#1-- INSIDE Pkg - Cust Copy

Metalex Manufacturing Inc.

Metalex

Certified ISO 9001 Quality Management
Veteran Owned Business 30 Plus Years

Packing List# 40547 **Rel#** 1 **PAGE** 1
Metalex Job# 2006-6400

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

Date: 5/24/07
Ship Via: SHIP IN PLACE
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	19	1		LCLS UNDULATOR MAIN ASSY ANL PART/REVISION NUMBER: L143-112000 REV.5 SLAC PART NUMBER: SA-381-001-35 ASSEMBLY SERIAL NUMBER: 5A10359-39 STRONGBACK SERIAL NUMBER: 5A0699-39 THE FOLLOWING BOM ITEMS ARE LOOSE PARTS PACKAGED WITHIN THIS CRATE, BUT NOT ASSEMBLED TO THE MAIN STRUCTURE: ITEM# 12 L143-110109 BRACKET 1 QTY-10 ITEM# 13 L143-110110 BRACKET 2 QTY-10 ITEM# 14 L143-110111 SCREW QTY-40 ITEM# 17 91292A122 SHCS M4X0.7X25MM LG QTY-20 ITEM# 18 91292A135 SHCS M6X1.0X16MM LG QTY-20 ITEM# 24 L143-110703 PEAK FIELD SHIM QTY-20 PLEASE ENSURE THESE ITEMS ARE ACCOUNTED FOR WHEN MAIN STRUCTURE IS REMOVED FROM CRATE. -CERTIFICATE OF CONFORMANCE, INSPECTION DATA, AND CERTIFICATIONS ENCLOSED. ANL SOURCE: SIGNATURE: Marion M White DATE: 24 May 07 PRINT: MARION M. WHITE STAMP:

Thank You 5/24/07
Sincerely

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: 05/23/2007

Customer: Argonne National Laboratory
9700 S. Cass
Argonne, IL 60439

Attention: Michael Oprondek

Metalex Job# 2006-6400
Purchase Order # 5A10359
MX Packing List # 40547

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	5A10359-39

*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: 5A10359-39

MTX QC 20

Metalex Representative Signature

Thomas Clark
Print Name

5/23/07
Date

MX1011 (05/05)

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 Schuerman **Date:** 02/27/06

ROB SCHUERMANN

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

LCLS Undulator L143-00076 Assembly Procedure

Assembly:

ANL Part/Revision Number: L143-112000-05
SLAC Part Number: SA-381-001-35
Assembly Serial Number: 5A10359-39

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: 77.97
L143-111000 Upper Middle Magnet Structure Assembly	Actual: 77.99
L143-111200 Upper Right Magnet Structure Assembly	Actual: 77.98
L143-110900 Lower Left Magnet Structure Assembly	Actual: 77.97
L143-111100 Lower Middle Magnet Structure Assembly	Actual: 77.99
L143-111300 Lower Right Magnet Structure Assembly	Actual: 77.97

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 A Becker **Date:** 4.3.07

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	Thomas P Becker	4.3.07
2	Check Strongback is marked with serial number & part no.'s (ANL & SLAC) per SOW Section 4.1.3	Undulator Ass'y Contractor	Thomas P Becker	4.3.07
3	Check all accompanying Certifications have correct part Serial number.	Undulator Ass'y Contractor	Thomas Clark MTX QC 20	5/23/07
4	Check Material Certification for compliance with ASTM B381-03, Grade F2	Undulator Ass'y Contractor & ANL	Thomas Clark MTX QC 20	5/23/07
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	Thomas Clark MTX QC 20	5/23/07
6	Check Rough Machining Anneal Certification for annealing conformance to AMS 2801B section3.2.9	Undulator Ass'y Contractor & ANL	Thomas Clark MTX QC 20	5/23/07
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	Thomas P Becker	4.3.07
	L143-112000-05			
	SA-381-001-35			
	5A10359-39			

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

16. PLAN REVIEWED/APPROVED BY DATE

17. QAR CONCURRENCE WITH PLAN DATE

Metalex Manufacturing Inc.

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

#1-- INSIDE Pkg - Cust Copy

Packing List# 40437 **Rel#** 1 **PAGE** 1
Metalex Job# 2006-6733

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

Date: 5/03/07
Ship Via: SHIP IN PLACE
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
005	5	1		L143-110700 REV. 07 STRONGBACK S/N: 5A06990-39 -CERTIFICATE OF CONFORMANCE, INSPECTION DATA, AND CERTIFICATIONS ENCLOSED. REF: SDR'S #3801-004 & #3801-006 TESTING SURVEILLANCE BY ANL HAS BEEN WAIVED PER MEETING BETWEEN TOM BARAZ (ANL QUALITY) & ROB SCHUERMANN (MX PROJECT ENGINEER)

Ship in Place.
5/4/07

Received By:

Printed Name _____ Signature _____ Date _____

Total Customer Satisfaction
Veteran Owned Business 30 Plus Years
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: 5/04/2007

Customer: Argonne National Laboratory
Bldg. 201, OCF-PRO
9700 S Cass Ave.
Argonne, Illinois 60439

Attention: Michael Oprondek

Metalex Job# 2006-6733
Purchase Order # 5A06990
MX Packing List # 40437

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 # *
005	1	L143-110700	07	Strongback	5A06990-39

*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.

Manufactured from Argonne supplied raw material - Metalex picked up material from Dial Machine, Inc. (Rockford, IL)

Reference SDR# 3801-004 (Modification) & SDR# 3801-006 (Modification).

Testing Surveillance by ANL has been wavied per meeting between Tom Barsz (ANL Quality) & Rob Schuermann

(MX Project Engineer).

Metalex Representative Signature | Thomas Clark Print Name | 5/4/07 Date

MX1011 (05/05)

Argonne National Laboratory Undulator Project

PO# 5A-06990 PO Modification M0011 Business Plan

Buyer: Michael Oprondek

Metalex Quote# 2005-98786		Qty	
L143-110700	STRONGBACK, MACH COMPLETE	5	$29980.00
L143-110700	CRATE CHARGE	5	$1880.00
L143-110700	SHIP CHARGE TO CHICAGO	1	$1800.00

PO Modification M0011

(5) finished L143-110700 Strongback details completed on PO# 5A-06990 are to be shipped to Argonne supplier HI-TECH MANUFACTURING, at 4637 N. 25TH AVENUE, SCHILLER PARK, IL 60176, phone: 847-678-1616, fax: 847-678-1617. Metalex is responsible for pre-paid trucking.

(5) pieces of Argonne owned raw material that can make finished L143-110700 Strongback details are to be picked up from Argonne supplier Dial Machine, Inc. at Eastrock Industrial Park, 2902 Eastrock Drive, P.O. Box 5246, Rockford, IL 61109, phone: 815/397-6660, fax: 815/397-0562. Metalex is responsible for pre-paid trucking.

The (5) pieces of Argonne owned raw material need to be finish machined into (5) L143-110700 Rev.#7 Strongback details. These (5) L143-110700 Rev.#7 Strongback will support the Undulator assemble project on PO# 5A-10359. Note: the Undulator Assembly Project on PO# 5A-10359 planned on using the serial numbers of the (5) finished L143-110700 Strongback that are shipping to HI-TECH MANUFACTURING. Metalex will need to change the serials numbers that will now be used on the applicable Undulator assemble jobs.

Five (5) new job numbers to be issued for the completion of (5) finished L143-110700 Rev.#7 Strongback details.

Delivery of these (5) new L143-110700 Rev.#7 Strongback details needs to support the build of Undulator assemble jobs ~~2006-6396,~~ 2006-6397, 2006-6398, 2006-6399 and 2006-6400.

06-5725 9w 11/8/06

(5) finished L143-110700 Strongback from PO# 5A-06990 to be shipped to HI-TECH MANUFACTURING are:

Job# 2005-3816 Serial No. 5A06990-32 Stored at MX3
Job# 2005-3817 Serial No. 5A06990-34 Stored at MX3
Job# 2005-3818 Serial No. 5A06990-36 Stored at MX3
Job# 2005-3819 Serial No. 5A06990-38 Stored at MX3
Job# 2005-3820 Serial No. 5A06990-40 Stored at MX3

Rob Schuermann 11/08/06

Schuermann, Rob

From: Glen Lawrence [gsl@aps.anl.gov]
Sent: Monday, November 20, 2006 5:26 PM
To: Schuermann, Rob
Subject: RE: serial numbers for (5) more Strongback details

Rob,

I assume that the two with 519211-087-1 on them are S/N 29 and 31; and the remaining three are S/N 33, 35 and 39. I have sent an e-mail to Steve Lewis at Dial for confirmation on my assumptions.

The material certs I have for S/N 37 indicate that it is for a lot of four, S/N 33, 35, 37 and 39 so that fits my assumptions. The material certs I have for S/N 25 indicate that it is for a lot of six, S/N 21, 23, 25, 27, 29,and 31 and that fits also.
So lets assume I am correct as I don't see how it could be otherwise.

The lot identified as 519211-087-1 is S/N 29 and 31 and has the same material certs as S/N 25
The lot identified as 519211-089-1 is S/N 33, 35, and 39 and has the same material certs as S/N 37

Glen

From: Schuermann, Rob [mailto:schuermann@metalexmfg.com]
Sent: Monday, November 20, 2006 3:01 PM
To: Schuermann, Rob; Glen Lawrence; Marion M. White; Emil Trakhtenberg; Tom Barsz
Cc: Dufresne, Scott; Kordenbrock, Nancy
Subject: RE: serial numbers for (5) more Strongback details

Glen,

Is there any direction on this yet?

Thanks,

Rob

From: Schuermann, Rob
Sent: Friday, November 17, 2006 10:04 AM
To: 'Glen Lawrence'
Cc: Dufresne, Scott; Kordenbrock, Nancy
Subject: RE: serial numbers for (5) more Strongback details

Glen,

The bars of material from Dial Machine are not marked with project serials numbers per the SOW.

The only markings on the bars are as follows:

519211-087-1 on (2) pieces and 519211-089-1 on (3) pieces. Does Argonne are traceability of raw material and anneal certifications back to these identifications?

Which serial numbers are to be assigned to 519211-087-1 and which to 519211-089-1?

See attached for the documentation that was sent to us with the (5) bars of material.

Thanks,

Rob Schuermann

From: Glen Lawrence [mailto:gsl@aps.anl.gov]
Sent: Thursday, November 09, 2006 10:03 AM
To: Schuermann, Rob
Subject: RE: serial numbers for (5) more Strongback details

Rob,
The serial numbers assigned by Dial were 29, 31, 33, 35, and 39 and are probably marked on the bars with a felt marker at this time While we could change the S/N of the bars, I see no particular reason to do so at this time.
Glen

From: Schuermann, Rob [mailto:schuermann@metalexmfg.com]
Sent: Wednesday, November 08, 2006 3:18 PM
To: Glen Lawrence
Subject: serial numbers for (5) more Strongback details

Glen,

What will be the serial numbers for the (5) Strongback details that Metalex will be machining from the stock coming from Dial?

Also, documentation package for (6) units will be at your place tomorrow.

Thanks,

Rob

THIS MEMORANDUM is an acknowledgement that a Bill of Lading has been issued and is not the Original Bill of Lading, nor a copy or duplicate, covering the property named herein, and is intended solely for filing or record.

RECEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of receipt by the carrier of the property described of this Original Bill of Lading.

DESIGNATE WITH AN (X)
BY TRUCK ☐ FREIGHT ☐

The property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned and destined as indicated below, which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that any service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Uniform Freight Classification in effect on the date hereof, if this is a rail or a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

From DIAL MACHINE, INC.
At 2902 Eastrock Drive • Rockford, IL 61109 (6728)

DATE: 11/16/06
SHIPPER'S NO: 21279

CARRIER
BY: Their Truck
CARRIER'S NO.

CONSIGNEE AND DESTINATION:
Metafex Mfg. Inc.
5750 Cornell Road
Cincinnati, OH 45242

ROUTE
DELIVERING CARRIER

CAR OR VEHICLE INITIALS & NO.

NO PACKAGES	HM	DESCRIPTION OF ARTICLES, SPECIAL MARKS AND EXCEPTIONS	ERG	*WEIGHT (SUBJECT TO CORR.)	CLASS OR RATE	✓
5		Loose Pcs Of Rough Castings			85	
		Refpart# SA-381-000-86				
		Titanium Strongback				

Hershey

RECEIVED
NOV 16 2006
METALEX MFG.
BY

PLACARDS SUPPLIED ☐ YES ☐ NO

DRIVER'S SIGNATURE

EMERGENCY RESPONSE PHONE NO

Subject to Section 7 of Conditions of applicable bill of lading, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement.
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

Per _____
(Signature of Consignor)

If charges are to be prepaid, write or stamp here, "To be Prepaid."

Received $_____ to apply in prepayment of the charges on the property described hereon.

Agent or Cashier

Per _____
(The signature here acknowledges only the amount prepaid).

Charges Advanced:
$ _____

SHIPPERS CERTIFICATION: The is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

SIGNATURE _____ TITLE _____

* If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is "carrier's or shipper's weight".
† Shipper's imprints in lieu of stamp; not a part of Bill of Lading approved by the Interstate Commerce Commission.
Note – Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.
The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____

THIS SHIPMENT IS CORRECTLY DESCRIBED

CORRECT WEIGHT IS _____ LBS

†The fibre boxes used for this shipment conform to the specifications set forth in the box makers certificate thereon, and all other requirements of the Consolidated Freight Classification

Per _____ Shipper

C.O.D. SHIPMENT
C.O.D. Amt _____
Collection Fee _____
Total Charges _____

DIAL MACHINE, INC.
2902 Eastrock Drive • Rockford, IL 61109

Shipper, Per _____ **Agent, Per** _____

Permanent post-office address of shipper

FORM 1200, RAPIDFORMS, INC. THOROFARE, NJ 08086-9400

PACKING LIST

DIAL MACHINE, INC.
2902 Eastrock Drive • Eastrock Industrial Park • P.O. Box 5246
Rockford, Illinois 61125
815/397-6660

Your Order No.	Our Order No. 21279	Date 11/15/06 19
Sold to		
Address		
City		
Ship Via Their Truck	Collect X	Prepaid
Deliver Metafex Mfg. Inc.		
Address 5750 Cornell Road		
City Cincinnati, OH 45242		

Quantity	Description
5	Loose Pcs of Rough Castings
	RefPart# SA-381-000-85
	Titanium Strongback

Hewsley

RECEIVED
NOV 16 2006
METALEX MFG.
BY CD

Received above in good condition.

No. 20191

Rec'd by _____ Date 19

Job# 6733

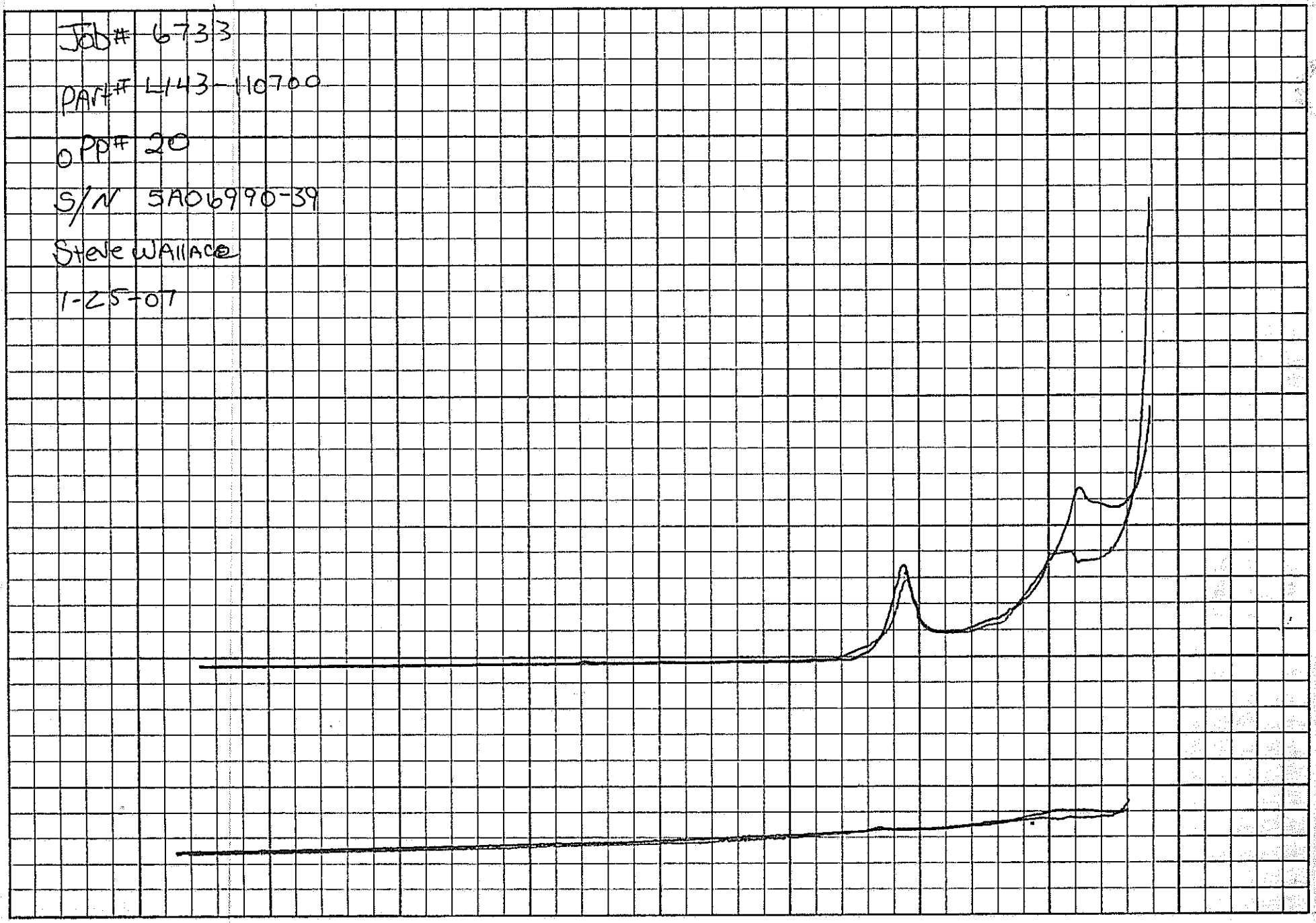
PART# L143-110700

OPP# 20

S/N 5A06990-39

Steve WALLACE

1-25-07



JOB# 6733

PART# L143-110700

OPP# 50

S/N 5A06990-39

Steve WALLACE

2-7-07

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. 2006-6733	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 5A06990
	Date Rec'd N/A	P.O. No. N/A	Part Name STRONGBACK		
At Oper. 150	Serial Numbers: S/N: 5A06990-39 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 TEMPERATURES TO BE RECORDED IN CELSIUS ****					
ALL DIMENSIONS APPLY AT A TEMPERATURE OF 20 DEGREES CELSIUS. PART MUST BE IN THERMAL EQUILIBRIUM DURING MEASUREMENTS AND AT THE SAME TEMPERATURE AT THE BEGINNING AND CONCLUSION OF THE MEASUREMENTS WITHIN +/-0.3 DEG. CELSIUS. **** THE PART TEMPERATURE BEFORE, DURING, AND AFTER DIMENSIONAL MEASUREMENT SHALL BE RECORDED BELOW****					
PART TEMPERATURE ***BEFORE*** INSPECTION (Record in Celsius)	SOW 4.5.1	CONTACT THERMOMETER MX1794	21.1°C	MTX QC 16	
PART TEMPERATURE ***DURING*** INSPECTION (Record in Celsius)	SOW 4.5.1	CONTACT THERMOMETER MX1794	20.83°C	MTX QC 16	
PART TEMPERATURE ***AFTER*** INSPECTION (Record in Celsius)	SOW 4.5.1	CONTACT THERMOMETER MX1794	21.0°C	MTX QC 16	
DRAWING L143-110700					
MATERIAL DESCRIPTION: ASTM B381 F2 TITANIUM GRADE 2	A2	CERT#	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 .3mm MAX	MTX QC 16	
UNLESS OTHERWISE SPECIFIED, SURFACE FINISH TO BE 6.4 MICRONS.	NOTE #3	PROFILOMETER MX1304	CONFORMS 6.4 OR BETTER	MTX QC 16	
⌖ .05 A B	D7	CMM MX1269	w/in .025	MTX QC 16	
⌖ .05 A B	D2	CMM MX1269	w/in .023	MTX QC 16	
1.6	D2	PROFILOMETER MX1304	1.6 OR BETTER	MTX QC 16	

STAMP	INSPECTED BY	DATE	PAGE	QTY ACC	QTY REJ
MTX QC 16	[signature]	5/2/07	1 OF 2	1	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
2006-6733	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: 5A06990-39 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
167.00 +.05 / -.00	C2	CMM MX1269	167.01 - 167.046	MTX QC 16	
83.50 ±.08	C2	CMM MX1269	83.48 - 83.50	MTX QC 16	
1.6√	C2	PROFILOMETER MX1304	1.6√ OR BETTER	MTX QC 16	
▱ | .05	C2	CMM MX1269	W/in .018	MTX QC 16	
▱ | .05	C2	CMM MX1269	W/in .025	MTX QC 16	
▱ | .05	D1	CMM MX1269	W/in .048	MTX QC 16	
⊥ | .1 | A	D1	CMM MX1269	W/in .028	MTX QC 16	
// | .05 | A	E8	CMM MX1269	W/in .020	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	CONFORMS	MTX QC 16	

STAMP	INSPECTED BY	DATE	PAGE 2 OF 2	QTY ACC	QTY REJ
MTX QC 16		5/2/07		1	0

JOB#3805

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 Cornell 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

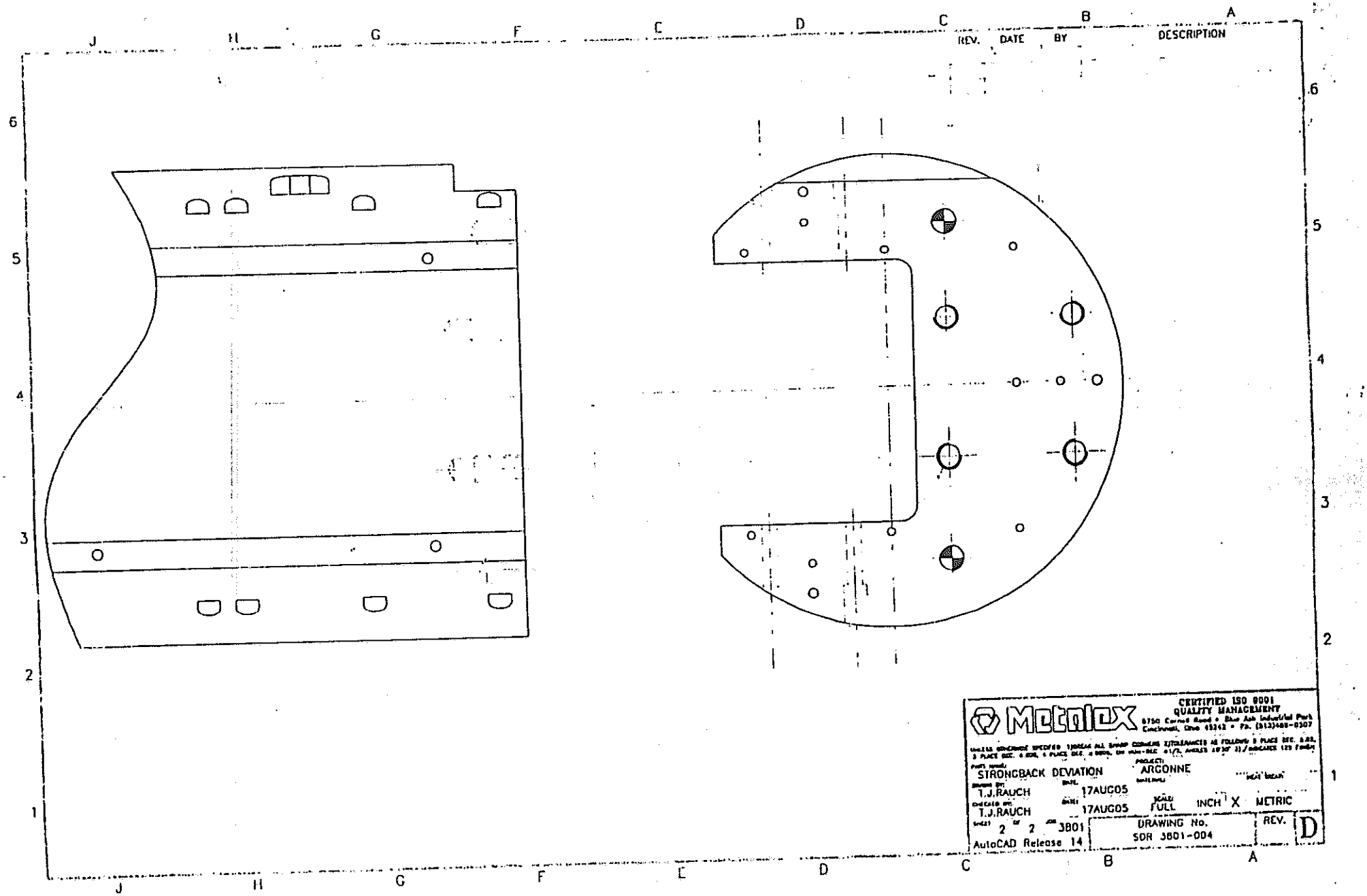
17. ANL Disposition and Remarks: The requested modifications for internal Metalex use are allowed.

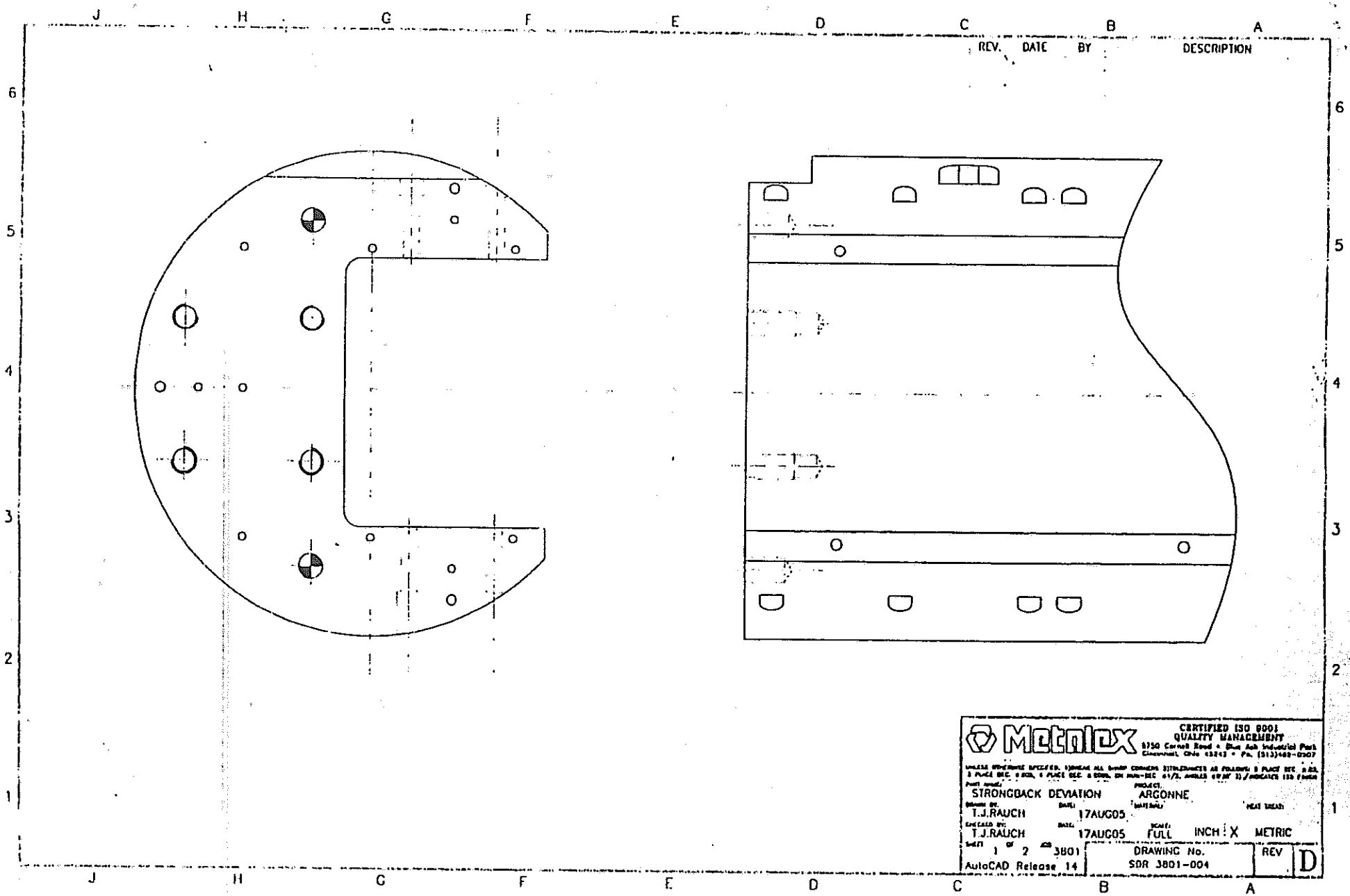
18. Approved

TECHNICAL REPRESENTATIVE DATE 08-23-05

QUALITY ASSURANCE REPRESENTATIVE - DATE 8/25/05

PROCUREMENT REPRESENTATIVE - DATE 8/26/05


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


REV. DATE BY DESCRIPTION
Metnlex
CERTIFIED ISO 9001
QUALITY MANAGEMENT
STRONGBACK DEVIATION
ARGONNE
T.J.RAUCH
17AUG05
T.J.RAUCH
17AUG05
FULL
INCH X METRIC
1 OF 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

13. Affects Delivery
☐ Yes ☑ No

14. Recommended Disposition and Comments:
Recommend acceptance.

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

Rob Schuermann 11/05/05
15 SUPPLIER REPRESENTATIVE – TITLE – DATE

18. ANL REPRESENTATIVE – DATE

17. ANL Disposition and Remarks: Acceptable.

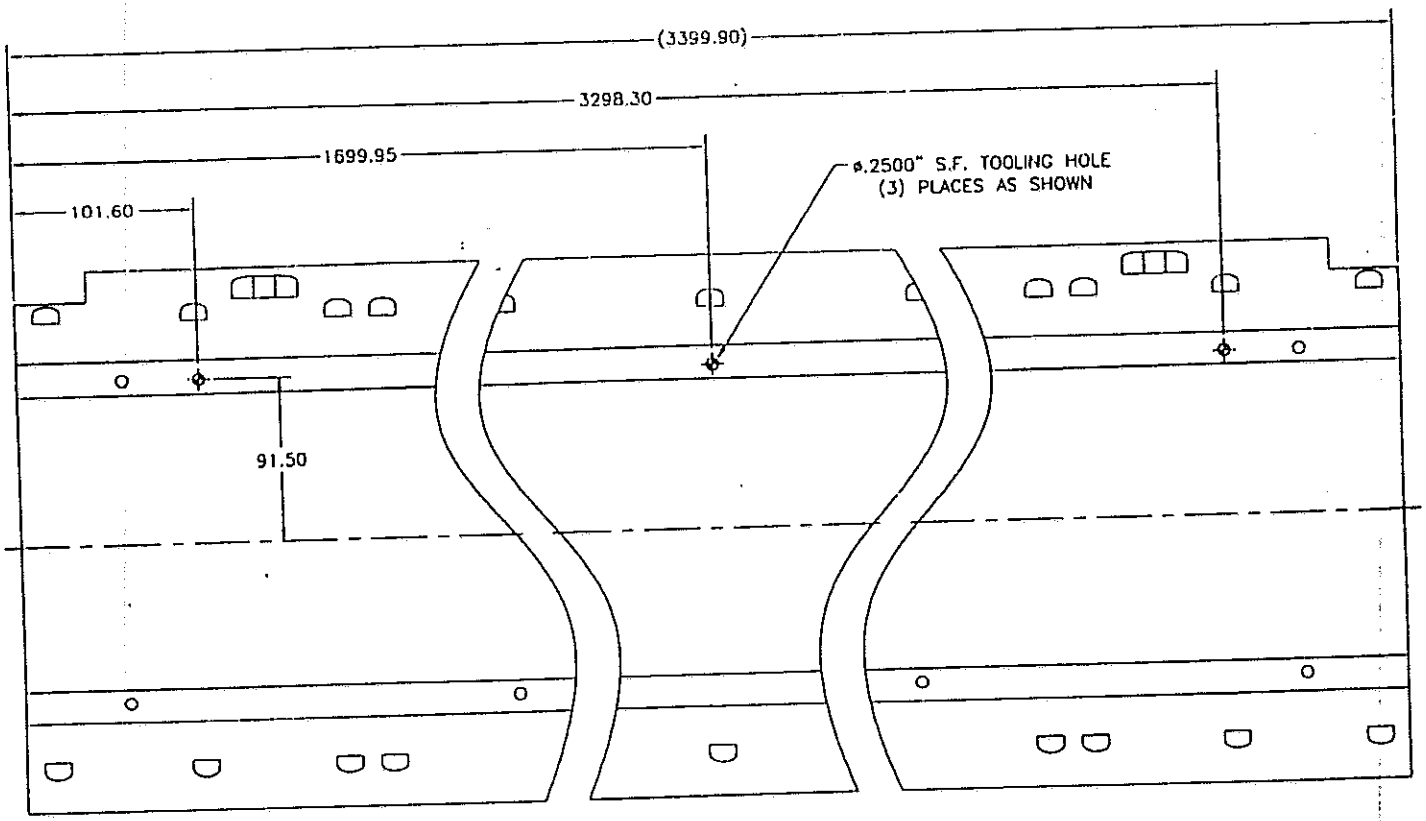
18. Approved

11/03/05
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
5750 Carnot Road • Blue Ash Industrial Park
Cincinnati, Ohio 45242 • Ph. (513)188-0507

UNLESS OTHERWISE SPECIFIED: 1)BREAK ALL SHARP CORNERS 2)TOLERANCES AS FOLLOWS: 2 PLACE DEC. ±.01, 3 PLACE DEC. ±.005, 4 PLACE DEC. ±.0005, ON NON-DEC. ±1/2, ANGLES ±0°30' 3)INDICATES 125 FINISH

PART NAME: STRONGBACK PROCESS		PROJECT: ARGONNE			
DRAWN BY: R.SCHUERMANN	DATE: 03NOV05	MATERIAL:		HEAT TREAT:	
CHECKED BY: R.SCHUERMANN	DATE: 03NOV05	SCALE: 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

Thomas K Becker
4.3.07

ANL Part/Revision Number: L143-112000-05
SLAC Part Number: SA-381-001-35
Assembly Serial Number: 5A10359-39
LOT40 magnets Serial # 18721-19200

Bottom Jaw

Slot Number	Serial No.	Main filed Orientation	x-axis orientation
1	19079	Upstream	Left
2	18834	Downstream	Right
3	19140	Upstream	Right
4	18863	Downstream	Right
5	19098	Upstream	Left
6	18821	Downstream	Right
7	19077	Upstream	Right
8	18791	Downstream	Left
9	19101	Upstream	Right
10	18773	Downstream	Left
11	19142	Upstream	Left
12	18887	Downstream	Right
13	19157	Upstream	Right
14	18797	Downstream	Left
15	19062	Upstream	Left
16	18876	Downstream	Left
17	19034	Upstream	Right
18	18911	Downstream	Right
19	19191	Upstream	Left
20	18781	Downstream	Left
21	19041	Upstream	Right
22	18804	Downstream	Right
23	19143	Upstream	Left
24	18770	Downstream	Left
25	19174	Upstream	Right
26	18890	Downstream	Right
27	19196	Upstream	Right
28	18995	Downstream	Right
29	19085	Upstream	Left
30	18816	Downstream	Right
31	19050	Upstream	Left
32	18966	Downstream	Right
33	19144	Upstream	Left
34	18829	Downstream	Left
35	19179	Upstream	Left
36	18846	Downstream	Right
37	18874	Upstream	Left
38	18932	Downstream	Left
39	19164	Upstream	Right
40	18798	Downstream	Right
41	19017	Upstream	Right
42	18742	Downstream	Right
43	19121	Upstream	Right

Top Jaw

Slot Number	Serial No.	Main filed Orientation	x-axis orientation
1	18768	Downstream	Right
2	19106	Upstream	Left
3	18827	Downstream	Left
4	19032	Upstream	Left
5	18752	Downstream	Left
6	19110	Upstream	Right
7	18732	Downstream	Left
8	19194	Upstream	Right
9	18726	Downstream	Right
10	19060	Upstream	Left
11	18780	Downstream	Right
12	19178	Upstream	Left
13	18794	Downstream	Right
14	19170	Upstream	Right
15	18800	Downstream	Right
16	19131	Upstream	Right
17	18756	Downstream	Right
18	19198	Upstream	Right
19	18801	Downstream	Right
20	19192	Upstream	Right
21	18831	Downstream	Left
22	19147	Upstream	Right
23	18974	Downstream	Right
24	19182	Upstream	Left
25	18767	Downstream	Right
26	19076	Upstream	Left
27	18735	Downstream	Right
28	19197	Upstream	Right
29	18751	Downstream	Right
30	19011	Upstream	Right
31	18753	Downstream	Left
32	19021	Upstream	Right
33	18828	Downstream	Right
34	19025	Upstream	Right
35	18822	Downstream	Right
36	19185	Upstream	Left
37	18765	Downstream	Left
38	19168	Upstream	Right
39	18985	Downstream	Left
40	19116	Upstream	Right
41	18743	Downstream	Left
42	19044	Upstream	Left
43	18836	Downstream	Right

44	18953	Downstream	Left
45	19064	Upstream	Right
46	18881	Downstream	Left
47	19183	Upstream	Left
48	18997	Downstream	Right
49	19190	Upstream	Right
50	18877	Downstream	Right
51	19094	Upstream	Left
52	18917	Downstream	Right
53	19114	Upstream	Right
54	18833	Downstream	Right
55	19012	Upstream	Right
56	18806	Downstream	Left
57	19128	Upstream	Left
58	18843	Downstream	Left
59	19026	Upstream	Right
60	18979	Downstream	Right
61	19132	Upstream	Right
62	18884	Downstream	Right
63	19092	Upstream	Left
64	18999	Downstream	Right
65	19155	Upstream	Left
66	18872	Downstream	Right
67	19014	Upstream	Right
68	18920	Downstream	Right
69	19029	Upstream	Right
70	18947	Downstream	Right
71	19177	Upstream	Right
72	18807	Downstream	Left
73	19091	Upstream	Left
74	18839	Downstream	Right
75	18916	Upstream	Left
76	18903	Downstream	Left
77	18856	Upstream	Right
78	18906	Downstream	Right
79	19019	Upstream	Right
80	18980	Downstream	Right
81	19150	Upstream	Left
82	18866	Downstream	Right
83	18957	Upstream	Left
84	18936	Downstream	Right
85	18729	Upstream	Left
86	18939	Downstream	Right
87	19000	Upstream	Right
88	18996	Downstream	Left
89	19081	Upstream	Left
90	18813	Downstream	Right
91	19069	Upstream	Left
92	18851	Downstream	Right
93	18951	Upstream	Left
94	18815	Downstream	Right
95	18844	Upstream	Right

44	19126	Upstream	Left
45	18775	Downstream	Left
46	19024	Upstream	Right
47	18731	Downstream	Left
48	19188	Upstream	Right
49	18855	Downstream	Left
50	19031	Upstream	Left
51	18946	Downstream	Left
52	19040	Upstream	Right
53	18965	Downstream	Left
54	19199	Upstream	Right
55	18783	Downstream	Left
56	19043	Upstream	Left
57	18845	Downstream	Right
58	18886	Upstream	Right
59	18971	Downstream	Right
60	19133	Upstream	Left
61	18870	Downstream	Left
62	19035	Upstream	Right
63	19001	Downstream	Left
64	18724	Upstream	Right
65	18983	Downstream	Left
66	19113	Upstream	Right
67	18728	Downstream	Right
68	19048	Upstream	Right
69	18723	Downstream	Left
70	19053	Upstream	Left
71	18744	Downstream	Left
72	19148	Upstream	Right
73	18825	Downstream	Left
74	19073	Upstream	Right
75	18788	Downstream	Left
76	18922	Upstream	Right
77	18910	Downstream	Left
78	19119	Upstream	Right
79	18954	Downstream	Right
80	19022	Upstream	Right
81	18864	Downstream	Right
82	19137	Upstream	Right
83	18734	Downstream	Right
84	18748	Upstream	Left
85	18934	Downstream	Left
86	18760	Upstream	Right
87	18984	Downstream	Left
88	18940	Upstream	Right
89	18796	Downstream	Left
90	18885	Upstream	Left
91	18950	Downstream	Right
92	19063	Upstream	Left
93	18924	Downstream	Left
94	19171	Upstream	Right
95	18963	Downstream	Left

96	18784	Downstream	Left
97	18746	Upstream	Left
98	18889	Downstream	Right
99	18814	Upstream	Left
100	19008	Downstream	Right
101	19159	Upstream	Left
102	19156	Downstream	Right
103	19006	Upstream	Right
104	18941	Downstream	Right
105	19049	Upstream	Left
106	18871	Downstream	Right
107	18862	Upstream	Right
108	18901	Downstream	Left
109	18789	Upstream	Left
110	18849	Downstream	Right
111	18921	Upstream	Left
112	18867	Downstream	Left
113	18968	Upstream	Right
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122	18969	Downstream	Left
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124	18873	Downstream	Right
125	19152	Upstream	Left
126	19117	Downstream	Right
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128	19046	Downstream	Left
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130	18837	Downstream	Left
131	18909	Upstream	Left
132	18747	Downstream	Right
133	18850	Upstream	Right
134	18929	Downstream	Left
135	19066	Upstream	Left
136	18926	Downstream	Right
137	19084	Upstream	Left
138	18757	Downstream	Left
139	19120	Upstream	Left
140	19003	Downstream	Right
141	18993	Upstream	Right
142	19089	Downstream	Left
143	18892	Upstream	Right
144	18883	Downstream	Right
145	18766	Upstream	Left
146	18977	Downstream	Right
147	19123	Upstream	Right

96	19097	Upstream	Left
97	18907	Downstream	Right
98	18964	Upstream	Left
99	18933	Downstream	Left
100	18854	Upstream	Right
101	19160	Downstream	Right
102	18982	Upstream	Right
103	18795	Downstream	Left
104	19018	Upstream	Right
105	18857	Downstream	Left
106	18868	Upstream	Left
107	18942	Downstream	Left
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110	18945	Upstream	Left
111	18975	Downstream	Left
112	18730	Upstream	Right
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116	18913	Upstream	Left
117	19074	Downstream	Left
118	18891	Upstream	Left
119	18787	Downstream	Right
120	18861	Upstream	Left
121	18727	Downstream	Right
122	19042	Upstream	Left
123	18853	Downstream	Right
124	18998	Upstream	Left
125	18759	Downstream	Left
126	18981	Upstream	Right
127	18938	Downstream	Right
128	18880	Upstream	Left
129	18893	Downstream	Left
130	18838	Upstream	Left
131	18786	Downstream	Right
132	19180	Upstream	Right
133	18923	Downstream	Right
134	18778	Upstream	Right
135	18912	Downstream	Left
136	19130	Upstream	Left
137	18914	Downstream	Left
138	19083	Upstream	Left
139	18986	Downstream	Left
140	19118	Upstream	Left
141	18935	Downstream	Left
142	18741	Upstream	Right
143	18733	Downstream	Right
144	18955	Upstream	Right
145	18865	Downstream	Right
146	19030	Upstream	Left
147	18777	Downstream	Right

148	18848	Downstream	Left
149	18987	Upstream	Right
150	18897	Downstream	Right
151	18970	Upstream	Right
152	18826	Downstream	Right
153	19036	Upstream	Right
154	18823	Downstream	Right
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175	19099	Upstream	Left
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177	19075	Upstream	Right
178	18754	Downstream	Left
179	18958	Upstream	Left
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183	19058	Upstream	Left
184	18840	Downstream	Left
185	19045	Upstream	Left
186	18860	Downstream	Left
187	19162	Upstream	Right
188	18992	Downstream	Right
189	19158	Upstream	Left
190	18972	Downstream	Left
191	19173	Upstream	Left
192	18785	Downstream	Left
193	19134	Upstream	Left
194	18943	Downstream	Left
195	19051	Upstream	Left
196	18878	Downstream	Left
197	19086	Upstream	Right
198	19004	Downstream	Right
199	19169	Upstream	Right

148	19115	Upstream	Left
149	18895	Downstream	Left
150	18820	Upstream	Left
151	18904	Downstream	Left
152	18898	Upstream	Left
153	18805	Downstream	Right
154	19093	Upstream	Right
155	18790	Downstream	Right
156	19056	Upstream	Left
157	18967	Downstream	Left
158	19122	Upstream	Right
159	18948	Downstream	Right
160	19090	Upstream	Right
161	18879	Downstream	Left
162	19154	Upstream	Right
163	19007	Downstream	Left
164	19037	Upstream	Left
165	18869	Downstream	Left
166	19136	Upstream	Left
167	18978	Downstream	Left
168	19061	Upstream	Left
169	18841	Downstream	Right
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172	19088	Upstream	Left
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176	19078	Upstream	Right
177	18858	Downstream	Right
178	19175	Upstream	Left
179	19005	Downstream	Left
180	19189	Upstream	Right
181	18771	Downstream	Left
182	19107	Upstream	Left
183	18902	Downstream	Left
184	19129	Upstream	Left
185	18918	Downstream	Right
186	19166	Upstream	Left
187	18989	Downstream	Left
188	19195	Upstream	Right
189	18737	Downstream	Left
190	19071	Upstream	Right
191	18905	Downstream	Left
192	19146	Upstream	Left
193	18810	Downstream	Left
194	19139	Upstream	Left
195	18721	Downstream	Right
196	19047	Upstream	Right
197	18755	Downstream	Right
198	19013	Upstream	Right
199	18739	Downstream	Right

200	18738	Downstream	Left
201	19100	Upstream	Right
202	18776	Downstream	Left
203	19141	Upstream	Left
204	18842	Downstream	Right
205	19125	Upstream	Right
206	18803	Downstream	Left
207	19200	Upstream	Left
208	18750	Downstream	Left
209	19072	Upstream	Left
210	18812	Downstream	Right
211	19052	Upstream	Right
212	18758	Downstream	Left
213	19111	Upstream	Right
214	19002	Downstream	Right
215	19176	Upstream	Right
216	18774	Downstream	Right
217	19104	Upstream	Left
218	18792	Downstream	Right
219	19112	Upstream	Left
220	18764	Downstream	Left
221	19038	Upstream	Right
222	18762	Downstream	Left
223	19187	Upstream	Right
224	18793	Downstream	Right
225	19009	Upstream	Left

200	19151	Upstream	Left
201	18763	Downstream	Left
202	19181	Upstream	Left
203	18761	Downstream	Left
204	19023	Upstream	Right
205	18894	Downstream	Left
206	19082	Upstream	Right
207	18835	Downstream	Left
208	19163	Upstream	Left
209	18961	Downstream	Left
210	19095	Upstream	Left
211	18817	Downstream	Right
212	19015	Upstream	Right
213	18799	Downstream	Left
214	19153	Upstream	Right
215	18779	Downstream	Left
216	19065	Upstream	Left
217	18900	Downstream	Left
218	19127	Upstream	Left
219	18931	Downstream	Left
220	19103	Upstream	Left
221	18782	Downstream	Right
222	19080	Upstream	Right
223	18769	Downstream	Left
224	19055	Upstream	Left
225	18809	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 Top and Bottom 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
18725	33%
19067	80%
18888	
19186	
18896	
19108	
18818	
19109	

Sample magnets

serial No.
18740
18875
18952
19057
19167

18859
19020
18930
19096
18973
19184
18919
19105
18959
19161
18991
19087
18960
18927
18824
19138
18990

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 Beden	4.3.07
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 Beden	4.3.07
	Section 4.1.3.			
3	Check that parts were marked with serial numbers per SOW section 4.1.3.	Undulator Ass'y Contractor	Thomas Beden	4.3.07
4	Check that accompanying Certifications have correct part serial numbers.	Undulator Ass'y Contractor	Thomas Clark MTX QC 20	5/23/07
5.	Check the material certification for compliance with ASTM A801, Type 1.	Undulator Ass'y Contractor & ANL	Thomas Clark MTX QC 20	5/23/07
6	Check the anneal certification for compliance with AMS-A801, or a specified material supplier's annealing schedule.	Undulator Ass'y Contractor & ANL	Thomas Clark MTX QC 20	5/23/07
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 Beden	4.3.07
	L143-112000-05			
	SA-381-001-35			
	5A10359-39			

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: 5A10359-39

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

Part: L143-110105 Poles

Completed By: Thomas R Becker **Date:** 4-3-07

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-Tech PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105 SERIAL #: 15610

P.O. #: SA-05150 DATE: 4-1-07

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	5.96	(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 #: 10936

P.O. #: 5A-05150

DATE: 4.1.07

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	5.96	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-Tech PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105 SERIAL #: 13516

P.O. #: 5A-05150 DATE: 4.1.07

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	5.95	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-Tech PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105 SERIAL #: 13503

P.O. #: 5A-05150 DATE: 4.1.07

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	5.95	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-Tech

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 12944

P.O. #: 5A-05150

DATE: 4.1.07

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 #: 13432

P.O. #: 5A-05150 DATE: 4.1.07

ACCEPTANCE CRITERIA

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

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	48.00	(Accept)/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.97	(Accept)/Reject
Pole Thickness	6.00	+0 / -.05	5.95	(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-Tech | PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105 | SERIAL #: 13432

P.O. #: 5A-05150 | DATE: 4.1.07

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	5.95	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, MY1452, 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 #: 05925

P.O. #: 5A-05150

DATE: 4.10.07

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, MY 1452, 587F, MX 0256, 587B

COMMENTS:

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

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Tech

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 14345

P.O. #: SA-05150

DATE: 4.11.07

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	5.95	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 #: 10906

P.O. #: 5A-05150 DATE: 4.1.07

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-Tech

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 14785

P.O. #: SA-05150

DATE: 4.1.07

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	5.96	(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 #: 12371

P.O. #: SA-05150 DATE: 4.1.07

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: 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-Tech PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105 SERIAL #: 13970

P.O. #: 5A-05150 DATE: 4.1.07

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	5.96	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, MY 1452, 587F, MX 0256, 587B

COMMENTS:

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

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Tech PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105 SERIAL #: 04138

P.O. #: 5A-05150 DATE: 4.1.07

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	48.00	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.98	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.96	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-Tech

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 11162

P.O. #: SA-05150

DATE: 4.1.07

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 #: 09879

P.O. #: SA-05150 DATE: 4.11.07

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: 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 #: 07030

P.O. #: 5A-05150

DATE: 4.1.07

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	48.00	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: 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-Tech PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105 SERIAL #: 13609

P.O. #: 5A-05150 DATE: 4.1.07

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	5.96	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 #: 13872

P.O. #: 5A-05150

DATE: 4.1.07

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	48.00	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.96	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.96	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, MY1452, 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 #: 15181

P.O. #: 5A-05150 DATE: 4.1.07

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	5.96	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 #: 11391

P.O. #: 5A-05150 DATE: 4.1.07

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: 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-Tech PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105 SERIAL #: 10833

P.O. #: SA-05150 DATE: 4.1.07

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, 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 #: 1143

P.O. #: 5A-05150

DATE: 4.1.07

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: 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-Tech PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105 SERIAL #: 13635

P.O. #: 5A-05150 DATE: 4.1.07

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	5.96	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 #: 10841

P.O. #: SA-05150

DATE: 4.1.07

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: 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-Tech

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 12433

P.O. #: 5A-05150

DATE: 4.1.07

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	48.00	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, MY 1452, 587F, MX 0256, 587B

COMMENTS:

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

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Tech

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 13477

P.O. #: SA-05150

DATE: 4.1.07

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	5.95	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-Tech

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 12888

P.O. #: SA-05150

DATE: 4.1.07

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 #: 14874

P.O. #: SA-05150

DATE: 4.1.07

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	5.96	(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 #: 05943

P.O. #: 5A-05150

DATE: 4.1.07

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 = $44^{+0}_{-.1}$

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 10967

P.O. #: 5A-05150

DATE: 4.1.07

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: HE-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 11348

P.O. #: SA-05150

DATE: 4.1.07

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: MX 111, MY 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 #: 12386

P.O. #: 5A-05150

DATE: 4.1.07

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	5.97	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 #: 11256

P.O. #: 5A-05150

DATE: 4.1.07

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: 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 #: 14992

P.O. #: SA-05150

DATE: 4.1.07

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	5.94	(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 #: 0697|

P.O. #: 5A-05150

DATE: 4.1.07

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-Tech PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105 SERIAL #: 15628

P.O. #: SA-05150 DATE: 4.1.07

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: 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 #: 11175

P.O. #: SA-05150

DATE: 4.1.07

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 #: 14884

P.O. #: 5A-05150 DATE: 4.1.07

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	5.96	(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 #: 14103

P.O. #: 5A-05150

DATE: 4.1.07

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	5.96	(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-Tech PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105 SERIAL #: 15449

P.O. #: 5A-05150 DATE: 4.1.07

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	5.96	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 #: 14828

P.O. #: SA-05150

DATE: 4.11.07

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: 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-Tech PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105 SERIAL #: 13605

P.O. #: SA-05150 DATE: 4.1.07

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: 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 #: 12082

P.O. #: 5A-05150

DATE: 4.1.07

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: 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-Tech

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 15652

P.O. #: 5A-05150

DATE: 4.16.07

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, 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 #: 15138

P.O. #: 5A-05150 DATE: 4.1.07

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, MX1452, 587F, MX0256, 587B

COMMENTS:

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

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Tech

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 10183

P.O. #: SA-05150

DATE: 4.1.07

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 #: 13634

P.O. #: 5A-05150

DATE: 4-16-07

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	48.00	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.99	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.96	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-Tech

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 14782

P.O. #: SA-05150

DATE: 4.1.07

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: 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 #: 14840

P.O. #: SA-05150

DATE: 4.1.07

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	5.95	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-Tech

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 12338

P.O. #: 5A-05150

DATE: 4.1.07

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Pole height	48.0	+0 / -.01	48.00	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	44.00	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 = $44^{+0}_{-.1}$

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 Becker	4.3.07
2	Visual inspection of parts for surface chips and pits.	Undulator Ass'y Contractor	Thomas P Becker	4.3.07
3	Dimensional check of part for conformance to the drawing.	Undulator Ass'y Contractor	Thomas P Becker	4.3.07
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			
	5A10359-39			

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 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: 5A10359-39

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

Part: L143-110106 Magnet

Completed By: Thomas P Becker **Date:** 4·3·07

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: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 19079

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.00	Accept/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.00	Accept/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.96	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 18834

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

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

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	56.98	(Accept)/Reject
Magnet Width	2.5984 66.00	+/- .0098 +/- .25	66.00	(Accept)/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.95	(Accept)/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 1940

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

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

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.00	(Accept)/Reject
Magnet Width	2.5984 66.00	+/- .0098 +/- .25	66.00	(Accept)/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.95	(Accept)/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 18863

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.00	Accept/Reject
Magnet Width	2.5984 66.00	+/- .0098 +/- .25	66.00	Accept/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.95	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 19098

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.00	Accept/Reject
Magnet Width	2.5984 66.00	+/- .0098 +/- .25	66.00	Accept/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.94	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 18821

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/-.05	57.00	Accept/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/-.25	66.00	Accept/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.95	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 18791

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

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

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.00	(Accept)/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	65.99	(Accept)/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.95	(Accept)/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 19101

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

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

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.00	(Accept)/Reject
Magnet Width	2.5984 66.00	+/- .0098 +/- .25	66.00	(Accept)/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.94	(Accept)/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 18773

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.00	Accept/Reject
Magnet Width	2.5984 66.00	+/- .0098 +/- .25	66.00	Accept/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.94	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 19142

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

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

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	56.99	(Accept)/Reject
Magnet Width	2.5984 66.00	+/- .0098 +/- .25	66.00	(Accept)/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.95	(Accept)/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 18887

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.00	Accept/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.00	Accept/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.95	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 19070

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.00	Accept/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.00	Accept/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.95	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 18969

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.01	Accept/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.01	Accept/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.95	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 18994

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

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

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.01	(Accept)/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.01	(Accept)/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.95	(Accept)/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 18873

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

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

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.02	(Accept)/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.01	(Accept)/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.96	(Accept)/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 19152

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

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

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.00	(Accept)/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.00	(Accept)/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.95	(Accept)/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 19117

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

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

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.00	(Accept)/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.00	(Accept)/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.94	(Accept)/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 18819

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

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

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.00	(Accept)/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.00	(Accept)/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.95	(Accept)/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 19046

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

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

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.00	(Accept)/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.00	(Accept)/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.93	(Accept)/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX857, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 18928

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

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

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.00	(Accept)/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.00	(Accept)/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.96	(Accept)/Reject

INSPECTOR: Thomas P Beeler QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 18837

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

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

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.01	(Accept)/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.00	(Accept)/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.95	(Accept)/Reject

INSPECTOR: Thomas P Beeler QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 18909

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.00	Accept/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.00	Accept/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.95	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 18747

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	56.99	Accept/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.00	Accept/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.95	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 18768

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	56.99	Accept/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.00	Accept/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.95	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 19106

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

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

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.01	(Accept)/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.00	(Accept)/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.96	(Accept)/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 18807

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.00	Accept/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.01	Accept/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.95	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 19032

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.00	Accept/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.00	Accept/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.95	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 18752

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

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

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.00	(Accept)/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.00	(Accept)/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.95	(Accept)/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 19110

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.00	Accept/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.00	Accept/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.96	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 18732

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

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

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.00	(Accept)/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.00	(Accept)/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.95	(Accept)/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX857, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 19194

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.00	Accept/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.00	Accept/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.95	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 18726

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.00	Accept/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.01	Accept/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.95	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 19060

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

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

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	56.99	(Accept)/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	65.99	(Accept)/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.94	(Accept)/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 18780

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.00	Accept/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.01	Accept/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.95	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX857, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 19178

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.00	Accept/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.00	Accept/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.96	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 18727

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

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

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.00	(Accept)/Reject
Magnet Width	2.5984 66.00	+/- .0098 +/- .25	66.01	(Accept)/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.95	(Accept)/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 19042

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.00	Accept/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.00	Accept/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.94	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 18853

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.01	Accept/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.025	Accept/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.95	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 18998

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

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

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	56.99	(Accept)/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.00	(Accept)/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.95	(Accept)/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 18759

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

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

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.00	(Accept)/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.00	(Accept)/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.94	(Accept)/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX857, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 18981

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.01	Accept/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.01	Accept/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.95	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 18938

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

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

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.00	(Accept)/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.01	(Accept)/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.95	(Accept)/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 18880

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.01	Accept/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.00	Accept/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.96	Accept/Reject

INSPECTOR: Thomas P Beeler QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 18893

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.00	Accept/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.00	Accept/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.95	Accept/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 18838

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

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

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.00	(Accept)/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.01	(Accept)/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.95	(Accept)/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 18786

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

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

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	57.01	(Accept)/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.01	(Accept)/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.95	(Accept)/Reject

INSPECTOR: Thomas P Becker QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 19180

P.O. #:

DATE: 3-26-07

ACCEPTANCE CRITERIA

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

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	2.2441 57.00	+/-.002 +/- .05	56.99	(Accept)/Reject
Magnet Width	2.5984 66.00	+/-.0098 +/- .25	66.00	(Accept)/Reject
Magnet thickness	.3543 9.00	+0/.004 +0/-.10	8.94	(Accept)/Reject

INSPECTOR: Thomas P Beeler QA Supervisor:

TEST EQUIPMENT USED: MX1462, MX111, 587K, MX2, MX1452, MX851, MX702

COMMENTS: