5		26.989 - 27.017	7	
10	B5		9.9 - 10.1	7	
15	B5		15.1 - 15.2	7	
4.5 ± 0.1	D3		4.496 - 4.509	7	
15 ± 0.1	D3		15.004 15.046	7	
12X 9.5	D5		9.4 - 9.6	7	
10X 15 ± 0.1= 150 ± 0.1	D4		14.991-15.004 149.996-150.009	7	
22X 45° X .2 FOUR SIDES	D4		.2 X 45°	7	
29 DRILL ⇓ THRU 8-32 UNC-2B TAP ⇓ 10 12 PLACES	D3		CONFORMS	7	
2X 45° X .2 THREE SIDES	D5		.2 X 45°	7	
10	C3			7	
5 HIGH CHARACTER ENGRAVE MAGNET NO.	C3		CONFORMS	7	
10 X 15 ± 0.05 = 150 ± 0.05	C4		15.991-15.995 149.995-150.004	7	
15 ± 0.05	C3		15.001 - 15.021	7	
12 ± 0.05	C3		12.009 - 12.014	7	
4.2 0 / -0.1	D2		4.191 - 4.244	7	
45°	D2		45°	7	
(63.5)	D1		REFERENCE	7	

STAMP	INSPECTED BY	DATE	PAGE	QTY ACC	QTY REJ
	James Diffee	7-18-06	2 OF 3	7	

Metalex
Customized Machinery and Parts
CERTIFIED ISO 9001 QUALITY MANAGEMENT

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

Job No.	Qty
2006-5681	7

Inspection Origin	Vendor (Sub-Tier Source) Identification		Customer Identification		
☐ Receiving ☐ In-Process ■ Final ☐ Rework/Repair ☐ First Article	Vendor Name: N/A		Part No.: L143-111201	REV:	P.O. Number: 5A10359
	Date Rec'd: N/A	P.O. No.: N/A	Part Name: UPPER RIGHT MAGNET STRUCTURE BASE		
At Oper.: 60	Serial Numbers: -04-04-08-10-12-14-16		Customer Name: ARGONNE		

SPECIFICATION	B/P ZONE	INSPECTION METHOD / GAGE NO.	ACTUAL DIMENSION / GAGE VERIFICATION (Range of Readings or Accept Status)	QTY ACC	QTY REJ
45° X 10	D1		45° X10	7	
0.5	D1		.49-.51	7	
2X 7.94	D1		7.93 - 7.95	7	
48 ± 0.1	D1		48.014 - 48.026	7	
5/16 DRILL ⇓ 21 3/8 -16 UNC-2B TAP ⇓ 17 2 PLACES	C1		CONFORMS	7	
-A-	C1		DATUM	7	
⌖ Ⓜ 0.04	C1		W/IN .030	7	
29 ±0.1	C1		29.009 - 29.046	7	
10 ± 0.1	C2		9.984 - 10.003	7	
3X 29	C2		28.8 - 29.1	7	
30 0 / -0.03	C1		29.988 - 29.996	7	
49 0 / -0.1	C1		48.956 - 48.977	7	
10 ± 0.1	C2		9.994 - 10.027	7	
27 0 / -0.1	C2		26.974 - 26.983	7	
67 +0.1 / 0	D2		67.046 - 67.073	7	
32	D2		32.013 - 32.021	7	
8 0 / -0.1	D2		7.991 7.995	7	
SECTION A-A					
24X 9.5 +0.05 / 0	D6		9.521 - 9.532	7	

STAMP	INSPECTED BY	DATE	PAGE3 OF3	QTY ACC	QTY REJ
	James L Hoffman	7-19-06		7	—

Metalex Customized Machinery and Parts CERTIFIED ISO 9001 QUALITY MANAGEMENT	INSPECTION PLANNING & REPORT FORM Metalex Mfg. 5750 Cornell Rd ! Cincinnati, OH 45242 ! (513) 489-0507	Job No. 2006 5681	Qty 7

Inspection Origin	Vendor (Sub-Tier Source) Identification		Customer Identification		
☐ Receiving ☐ In-Process ■ Final ☐ Rework/Repair ☐ First Article	Vendor Name N/A		Part No. L143-111301	REV	P.O. Number 5A10359
	Date Rec'd N/A	P.O. No. N/A	Part Name LOWER RIGHT MAGNET STRUCTURE BASE		
At Oper. 60	Serial Numbers: 0-4-06-08-010-12-14-16		Customer Name ARGONNE		

SPECIFICATION	B/P ZONE	INSPECTION METHOD / GAGE NO.	ACTUAL DIMENSION / GAGE VERIFICATION (Range of Readings or Accept Status)	QTY ACC	QTY REJ
AL CAST TOOL & JIG PLATE 2.5" PLATE	A2		CONFORMS	7	
NOTE: CLEAR ANODIZE	A1		Conforms	7	MTX QC 12
128 0 / -0.1	A5		127.943 - 127.974	7	
60	B2		59.7 - 60.1	7	
⌀4.1 THRU ⌀6.35 ↓ 17 24 PLACES	B4		4.1 6.35 X 17 (26X)	7	
0.04 A	A4		.010	7	
189 0 / -0.1	A3		188.914 - 188.937	7	
154.6 ±0.1	A3		154.609 - 154.623	7	
77.3 ±0.1	A4		77.25 - 77.38	7	
12.7 ±0.1	A4		12.695 - 12.699	7	
10.8 DRILL ↓ 20.5 M12x1.25 ISO – H TAP ↓ 13.5 6 PLACES	A4		CONFORMS	7	
26 ±0.1	A4		26.004 - 26.021	7	
56 ±0.1	A4		55.994 - 56.009	7	
32 ±0.1	B4		31.976 - 31.992	7	
47 ±0.1	B4		47.013 - 47.027	7	
50.35 ±0.1	B3		50.33 - 50.36	7	
20 ±0.1	B3		20.019 - 20.027	7	
5	B4		5	7	
5	B4		5	7	
5 HIGH CHARACTER ENGRAVE ASSEMBLY NO. AND SERIAL NO.	B4		CONFORMS	7	

STAMP	INSPECTED BY	DATE	PAGE 1 OF 3	QTY ACC	QTY REJ
	James [signature]	7-18-06		7	

MX1010 (7/98)

Metalex
Customized Machinery and Parts
CERTIFIED ISO 9001 QUALITY MANAGEMENT

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

Job No. 2006 5681 | Qty 7

Inspection Origin	Vendor (Sub-Tier Source) Identification		Customer Identification		
☐ Receiving ☐ In-Process ☒ Final ☐ Rework/Repair ☐ First Article	Vendor Name: N/A		Part No.: L143-111301	REV:	P.O. Number: 5A10359
	Date Rec'd: N/A	P.O. No.: N/A	Part Name: LOWER RIGHT MAGNET STRUCTURE BASE		
At Oper.: 60	Serial Numbers: -04-06-09,-10-17-14-16		Customer Name: ARGONNE		

SPECIFICATION	B/P ZONE	INSPECTION METHOD / GAGE NO.	ACTUAL DIMENSION / GAGE VERIFICATION (Range of Readings or Accept Status)	QTY ACC	QTY REJ
5 DRILL ⇓ 15 M6x1 ISO – H TAP ⇓ 12.7 8 PLACES	C4		CONFORMS	7	
2X 60 ±0.1	C3		59.987 - 59.999	7	
3X 15 ± 0.1	C3		14.995 - 15.004	7	
27 ± 0.1	C3		26.992 - 26.997	7	
10	B4		9.9 - 10.1	7	
15	B3		14.95 - 15.02	7	
4.5 ± 0.1	D4		4.465 - 4.504	7	
15 ± 0.1	D4		14.967 - 15.021	7	
12X 9.5	D3		9.470 - 9.520	7	
10X 15 ± 0.1 = 150 ± 0.1	D3		14.991 - 15.009 = 150.001 - 150.09	7	
22X 45° X .2 FOUR SIDES	D3		.2 X 45	7	
29 DRILL ⇓ THRU 8-32 UNC-2B TAP ⇓ 10 12 PLACES	D4		CONFORMS	7	
2X 45° X .2 THREE SIDES	D2		.2 X 45	7	
17	C4		16.95 - 17.01	7	
5 HIGH CHARACTER ENGRAVE MAGNET NO.	C4		CONFORMS	7	
10 X 15 ± 0.05 = 150 ± 0.05	C3		14.997 - 15.003 = 150.002 - 150.009	7	
15 ± 0.05	C4		14.999 - 15.005	7	
12 ± 0.05	C4		11.995 - 12.004	7	
4.2 0 / -0.1	D5		4.196 - 4.204	7	
45°	D6		45°	7	
(63.5)	D6		REFERENCE	7	

STAMP	INSPECTED BY	DATE	PAGE2 OF3	QTY ACC	QTY REJ
	James Miller	7-18-06		7	

Metalex
Customized Machinery and Parts
CERTIFIED ISO 9001 QUALITY MANAGEMENT

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

Job No. 2004-5681
Qty 7

Inspection Origin	Vendor (Sub-Tier Source) Identification		Customer Identification		
☐ Receiving ☐ In-Process ■ Final ☐ Rework/Repair ☐ First Article	Vendor Name: N/A		Part No.: L143-111301	REV:	P.O. Number: 54 10359
	Date Rec'd: N/A	P.O. No.: N/A	Part Name: LOWER RIGHT MAGNET STRUCTURE BASE		
At Oper.: 60	Serial Numbers: -04-06-09-010-12-014-016		Customer Name: ARGONNE		

SPECIFICATION	B/P ZONE	INSPECTION METHOD / GAGE NO.	ACTUAL DIMENSION / GAGE VERIFICATION (Range of Readings or Accept Status)	QTY ACC	QTY REJ
45° X 10	D6		10 X 45°	7	
0.5	D6		.490-.510	7	
2X 7.94	D6		7.939 - 7.941	7	
48 ± 0.1	C6		47.981 - 47.991	7	
5/16 DRILL ↓ 21 3/8 -16 UNC-2B TAP ↓ 17 2 PLACES	C6		CONFORMS	7	
-A-	C6		DATUM	7	
⌭ / 0.04	C6		W/IN .030	7	
29 ±0.1	C6		28.990 - 29.010	7	
10 ± 0.1	C5		9.976 - 10.014	7	
3X 29	C5		28.9 - 29.1	7	
30 0 / -0.03	C6		29.990 - 29.995	7	
49 0 / -0.1	C6		48.971 - 48.985	7	
10 ± 0.1	C5		10.014 - 10.021	7	
27 0 / -0.1	C5		26.943 - 26.971	7	
67 +0.1 / 0	D5		67.033 - 67.057	7	
32	D5		31.95 - 32.01	7	
8 0 / -0.1	D5		7.976 - 7.992	7	
SECTION A-A					
24X 9.5 +0.05 / 0	D1		9.509 - 9.514	7	

STAMP	INSPECTED BY	DATE	PAGE 3 OF 3	QTY ACC	QTY REJ
	James Siff	7-18-06		7	

MX1010 (7/98)