Metalex
Manufacturing
Inc.

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

#1-- INSIDE Pkg - Cust Copy

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

Packing List# 40544 **Rel#** 1 **PAGE** 1
Metalex Job# 2006-6397

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	3	LCLS UNDULATOR MAIN ASSY ANL PART/REVISION NUMBER: L143-112000 REV.5 SLAC PART NUMBER: SA-381-001-35 ASSEMBLY SERIAL NUMBER: 5A10359-31 STRONGBACK SERIAL NUMBER: 5A0699-31 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
Ship Safe

Received By:

Printed Name _____ Signature _____ Date _____

MX3006 (10/ 02)

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# 2006-6397
Purchase Order # 5A10359
MX Packing List # 40544

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	5A10359-31

*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: 5A10359-31

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 Schuermann Date: 02/27/06
ROB SCHUERMANN

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

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

LCLS Undulator L143-00076 Assembly Procedure

Assembly:

ANL Part/Revision Number: L143-112000-05
SLAC Part Number: SA-381-001-35
Assembly Serial Number: 5A10359-31

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: 77.98
L143-111000 Upper Middle Magnet Structure Assembly	Actual: 78.00
L143-111200 Upper Right Magnet Structure Assembly	Actual: 77.97
L143-110900 Lower Left Magnet Structure Assembly	Actual: 77.99
L143-111100 Lower Middle Magnet Structure Assembly	Actual: 78.00
L143-111300 Lower Right Magnet Structure Assembly	Actual: 77.98

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 P Becker **Date:** 4-18-07

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 Bedar	4-18-07
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 Bedar	4.18.07
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 Bedar	4.18.07
	L143-112000-05			
	SA-381-001-35			
	5A10359-31			

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.

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Veteran Owned Business 30 Plus Years

#1-- INSIDE Pkg - Cust Copy

Packing List# 40301 **Rel#** 1 **PAGE** 1
Metalex Job# 2006-6730

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

Date: 4/11/07
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	3	L143-110700 REV. 07 STRONGBACK S/N: 5A06990-31 -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)

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: 04/11/2007
Customer: Argonne National Laboratory
Bldg. 201, OCF-PRO
9700 S Cass Ave.
Argonne, Illinois 60439
Attention: Michael Oprondek

Metalex Job# 2006-6730
Purchase Order # 5A06990
MX Packing List # 40301

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	5A06990-31

*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 | 4/11/07 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 gw 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 the 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
CARRIER'S NO.
BY Their Truck

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				

RECEIVED
NOV 16 2006
METALEX MFG.
BY Hershey

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:
$ _____

PLACARDS SUPPLIED ☐ YES ☐ NO
DRIVER'S SIGNATURE
EMERGENCY RESPONSE PHONE NO

SHIPPER'S CERTIFICATION: This is to certify that the above-named materials are properly described, 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 _____

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

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

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 08086-9498

3

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.	Date
	21279	11/16/06 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
	Reffart# SA-381-000-85
	Titanium Strongback

Henson

RECEIVED
NOV 1 6 2006
METALEX MFG.
BY CD

Received above in good condition.

Rec'd by _____ Date _____ 19

No. 20191

JOB# 6150

PART# L143-110700

OPP# 20

S/N 5A06990-31

STEVE WALLACE

1-25-07

TOPS FORM 33031

JOB# 6730

PART# L143-110700

OPP# 50

S/N 5A06990-31

Steve Wallace

2-8-07

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. 2006-6730	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: 5A06990-31 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	20.83°C	MTX QC 16	
PART TEMPERATURE *DURING* INSPECTION (Record in Celsius)	SOW 4.5.1	CONTACT THERMOMETER MX1794	20.66°C	MTX QC 16	
PART TEMPERATURE *AFTER* INSPECTION (Record in Celsius)	SOW 4.5.1	CONTACT THERMOMETER MX1794	20.88°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 .3 MAX	MTX QC 16	
UNLESS OTHERWISE SPECIFIED, SURFACE FINISH TO BE 6.4 MICRONS.	NOTE #3	PROFILOMETER MX1304	6.4√ OR BETTER	MTX QC 16	
⌭ .05 A B	D7	CMM MX1269	w/in .028	MTX QC 16	
⌭ .05 A B	D2	CMM MX1269	w/in .005	MTX QC 16	
1.6√	D2	PROFILOMETER MX1304	1.6√ OR BETTER	MTX QC 16	

STAMP	INSPECTED BY	DATE	PAGE 1 OF 2	QTY ACC	QTY REJ
MTX QC 16	[signature]	4/11/07		1	Ø

MX1010 (7/98)

Metalex Customized Machinery and Parts CERTIFIED ISO 9001 QUALITY MANAGEMENT	INSPECTION PLANNING & REPORT FORM Metalex Mfg. 5750 Cornell Rd ` Cincinnati, OH 45242 ` (513) 489-0507	Job No. 2006-6730	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: 5A06990-31 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	167.00 - 167.033	MTX QC 16	
83.50 ±.08	C2	CMM MX1269	83.50 - 83.52	MTX QC 16	
1.6	C2	PROFILOMETER MX1304	1.6 OR BETTER	MTX QC 16	
⏥ | .05	C2	CMM MX1269	w/in .015	MTX QC 16	
⏥ | .05	C2	CMM MX1269	w/in .018	MTX QC 16	
⏥ | .05	D1	CMM MX1269	w/in .05	MTX QC 16	
⌖ | .1 | A	D1	CMM MX1269	w/in .02	MTX QC 16	
// | .05 | A	E8	CMM MX1269	w/in .012	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	[signature]	4/11/07		1	Ø

MX1010 (7/98)

JO3#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

Rob Schuermann 8/17/05

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

08-23-05

TECHNICAL REPRESENTATIVE - DATE

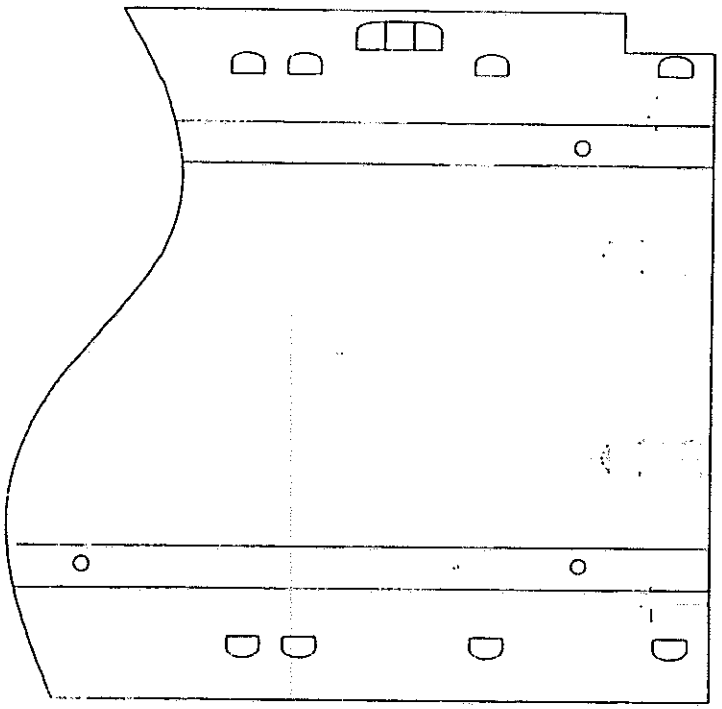
8/25/05

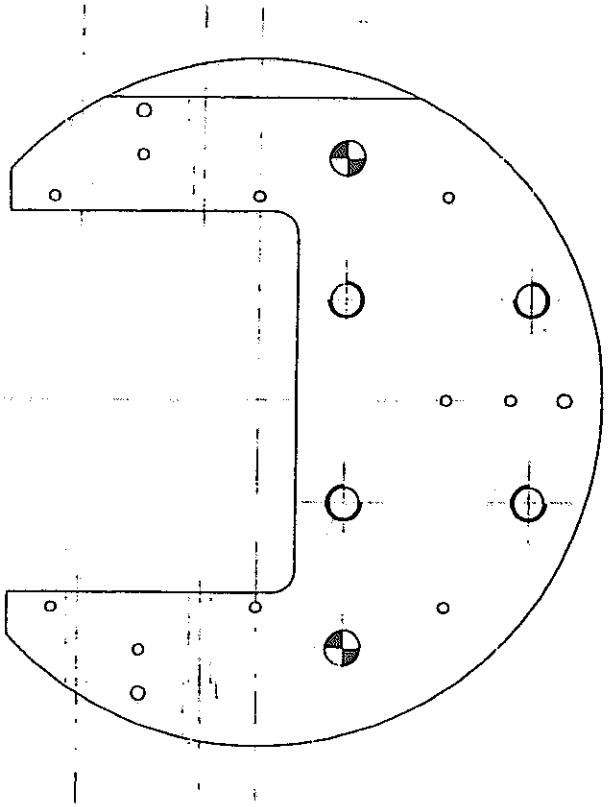
QUALITY ASSURANCE REPRESENTATIVE - DATE

8/26/05

PROCUREMENT REPRESENTATIVE - DATE

REV.	DATE	BY	DESCRIPTION



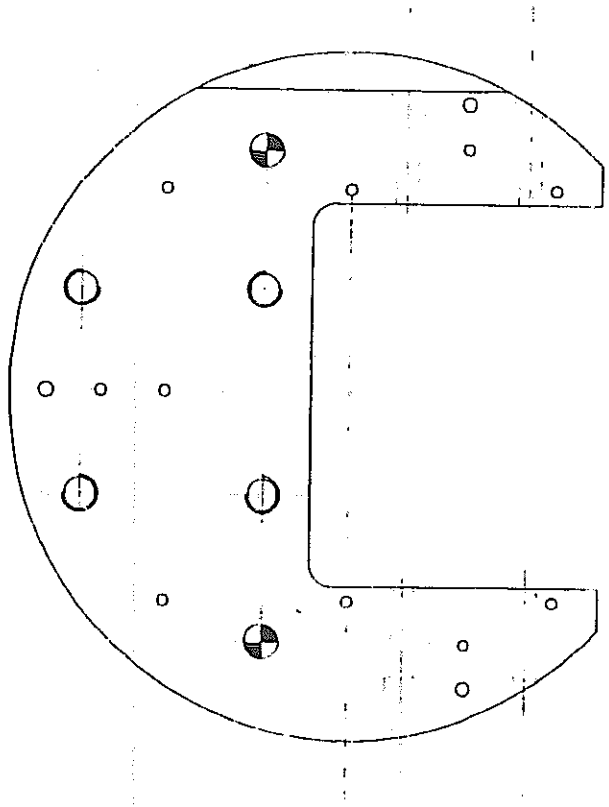


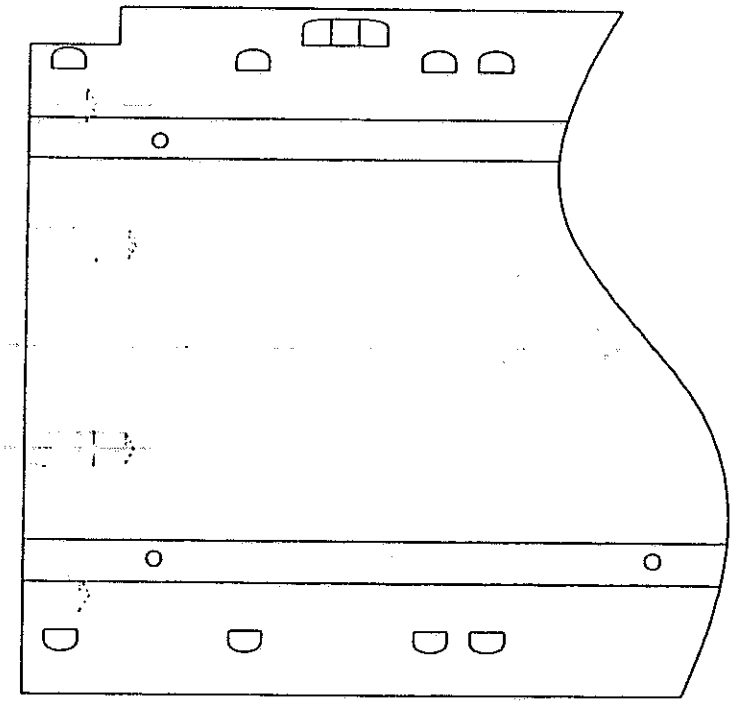
Metalex
CERTIFIED ISO 9001
QUALITY MANAGEMENT
8750 Cornell Road • Blue Ash Industrial Park
Cincinnati, Ohio 45242 • Ph. (513)489-0507

UNLESS OTHERWISE SPECIFIED 1)BREAK ALL SHARP CORNERS 2)TOLERANCES AS FOLLOWS: 2 PLACE DEC ± .03, 3 PLACE DEC ± .005, 4 PLACE DEC ± .0005, ON MIN-DEC ±1/2, ANGLES ±30' 3)/INDICATES 125 FINISH

PART NAME: STRONGBACK DEVIATION		PROJECT: ARGONNE	
DRAWN BY: T.J.RAUCH	DATE: 17AUG05	MATERIAL:	HEAT TREAT:
CHECKED BY: T.J.RAUCH	DATE: 17AUG05	SCALE: FULL	INCH X METRIC
SHEET 2 OF 2	JOB 3801	DRAWING No. SDR 3801-004	REV. D
AutoCAD Release 14			

REV.	DATE	BY	DESCRIPTION





Metalex

CERTIFIED ISO 9001
QUALITY MANAGEMENT
5750 Cornell Road • Blue Ash Industrial Park
Cincinnati, Ohio 45242 • Ph. (513)489-0507

UNLESS OTHERWISE SPECIFIED: 1)BREAK ALL SHARP CORNERS 2)TOLERANCES AS FOLLOWS: 2 PLACE DEC ± .03, 3 PLACE DEC. ± .005, 4 PLACE DEC. ± .0005, ON NON-DEC ±1/2, ANGLES ±0°30' 3)/INDICATES 125 FINISH

PART NAME: STRONGBACK DEVIATION
PROJECT: ARGONNE
DRAWN BY: T.J.RAUCH
DATE: 17AUG05
MATERIAL:
HEAT TREAT:
CHECKED BY: T.J.RAUCH
DATE: 17AUG05
SCALE: FULL
INCH X METRIC
SHEET 1 OF 2
JOB 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

16. ANL REPRESENTATIVE – DATE

17. ANL Disposition and Remarks: Acceptable.

18. Approved

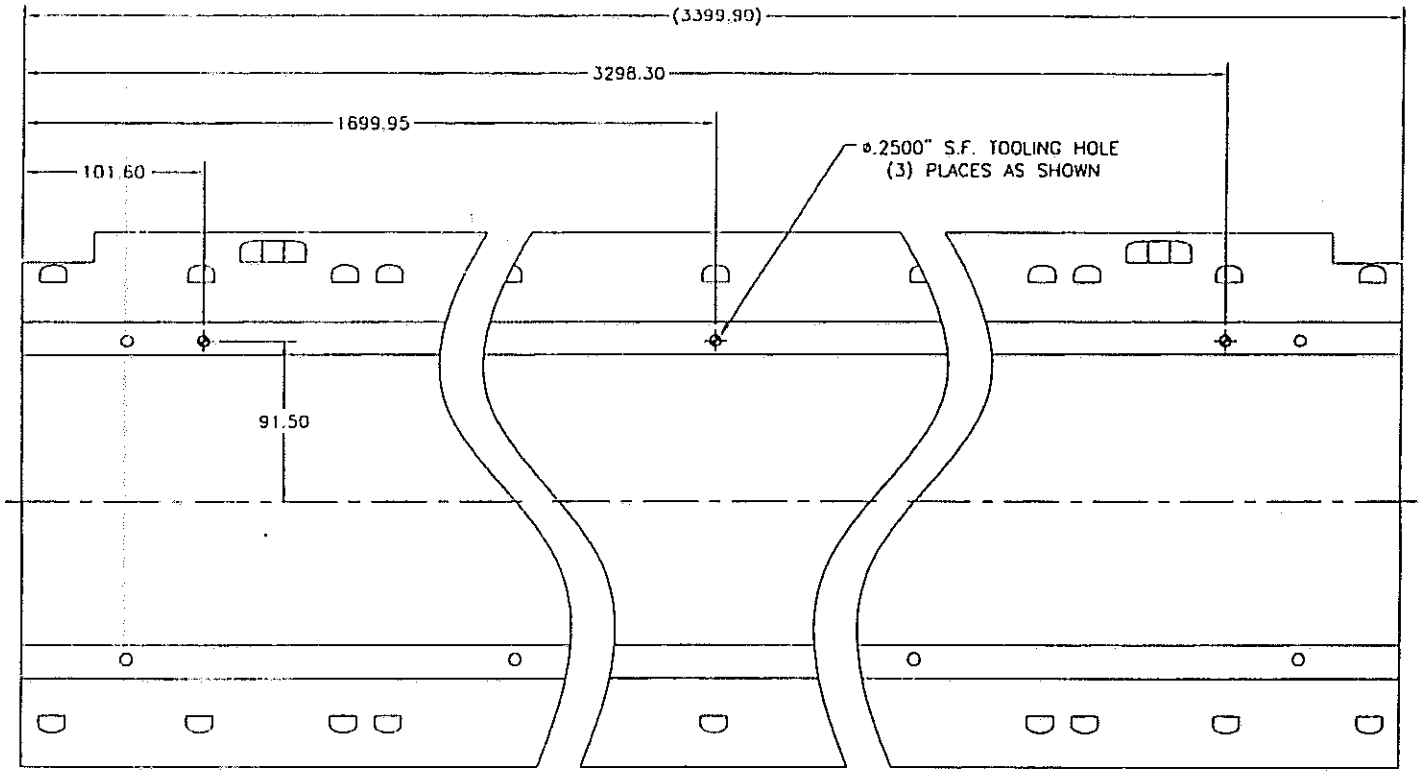
11/03/05 — TECHNICAL REPRESENTATIVE – DATE

11/03/05 — QUALITY ASSURANCE REPRESENTATIVE – DATE

11/3/5 — PROCUREMENT REPRESENTATIVE – DATE

ANL 311 (9-94)

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 Cornell Road • Blue Ash Industrial Park
Cincinnati, Ohio 45242 • Ph. (513)489-0507

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

ANL Part/Revision Number: L143-112000-05
SLAC Part Number: SA-381-001-35
Assembly Serial Number: 5A10359-31
LOT34 magnets Serial# 15841-16320

Bottom Jaw

Slot Number	Serial No.	Main filed Orientation	x-axis orientation
1	15968	Upstream	Right
2	16302	Downstream	Left
3	16292	Upstream	Left
4	16054	Downstream	Left
5	16022	Upstream	Left
6	16009	Downstream	Right
7	16016	Upstream	Right
8	16036	Downstream	Left
9	15919	Upstream	Right
10	16299	Downstream	Left
11	15851	Upstream	Right
12	16236	Downstream	Left
13	15970	Upstream	Right
14	16258	Downstream	Left
15	16099	Upstream	Left
16	16169	Downstream	Right
17	15926	Upstream	Right
18	15875	Downstream	Left
19	16191	Upstream	Left
20	16204	Downstream	Left
21	15890	Upstream	Left
22	16281	Downstream	Right
23	16244	Upstream	Right
24	15986	Downstream	Right
25	15956	Upstream	Right
26	16176	Downstream	Right
27	16097	Upstream	Right
28	16025	Downstream	Right
29	16135	Upstream	Right
30	16158	Downstream	Right
31	16282	Upstream	Left
32	16305	Downstream	Right
33	15907	Upstream	Left
34	16069	Downstream	Right
35	16028	Upstream	Right
36	16119	Downstream	Right
37	15877	Upstream	Right
38	16168	Downstream	Left
39	15954	Upstream	Right
40	15940	Downstream	Right
41	15957	Upstream	Right
42	16081	Downstream	Right
43	16107	Upstream	Right

Top Jaw

Slot Number	Serial No.	Main filed Orientation	x-axis orientation
1	16162	Downstream	Right
2	15896	Upstream	Left
3	16224	Downstream	Left
4	15878	Upstream	Left
5	16198	Downstream	Left
6	15932	Upstream	Left
7	16189	Downstream	Right
8	16266	Upstream	Right
9	16023	Downstream	Right
10	16194	Upstream	Right
11	16293	Downstream	Left
12	15895	Upstream	Right
13	16157	Downstream	Left
14	16260	Upstream	Left
15	16127	Downstream	Right
16	16285	Upstream	Right
17	16122	Downstream	Left
18	15869	Upstream	Left
19	16291	Downstream	Left
20	16051	Upstream	Left
21	16235	Downstream	Left
22	15882	Upstream	Right
23	16254	Downstream	Left
24	15938	Upstream	Left
25	16177	Downstream	Right
26	16110	Upstream	Left
27	16311	Downstream	Left
28	16013	Upstream	Right
29	15917	Downstream	Left
30	16261	Upstream	Left
31	16133	Downstream	Left
32	15929	Upstream	Right
33	16007	Downstream	Right
34	16298	Upstream	Left
35	15988	Downstream	Left
36	15855	Upstream	Left
37	16230	Downstream	Left
38	15966	Upstream	Left
39	16241	Downstream	Right
40	16031	Upstream	Right
41	16030	Downstream	Right
42	16049	Upstream	Left
43	16297	Downstream	Right

44	15845	Downstream	Right
45	16064	Upstream	Left
46	16131	Downstream	Left
47	16010	Upstream	Right
48	16108	Downstream	Left
49	15922	Upstream	Right
50	15983	Downstream	Left
51	16277	Upstream	Right
52	16170	Downstream	Right
53	15893	Upstream	Right
54	16242	Downstream	Left
55	15950	Upstream	Right
56	16000	Downstream	Right
57	16114	Upstream	Left
58	16273	Downstream	Right
59	15936	Upstream	Left
60	16310	Downstream	Right
61	16050	Upstream	Right
62	16216	Downstream	Right
63	16075	Upstream	Left
64	16066	Downstream	Left
65	16289	Upstream	Right
66	16020	Downstream	Right
67	16215	Upstream	Right
68	16251	Downstream	Left
69	15925	Upstream	Left
70	16165	Downstream	Right
71	16296	Upstream	Right
72	15888	Downstream	Left
73	15975	Upstream	Right
74	16315	Downstream	Left
75	15992	Upstream	Right
76	16056	Downstream	Left
77	15883	Upstream	Left
78	16197	Downstream	Left
79	15934	Upstream	Left
80	15924	Downstream	Right
81	16229	Upstream	Right
82	16156	Downstream	Right
83	16245	Upstream	Right
84	16290	Downstream	Left
85	15962	Upstream	Right
86	16001	Downstream	Left
87	16184	Upstream	Left
88	16091	Downstream	Right
89	16103	Upstream	Right
90	16062	Downstream	Left
91	16006	Upstream	Left
92	16147	Downstream	Right
93	16232	Upstream	Left
94	16255	Downstream	Right
95	16208	Upstream	Right

44	16012	Upstream	Left
45	15862	Downstream	Right
46	16011	Upstream	Left
47	16002	Downstream	Right
48	16154	Upstream	Right
49	16092	Downstream	Right
50	15870	Upstream	Left
51	15960	Downstream	Left
52	15974	Upstream	Left
53	16166	Downstream	Right
54	15894	Upstream	Left
55	15976	Downstream	Left
56	16226	Upstream	Right
57	16279	Downstream	Left
58	16037	Upstream	Left
59	15844	Downstream	Right
60	15985	Upstream	Left
61	16138	Downstream	Right
62	16019	Upstream	Left
63	16155	Downstream	Left
64	16234	Upstream	Left
65	16080	Downstream	Left
66	16159	Upstream	Right
67	16252	Downstream	Left
68	15843	Upstream	Right
69	15955	Downstream	Left
70	16087	Upstream	Left
71	16221	Downstream	Left
72	16313	Upstream	Left
73	15874	Downstream	Right
74	15993	Upstream	Right
75	16318	Downstream	Right
76	15857	Upstream	Left
77	16278	Downstream	Right
78	15886	Upstream	Left
79	15850	Downstream	Right
80	15949	Upstream	Right
81	15865	Downstream	Left
82	16171	Upstream	Left
83	16207	Downstream	Right
84	16228	Upstream	Left
85	16283	Downstream	Right
86	15953	Upstream	Left
87	16017	Downstream	Left
88	16048	Upstream	Right
89	16078	Downstream	Left
90	16077	Upstream	Right
91	16143	Downstream	Left
92	16151	Upstream	Left
93	16043	Downstream	Right
94	16239	Upstream	Left
95	15987	Downstream	Right

96	16126	Downstream	Left
97	15909	Upstream	Right
98	16248	Downstream	Right
99	15927	Upstream	Right
100	15879	Downstream	Right
101	15977	Upstream	Left
102	16052	Downstream	Right
103	16314	Upstream	Left
104	15978	Downstream	Left
105	15885	Upstream	Right
106	15868	Downstream	Right
107	15898	Upstream	Left
108	16213	Downstream	Left
109	15959	Upstream	Right
110	16287	Downstream	Right
111	16046	Upstream	Right
112	16139	Downstream	Right
113	16098	Upstream	Right
114	16014	Downstream	Right
115	16047	Upstream	Left
116	16153	Downstream	Right
117	16116	Upstream	Right
118	16152	Downstream	Left
119	15941	Upstream	Right
120	15905	Downstream	Right
121	15872	Upstream	Left
122	16058	Downstream	Left
123	16312	Upstream	Right
124	15979	Downstream	Left
125	16021	Upstream	Left
126	16319	Downstream	Left
127	16199	Upstream	Left
128	15942	Downstream	Left
129	15918	Upstream	Right
130	15969	Downstream	Right
131	16303	Upstream	Right
132	15981	Downstream	Right
133	16205	Upstream	Right
134	16074	Downstream	Right
135	16309	Upstream	Left
136	16102	Downstream	Right
137	16063	Upstream	Right
138	16065	Downstream	Left
139	16042	Upstream	Right
140	16067	Downstream	Left
141	16113	Upstream	Right
142	16132	Downstream	Left
143	15961	Upstream	Left
144	16270	Downstream	Left
145	16178	Upstream	Left
146	15904	Downstream	Right
147	16123	Upstream	Right

96	16212	Upstream	Left
97	15935	Downstream	Right
98	15867	Upstream	Left
99	15958	Downstream	Left
100	16193	Upstream	Right
101	16316	Downstream	Left
102	16249	Upstream	Left
103	15997	Downstream	Right
104	16317	Upstream	Right
105	16272	Downstream	Left
106	15889	Upstream	Right
107	15930	Downstream	Right
108	16118	Upstream	Left
109	16237	Downstream	Left
110	16034	Upstream	Left
111	16134	Downstream	Right
112	16061	Upstream	Left
113	16101	Downstream	Left
114	16079	Upstream	Right
115	16211	Downstream	Left
116	16182	Upstream	Right
117	16209	Downstream	Left
118	15939	Upstream	Right
119	16267	Downstream	Right
120	15880	Upstream	Left
121	16300	Downstream	Left
122	15859	Upstream	Left
123	16027	Downstream	Left
124	16026	Upstream	Left
125	15973	Downstream	Right
126	16196	Upstream	Right
127	16035	Downstream	Left
128	15920	Upstream	Left
129	16111	Downstream	Right
130	16264	Upstream	Right
131	15984	Downstream	Left
132	16284	Upstream	Left
133	16041	Downstream	Left
134	16160	Upstream	Left
135	16109	Downstream	Left
136	16095	Upstream	Left
137	16150	Downstream	Right
138	16141	Upstream	Left
139	16144	Downstream	Left
140	16188	Upstream	Right
141	16288	Downstream	Left
142	16120	Upstream	Left
143	16233	Downstream	Right
144	15931	Upstream	Left
145	15928	Downstream	Right
146	16032	Upstream	Right
147	15912	Downstream	Right

148	15996	Downstream	Right
149	15871	Upstream	Left
150	16024	Downstream	Left
151	15971	Upstream	Right
152	16320	Downstream	Right
153	15972	Upstream	Right
154	15887	Downstream	Right
155	16275	Upstream	Left
156	16247	Downstream	Left
157	15903	Upstream	Right
158	15965	Downstream	Right
159	15914	Upstream	Left
160	16045	Downstream	Right
161	16268	Upstream	Left
162	16071	Downstream	Right
163	16068	Upstream	Left
164	16201	Downstream	Right
165	16148	Upstream	Right
166	16286	Downstream	Right
167	16112	Upstream	Left
168	16090	Downstream	Left
169	16130	Upstream	Right
170	16083	Downstream	Right
171	16246	Upstream	Left
172	15858	Downstream	Right
173	15881	Upstream	Right
174	16164	Downstream	Right
175	16086	Upstream	Right
176	15937	Downstream	Right
177	15908	Upstream	Right
178	16145	Downstream	Right
179	16202	Upstream	Right
180	16220	Downstream	Right
181	16100	Upstream	Right
182	15849	Downstream	Left
183	16072	Upstream	Left
184	16271	Downstream	Right
185	15989	Upstream	Left
186	15873	Downstream	Right
187	16124	Upstream	Right
188	15945	Downstream	Right
189	16174	Upstream	Right
190	16128	Downstream	Left
191	15856	Upstream	Right
192	16183	Downstream	Left
193	16085	Upstream	Left
194	16214	Downstream	Right
195	15916	Upstream	Right
196	16210	Downstream	Left
197	16265	Upstream	Left
198	16295	Downstream	Right
199	16106	Upstream	Left

148	15891	Upstream	Right
149	16276	Downstream	Right
150	15853	Upstream	Left
151	15999	Downstream	Left
152	16053	Upstream	Left
153	15900	Downstream	Left
154	16059	Upstream	Right
155	16223	Downstream	Left
156	16274	Upstream	Right
157	16172	Downstream	Left
158	15902	Upstream	Left
159	16259	Downstream	Left
160	16238	Upstream	Left
161	16096	Downstream	Left
162	16306	Upstream	Right
163	16003	Downstream	Left
164	16104	Upstream	Right
165	16263	Downstream	Left
166	16181	Upstream	Left
167	15921	Downstream	Right
168	15963	Upstream	Right
169	16089	Downstream	Right
170	15943	Upstream	Left
171	16057	Downstream	Right
172	15947	Upstream	Left
173	16180	Downstream	Left
174	15994	Upstream	Right
175	16163	Downstream	Left
176	15913	Upstream	Left
177	16187	Downstream	Left
178	15866	Upstream	Left
179	16005	Downstream	Right
180	16094	Upstream	Left
181	16206	Downstream	Left
182	16105	Upstream	Left
183	15846	Downstream	Left
184	16093	Upstream	Left
185	16280	Downstream	Right
186	16033	Upstream	Left
187	15933	Downstream	Right
188	15946	Upstream	Left
189	16115	Downstream	Right
190	15884	Upstream	Left
191	16038	Downstream	Left
192	15991	Upstream	Left
193	16073	Downstream	Left
194	15847	Upstream	Left
195	16137	Downstream	Left
196	16140	Upstream	Left
197	15910	Downstream	Right
198	16004	Upstream	Left
199	15995	Downstream	Left

200	16175	Downstream	Right
201	16190	Upstream	Left
202	16227	Downstream	Right
203	16225	Upstream	Right
204	16008	Downstream	Right
205	15876	Upstream	Right
206	16218	Downstream	Left
207	16243	Upstream	Right
208	16294	Downstream	Right
209	15915	Upstream	Left
210	16125	Downstream	Left
211	16262	Upstream	Right
212	16185	Downstream	Right
213	16173	Upstream	Left
214	16217	Downstream	Right
215	15897	Upstream	Left
216	16192	Downstream	Right
217	16082	Upstream	Right
218	16121	Downstream	Right
219	16070	Upstream	Left
220	16186	Downstream	Left
221	15860	Upstream	Left
222	16200	Downstream	Right
223	15854	Upstream	Left
224	16269	Downstream	Right
225	16076	Upstream	Left

200	16015	Upstream	Left
201	16161	Downstream	Left
202	16040	Upstream	Right
203	16257	Downstream	Right
204	15951	Upstream	Right
205	16219	Downstream	Right
206	15852	Upstream	Right
207	15861	Downstream	Left
208	16088	Upstream	Left
209	16039	Downstream	Left
210	16240	Upstream	Left
211	16167	Downstream	Left
212	16044	Upstream	Left
213	16253	Downstream	Left
214	15967	Upstream	Left
215	15906	Downstream	Right
216	15980	Upstream	Left
217	16060	Downstream	Left
218	15848	Upstream	Right
219	16222	Downstream	Left
220	16256	Upstream	Left
221	16231	Downstream	Left
222	16136	Upstream	Right
223	16179	Downstream	Right
224	15944	Upstream	Left
225	16250	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
16149	33%
15842	80%
16307	
15952	
16203	
15899	
16301	
16304	

Sample magnets

serial No.
15901
15998
16055
16195
16308

16029
15964
15990
15864
15863
15982
16129
15923
16084
15892
16146
16142
16117
15841
15911
15948
16018

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 R Becker	4.18.07
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 R Becker	4/18.07
	Section 4.1.3.			
3	Check that parts were marked with serial numbers per SOW section 4.1.3.	Undulator Ass'y Contractor	Thomas R Becker	4.18.07
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 R Becker	4/18.07
	L143-112000-05			
	SA-381-001-35			
	5A10359-31			

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: 5A10359-31

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

Part: L143-110105 Poles

Completed By: Thomas A Becker **Date:** 4.18.07

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-TECK

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 13568

P.O. #: 6A-05150

DATE: 4/7/07

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-Tech

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 15544

P.O. #: 5A-05150

DATE: 4.7.07

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-Tech

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 11207

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	5.96	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 #: 11262

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	43.94	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.97	Accept/Reject
Perpendicularity to A (both sides)	<= .01	N/A	<.01	Accept/Reject
Flatness of base	<= .01	N/A	<.01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

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

COMMENTS:

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

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-TECK

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 13471

P.O. #: 6A-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 = $44^{+0}_{-.1}$

LCLS

Procedure Number: L143-00076
Revision: 0
Issue Date: April 14, 2005

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 13994

P.O. #: 5A-05150

DATE: 4-7-07

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	5.95	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 #: 13544

P.O. #: 5A-05150

DATE: 4-7-07

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

LCLS Linac Coherent Light Source Stanford Synchrotron Radiation Laboratory Stanford Linear Accelerator Center

Procedure Number: L143-00076
Revision: 0
Issue Date: April 14, 2005

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-TECK

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 12342

P.O. #: 6A-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-Tech

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 11237

P.O. #: 5A-05150

DATE: 4-7-07

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

COMMENTS:

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

LCLS Linac Coherent Light Source Stanford Synchrotron Radiation Laboratory Stanford Linear Accelerator Center

Procedure Number: L143-00076
Revision: 0
Issue Date: April 14, 2005

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 01575

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	5.96	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 #: 10851

P.O. #: 5A-05150 DATE: 4/7/07

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: 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 #: 13586

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	43.99	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, 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 #: 11280

P.O. #: 5A-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	43.95	(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 #: 13406

P.O. #: 5A-05150

DATE: 4-12-07

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 #: 12023

P.O. #: 6A-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 = $44^{+0}_{-.1}$

LCLS

Procedure Number: L143-00076
Revision: 0
Issue Date: April 14, 2005

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-Tech

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 13943

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	5.96	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 #: 13588

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: 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 #: 13570

P.O. #: 5A-05150

DATE: 4/7/07

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 #: 13515

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	5.95	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 #: 10925

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	43.99	Accept/Reject
Pole Thickness	6.00	+0 / -.05	5.98	Accept/Reject
Perpendicularity to A (both sides)	<= .01	N/A	<.01	Accept/Reject
Flatness of base	<= .01	N/A	<.01	Accept/Reject

INSPECTOR: Thomas P. Becker QA Supervisor:

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

COMMENTS:

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

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-TECK

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 15171

P.O. #: 6A-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	5.96	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 #: 11036

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, 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 #: 12325

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 #: 13582

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	5.96	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 #: 14047

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	5.96	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 #: 15239

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: HS-Teck

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 15561

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-Tech

PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105

SERIAL #: 14748

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, 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 #: 15620

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	43.99	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, 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 #: 14801

P.O. #: 5A-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	48.00	Accept/Reject
Pole Width	44.0	+0 / ~~-.01~~ -.1	43.94	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 #: 14839

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, 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 #: 11192

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	43.99	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, 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 #: 13448

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 #: 11164

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 #: 13459

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 #: 13998

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	5.96	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 #: 13485

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, 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 #: 14852

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

COMMENTS:

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

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

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

DRAWING #: L143-110105 SERIAL #: 13426

P.O. #: 6A-05150 DATE: 4/7/07

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 #: 12337

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	43.92	(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 #: 12383

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-Teck

PART NAME: LCLS Magnet Stricture Pole

DRAWING #: L143-110105

SERIAL #: 11318

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	5.98	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 #: 14854

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	5.94	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: 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 #: 08167

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	43.94	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 #: 08032

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-Teck PART NAME: ECLS Magnet Structure Pole

DRAWING #: L143-110105 SERIAL #: 13556

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	5.96	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 #: 12424

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-Tech PART NAME: LCLS Magnet Structure Pole

DRAWING #: L143-110105 SERIAL #: 13554

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	5.94	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: 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 #: 13537

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	43.92	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 #: 15616

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	5.97	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 = $44^{+0}_{-.1}$

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	4.18.07
2	Visual inspection of parts for surface chips and pits.	Undulator Ass'y Contractor	Thomas P Becker	4.18.07
3	Dimensional check of part for conformance to the drawing.	Undulator Ass'y Contractor	Thomas P Becker	4.18.07
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			
	5A10359-31			

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: 5A10359-31

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

Part: L143-110106 Magnet

Completed By: Thomas P. Barker **Date:** 4.18.07

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 #: 15-09

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 #: 16248

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	56.990	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 #: 159-27

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 #: 15879

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	66.00	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 #: 15977

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 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 #: 16052

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 #: 16314

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	65.975	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 #: 15978

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 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 #: 15885

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 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 #: 15868

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 #: 15898

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 #: 16213

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	65.975	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 #: 15959

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	66.00	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 #: 16287

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	8.96	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 #: 16046

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 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 #: 16139

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 #: 16098

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, MX851, MX702

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Shin-Etsu

PART NAME: LCLS Magnet

DRAWING #: L143-110106

SERIAL #: 16014

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 #: 16047

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	65.975	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 #: 16153

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 #: 16116

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 #: 16152

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 #: 15941

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 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 #: 15905

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 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 #: 15872

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 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 #: 16058

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 #: 16312

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 #: 15979

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 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 #: 16021

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 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 #: 16319

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 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 #: 16199

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 #: 15942

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 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 #: 15918

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	65.975	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 #: 15969

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	66.00	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 #: 16303

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 #: 15981

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	66.00	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 #: 16205

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 #: 16074

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 #: 16309

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	8.925	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 #: 16102

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 #: 16063

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 #: 16065

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 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 #: 16042

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	66.00	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 #: 16067

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 #: 16113

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 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 #: 16132

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	8.96	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 #: 15961

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 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 #: 16270

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	66.0T	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: