

Table of Contents for QA Records Packages

The purpose of this form is to verify the presence of the appropriate quality assurance records for hardware shipments being installed at SLAC. This form is required to be completed by ANL LCLS project personnel prior to authorizing shipments to SLAC.

System or Component Name: LCLS Fixed Support Assembly

Date: Jan 15, 2008

Part/Drawing Number: L143-143080-200000

Serial Numbers: 22

Supplier Name: Hi-Tech Manufacturing Inc

PO Number: 7A-08189

Responsible LCLS Technical Lead: M. White

Responsible Engineer(s): E. Trakhtenberg

No.	Record Name	Document number	Origin	Comments	Present?
1.	ANL Component Acceptance Record	LCLS	ANL	ANL Acceptance record of ANL acceptance date and applicable drawing revisions.	Present
2.	Dynamic CAM test results		ANL		Present
3.	Certificates of Conformance for Vibratory Stress Relief	NA	American Grinding	L1430802-200030, L1430802-200021, L1430802-200011	Present
4.	Certificates of Inspection	NA	Hi-Tech	L1430401-100101, L1430401-100201,	Present
5.	Certificates of Inspection	NA	Hi-Tech	L1430401-100103, L1430401-100303,	Present
6.	Copies of the ANL Inspection/Acceptance Report of Components for As-Built Drawings	L143-00093	Metalex	Undulator Girder	Present
7.	Copies of the ANL Inspection/Acceptance Report of Components for As-Built Drawings	L143-00093	Metalex	Interface Plate (Double CAM)	Present
8.	Copies of the ANL Inspection/Acceptance Report of Components for As-Built Drawings	L143-00093	Metalex	Interface Plate (Single CAM)	Present
9.	Weld Certification	NA	Metalex	Support Girder (L1430401-10040)	Present
10.	Weld Certification	NA	Metalex	Support Girder (L1430401-10040)	Present
11.	Inspection Planning & Report Form	NA	Metalex	Undulator Support Girder	Present
12.	Certificate of compliance – Stress Test	NA	Cincinnati Steel Treating Co.	Support Girder	Present
13.	Certificate of Conformance	NA	Metalex	Support Girder	Present
14.	Calibration Certificate – CMM metric & inches	TG13480 & TG13482	American Calibration Inc.	Unit is in working condition	Present in SM #1 QA
15.	Various MSDS for Paint & Oil and Concrete Epoxy Grease	NA	NA	MSDS for chemicals used.	Present
16.	Welding Operator Qualification Test Record	NA	Bodycote Tausisg Inc.	Welders qualifications	Present
17.	Certificates of Conformance for Support Girder raw materials	NA	Metalex	Precision Steel Services Inc., Frederick Steel Co., CMC Steel	Present in SM #1 QA
18.	Certificate of Compliance /Statement of Quality	NA	The Sherwin-Williams Co.		Present
19.	Visual Weld Inspection Report	NA	Metalex	Girder Support	Present
20.	Visual Weld Inspection Report	NA	HiTech	Girder Support	Present

No.	Record Name	Document number	Origin	Comments	Present?
21.	Gearhead Inspection Report		GAM	In Folder	Present
22.	Certification of Single Axis Table		Lintech		Present in SM #1 QA
23.	Certificate of Conformance for CAM Motors		Animatics	Motors – In Folder	Present
24.	Shipping Crate Design Approval Record	NA	Hi-Tech		Present
25.	Misc. Photographs	NA	Hi-Tech		

Optional notes or Comments:

The Mill Certificates for the steel dimensions, chemical composition, and tensile properties are present for Girder serial number 1 only because the material for all of the girder assemblies was purchased at one time.

Signature of person that completed this table of contents: _____ Date: _____

Concurrence signatures of this table of contents contents:

Responsible ANL LCLS Engineer: _____ Date: _____

Responsible ANL QA Coordinator: _____ Date: _____

Responsible ANL LCLS Technical Lead: _____ Date: _____

ANL LCLS Project Manager: _____ Date: _____

Distribute this completed form to: ANL Records package, ANL LCLS QA, ANL LCLS Technical Lead

THE PURPOSE OF THIS FORM IS TO PROVIDE A RECORD OF THE ACCEPTANCE OF LCLS COMPONENTS DELIVERED BY ANL, AS WELL AS ANY ISSUES THAT MAY ARISE FROM THE ACCEPTANCE PROCESS.

System or Component Name	Part/ Drawing Number	Rev.	Qty	Serial No.	Supplier Name	ANL Purchase Order Number
Fixed Support General Assembly	L1430802-200000	07	10 5	19, 20, 21, 22, 23	Hi- Tech Manufacturing	7A-08189
Undulator Girder Assembly	L1430401-100396	04	1 5	19, 20, 21, 22, 23	Hi- Tech Manufacturing	7A-08189

The components appearing above are being delivered to SLAC and have been deemed to meet the requirements defined in the ANL Statement of Work Document # L143-00093-03/ SLAC No.SP-381-004-26.

ANL Approval Signatures:

Valdez Flores
LCLS Quality Assurance Coordinator at ANL

1/9/08
Date

[Signature]
Responsible or Chief Engineer at ANL

01/09/08
Date

[Signature]
LCLS Technical Lead at ANL

09-Jan 2008
Date

[Signature]
LCLS Project Manager at ANL

09 Jan 2008
Date

The components appearing above have been accepted by SLAC and have been deemed to have met the requirements defined in the ANL Statement of Work Document # L143-00093-03/ SLAC No.SP-381-004-26.

SLAC Acceptance Signatures:

LCLS Quality Assurance Manager at SLAC

Date

LCLS Chief Engineer at SLAC

Date

LCLS Project Director at SLAC

Date

The LCLS Quality Assurance Manager at SLAC is responsible for retaining the original completed and for forwarding copies of the completed form to all who have signed the form

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

22-1

TIME OF TEST: 10/29/2007 11:35:04 AM

POS#1 FWD

CAM ECCEN R (MICRONS) = 2204.98
ROTARY POT GAIN = 342.39
POT OFFSET (DEG) = 48.49
DEVIATION RMS (MICRONS) = 11.72
DEVIATION MAX (MICRONS) = 20.96
DEVIATION MIN (MICRONS) = -25.71

POS#1 BWD

CAM ECCEN R (MICRONS) = 2209.55
ROTARY POT GAIN = 342.39
POT OFFSET (DEG) = 45.35
DEVIATION RMS (MICRONS) = 9.75
DEVIATION MAX (MICRONS) = 19.44
DEVIATION MIN (MICRONS) = -23.97

POS#2 FWD

CAM ECCEN R (MICRONS) = 2206.89
ROTARY POT GAIN = 342.39
POT OFFSET (DEG) = 45.35
DEVIATION RMS (MICRONS) = 14.02
DEVIATION MAX (MICRONS) = 28.49
DEVIATION MIN (MICRONS) = -27.08

POS#2 BWD

CAM ECCEN R (MICRONS) = 2208.93
ROTARY POT GAIN = 342.39
POT OFFSET (DEG) = 45.35
DEVIATION RMS (MICRONS) = 11.40
DEVIATION MAX (MICRONS) = 21.50
DEVIATION MIN (MICRONS) = -25.89

POS#3 FWD

CAM ECCEN R (MICRONS) = 2205.87
ROTARY POT GAIN = 342.39
POT OFFSET (DEG) = 45.35
DEVIATION RMS (MICRONS) = 14.76
DEVIATION MAX (MICRONS) = 29.76
DEVIATION MIN (MICRONS) = -27.27

POS#3 BWD

CAM ECCEN R (MICRONS) = 2208.52
ROTARY POT GAIN = 342.39
POT OFFSET (DEG) = 45.35
DEVIATION RMS (MICRONS) = 12.40
DEVIATION MAX (MICRONS) = 23.20
DEVIATION MIN (MICRONS) = -27.87

=== TEST PASS! ===

--- END OF TEST ---

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

22-2

TIME OF TEST: 11/1/2007 10:50:44 AM

POS#1 FWD

CAM ECCEN R (MICRONS) = 1539.54
ROTARY POT GAIN = 344.62
POT OFFSET (DEG) = 59.01
DEVIATION RMS (MICRONS) = 13.58
DEVIATION MAX (MICRONS) = 32.63
DEVIATION MIN (MICRONS) = -31.54

POS#1 BWD

CAM ECCEN R (MICRONS) = 1546.66
ROTARY POT GAIN = 344.62
POT OFFSET (DEG) = 59.01
DEVIATION RMS (MICRONS) = 13.86
DEVIATION MAX (MICRONS) = 31.86
DEVIATION MIN (MICRONS) = -36.93

POS#2 FWD

CAM ECCEN R (MICRONS) = 1541.51
ROTARY POT GAIN = 344.62
POT OFFSET (DEG) = 59.01
DEVIATION RMS (MICRONS) = 14.17
DEVIATION MAX (MICRONS) = 35.00
DEVIATION MIN (MICRONS) = -31.38

POS#2 BWD

CAM ECCEN R (MICRONS) = 1545.52
ROTARY POT GAIN = 344.62
POT OFFSET (DEG) = 59.01
DEVIATION RMS (MICRONS) = 13.62
DEVIATION MAX (MICRONS) = 35.25
DEVIATION MIN (MICRONS) = -35.40

POS#3 FWD

CAM ECCEN R (MICRONS) = 1542.12
ROTARY POT GAIN = 344.62
POT OFFSET (DEG) = 59.01
DEVIATION RMS (MICRONS) = 13.29
DEVIATION MAX (MICRONS) = 33.74
DEVIATION MIN (MICRONS) = -31.07

POS#3 BWD

CAM ECCEN R (MICRONS) = 1544.40
ROTARY POT GAIN = 344.62
POT OFFSET (DEG) = 59.01
DEVIATION RMS (MICRONS) = 13.97
DEVIATION MAX (MICRONS) = 34.37
DEVIATION MIN (MICRONS) = -37.92

=== TEST PASS! ===

--- END OF TEST ---

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

22-3

TIME OF TEST: 11/1/2007 10:34:06 AM

POS#1 FWD

CAM ECCEN R (MICRONS) = 1548.66
ROTARY POT GAIN = 345.51
POT OFFSET (DEG) = 58.61
DEVIATION RMS (MICRONS) = 5.40
DEVIATION MAX (MICRONS) = 13.99
DEVIATION MIN (MICRONS) = -14.25

POS#1 BWD

CAM ECCEN R (MICRONS) = 1547.77
ROTARY POT GAIN = 345.51
POT OFFSET (DEG) = 58.61
DEVIATION RMS (MICRONS) = 5.76
DEVIATION MAX (MICRONS) = 14.48
DEVIATION MIN (MICRONS) = -15.20

POS#2 FWD

CAM ECCEN R (MICRONS) = 1547.47
ROTARY POT GAIN = 345.51
POT OFFSET (DEG) = 58.61
DEVIATION RMS (MICRONS) = 5.71
DEVIATION MAX (MICRONS) = 15.38
DEVIATION MIN (MICRONS) = -18.49

POS#2 BWD

CAM ECCEN R (MICRONS) = 1546.97
ROTARY POT GAIN = 345.51
POT OFFSET (DEG) = 58.61
DEVIATION RMS (MICRONS) = 5.76
DEVIATION MAX (MICRONS) = 14.80
DEVIATION MIN (MICRONS) = -15.20

POS#3 FWD

CAM ECCEN R (MICRONS) = 1549.75
ROTARY POT GAIN = 345.51
POT OFFSET (DEG) = 58.61
DEVIATION RMS (MICRONS) = 5.64
DEVIATION MAX (MICRONS) = 17.46
DEVIATION MIN (MICRONS) = -17.11

POS#3 BWD

CAM ECCEN R (MICRONS) = 1547.49
ROTARY POT GAIN = 345.51
POT OFFSET (DEG) = 58.61
DEVIATION RMS (MICRONS) = 5.93
DEVIATION MAX (MICRONS) = 16.36
DEVIATION MIN (MICRONS) = -15.75

=== TEST PASS! ===

--- END OF TEST ---

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

22-4

TIME OF TEST: 11/3/2007 10:00:52 AM

POS#1 FWD

CAM ECCEN R (MICRONS) = 1565.95
ROTARY POT GAIN = 346.69
POT OFFSET (DEG) = 58.67
DEVIATION RMS (MICRONS) = 5.14
DEVIATION MAX (MICRONS) = 16.99
DEVIATION MIN (MICRONS) = -14.33

POS#1 BWD

CAM ECCEN R (MICRONS) = 1565.99
ROTARY POT GAIN = 346.69
POT OFFSET (DEG) = 58.67
DEVIATION RMS (MICRONS) = 5.45
DEVIATION MAX (MICRONS) = 19.01
DEVIATION MIN (MICRONS) = -12.60

POS#2 FWD

CAM ECCEN R (MICRONS) = 1564.49
ROTARY POT GAIN = 346.69
POT OFFSET (DEG) = 58.67
DEVIATION RMS (MICRONS) = 5.31
DEVIATION MAX (MICRONS) = 16.98
DEVIATION MIN (MICRONS) = -16.05

POS#2 BWD

CAM ECCEN R (MICRONS) = 1565.45
ROTARY POT GAIN = 346.69
POT OFFSET (DEG) = 58.67
DEVIATION RMS (MICRONS) = 4.95
DEVIATION MAX (MICRONS) = 16.80
DEVIATION MIN (MICRONS) = -12.74

POS#3 FWD

CAM ECCEN R (MICRONS) = 1565.29
ROTARY POT GAIN = 346.69
POT OFFSET (DEG) = 58.67
DEVIATION RMS (MICRONS) = 5.24
DEVIATION MAX (MICRONS) = 15.16
DEVIATION MIN (MICRONS) = -14.85

POS#3 BWD

CAM ECCEN R (MICRONS) = 1565.93
ROTARY POT GAIN = 346.69
POT OFFSET (DEG) = 58.67
DEVIATION RMS (MICRONS) = 5.07
DEVIATION MAX (MICRONS) = 17.77
DEVIATION MIN (MICRONS) = -13.30

=== TEST PASS! ===

--- END OF TEST ---

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

22-5

TIME OF TEST: 11/3/2007 10:24:58 AM

POS#1 FWD

CAM ECCEN R (MICRONS) = 1572.73

ROTARY POT GAIN = 349.04

POT OFFSET (DEG) = 61.34

DEVIATION RMS (MICRONS) = 7.18

DEVIATION MAX (MICRONS) = 20.65

DEVIATION MIN (MICRONS) = -17.51

POS#1 BWD

CAM ECCEN R (MICRONS) = 1573.96

ROTARY POT GAIN = 349.04

POT OFFSET (DEG) = 61.34

DEVIATION RMS (MICRONS) = 6.76

DEVIATION MAX (MICRONS) = 15.80

DEVIATION MIN (MICRONS) = -20.77

POS#2 FWD

CAM ECCEN R (MICRONS) = 1571.57

ROTARY POT GAIN = 349.04

POT OFFSET (DEG) = 61.34

DEVIATION RMS (MICRONS) = 7.13

DEVIATION MAX (MICRONS) = 18.09

DEVIATION MIN (MICRONS) = -14.62

POS#2 BWD

CAM ECCEN R (MICRONS) = 1573.97

ROTARY POT GAIN = 349.04

POT OFFSET (DEG) = 61.34

DEVIATION RMS (MICRONS) = 6.59

DEVIATION MAX (MICRONS) = 16.30

DEVIATION MIN (MICRONS) = -19.75

POS#3 FWD

CAM ECCEN R (MICRONS) = 1572.75

ROTARY POT GAIN = 349.04

POT OFFSET (DEG) = 61.34

DEVIATION RMS (MICRONS) = 7.11

DEVIATION MAX (MICRONS) = 17.25

DEVIATION MIN (MICRONS) = -16.23

POS#3 BWD

CAM ECCEN R (MICRONS) = 1574.49

ROTARY POT GAIN = 349.04

POT OFFSET (DEG) = 61.34

DEVIATION RMS (MICRONS) = 6.60

DEVIATION MAX (MICRONS) = 16.66

DEVIATION MIN (MICRONS) = -19.44

=== TEST PASS! ===

--- END OF TEST ---



AMERICAN GRINDING & MACHINE CO.

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

CERTIFICATE OF COMPLIANCE

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

RE: PURCHASE ORDER 16845

PRINT NUMBER(S) (if applicable) L1430802-200030

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

[Signature]
Signature of American Grinding Representative

7/19/07
Date

Certificate of Inspection

This certificate is presented to

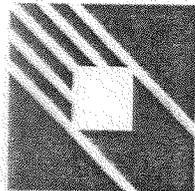
Argonne National Laboratory

Per PO # 7A-08189, part #
L1430401-100103 (PF-381-000-15) quantity of 16pcs
L1430401-100303 (PF-381-002-15) quantity of 4pcs
Have been inspected and met all drawing requirements.

Q.C. Supervisor

M. Delgado

09-07-07
Date



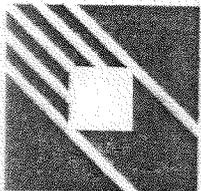
HT-THCAI

Manufacturing, Inc.

ISO 9001:2000
certified

Certificate of Inspections

This certificate is presented to



HT-TECH

Manufacturing, Inc.

ISO 9001:2000
certified

Argonne National Laboratory

Per PO # 7A-08189, part #

L1430401-100101 (PF-381-000-13) quantity of 114pcs

L1430401-100201 (PF-381-000-23) quantity of 38pcs

Have been inspected and met all drawing requirements.

O.C. Supervisor

Mudger

09-07-07
Date

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: METALEX, INC.

PART NAME: UNDULATOR GIRDER ASSY

DRAWING #: L1430401-100400 (05)

SERIAL #: 22

P.O. #: 7A-08189

DATE: 12-19-07

ACCEPTANCE CRITERIA

1. Visually inspect for damage. Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Perpendicularity of Datum B to C	≤ 0.25	≤ 0.25	≤ 0.25	Accept/Reject
Perpendicularity of Datum A to C	≤ 0.25	≤ 0.25	≤ 0.25	Accept/Reject
True position of 2 D2 hole to 2 D3 holes	≤ 0.03	≤ 0.03	≤ 0.25	Accept/Reject
Parallelism of support pad surface to Datum C	≤ 0.07	≤ 0.07	#1 ≤ 0.07	Accept/Reject
			#2 ≤ 0.07	
			#3 ≤ 0.07	
			#4 ≤ 0.07	
Distance from Datum C to support pad surface	109.50	+0.2/-0.2	#1 109.44	Accept/Reject
			#2 109.50	
			#3 109.42	
			#4 109.52	

INSPECTOR: Simon

QA Supervisor: Mulez

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

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-TECH MANUFACTURING, INC.

PART NAME: INTERFACE PLATE (DOUBLE CAM)

DRAWING #: L1430802-200011 (03)

SERIAL #: 22

P.O. #: 7A-08189

DATE: 08-21-07

ACCEPTANCE CRITERIA

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

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Flatness of Datum A	≤ 0.02	≤ 0.02	$L = .01$	<u>Accept/Reject</u>
Perpendicularity of Datum B to A	≤ 0.02	≤ 0.02	$L = .02$	<u>Accept/Reject</u>
Parallelism of inner edge on Cam Block A to B	≤ 0.02	≤ 0.02	$L = .02$	<u>Accept/Reject</u>
Parallelism of inner edge on Cam Block B to B	≤ 0.02	≤ 0.02	$L = .02$	<u>Accept/Reject</u>
Parallelism of outer edge on Cam Block B to B	≤ 0.02	≤ 0.02	$L = .02$	<u>Accept/Reject</u>
Width of mounting surface on Cam Block B	142.01	+0.02/-0	142.02	<u>Accept/Reject</u>
Width of mounting surface on Cam Block A	254.00	+0.02/-0	254.01	<u>Accept/Reject</u>
Separation of outer edges of Cam Blocks	685.42	+0.08/-0.08	685.45	<u>Accept/Reject</u>

INSPECTOR: Smol

QA Supervisor: Murtagh

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

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: HI-TECH MANUFACTURING, INC.

PART NAME: INTERFACE PLATE (SINGLE CAM)

DRAWING #: L1430802-200021 (03)

SERIAL #: 22

P.O. #: 7A-08189

DATE: 08-20-07

ACCEPTANCE CRITERIA

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

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Flatness of Datum A	≤ 0.02	≤ 0.02	$\angle = .01$	Accept/Reject
Perpendicularity of Datum B to A	≤ 0.02	≤ 0.02	$\angle = .01$	Accept/Reject
Parallelism of upper edge on lower Cam Block C to B	≤ 0.02	≤ 0.02	$\angle = .02$	Accept/Reject
Parallelism of lower edge on upper Cam Block C to B	≤ 0.02	≤ 0.02	$\angle = .01$	Accept/Reject
Parallelism of upper edge on upper Cam Block C to B	≤ 0.02	≤ 0.02	$\angle = .02$	Accept/Reject
Width of mounting surface on lower Cam Block	142.01	+0.02/-0	142.02	Accept/Reject
Width of mounting surface on upper Cam Block	142.01	+0.02/-0	142.01	Accept/Reject
Separation of inner edges of Cam Blocks	457.43	+0.08/-0.08	457.45	Accept/Reject

INSPECTOR: S. Moore

QA Supervisor: M. L. Laga

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

COMMENTS:

 <small>Manufacturing Quality Control CERTIFIED ISO 9001 QUALITY MANAGEMENT</small>		INSPECTION PLANNING & REPORT FORM Melnlex Mfg 5750 Cornell Rd. Ft. Mitchell, OH 45242-1 (513) 489-0507		Job No. 2007-7558	Qty 1	
Inspection Origin <input type="checkbox"/> Receiving <input type="checkbox"/> In-Process <input checked="" type="checkbox"/> Final <input type="checkbox"/> Rework/Repair <input type="checkbox"/> First Article		Vendor (Sub-Tier Source) Identification Vendor Name N/A Date Rec'd N/A P.O. No. N/A		Customer Identification Part No. L1430401-100400 REV 6 P.O. Number 16185 Part Name Undulator Support Girder		
Alt Oper. 170	Serial Numbers: 22		Customer Name Hi-Tech Manufacturing			
SPECIFICATION		B/P ZONE	INSPECTION METHOD / GAGE NO.	ACTUAL DIMENSION / GAGE VERIFICATION: (Range of Readings or Accept Status)	QTY ACC	QTY REJ

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

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

PART TEMPERATURE BEFORE INSPECTION (Record in Celsius)	SOW 4.5.4	CONTACT THERMOMETER MX1794	20.30° C	
PART TEMPERATURE DURING INSPECTION (Record in Celsius)	SOW 4.5.4	CONTACT THERMOMETER MX1794	20.30° C	
PART TEMPERATURE AFTER INSPECTION (Record in Celsius)	SOW 4.5.4	CONTACT THERMOMETER MX1794	20.31° C	

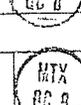
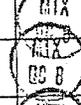
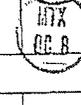
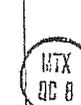
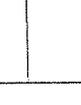
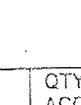
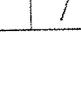
CRITICAL DIMENSIONS PER SECTION 4.5.2.2 OF DOC. # L143-00093

SHEET 2 - TOP VIEW

A) Flatness of Datum B of .030 [.001]	N/A	CMM MX1269	.014	
B) Perpendicularity of Datum B to Datum C .25 [.010] A C	E8	CMM MX1269	.014	
C) Flatness of datum A of .030 [.001]	N/A	CMM MX1269	.019	
D) Perpendicularity of Datum A to Datum C .25 [.010] C	D8	CMM MX1269	.019	
E) 9X \varnothing 6.338 - 6.350 marked "D1", "D2" & "D3"	E7 E6 E3	CMM MX1269	6.347 - 6.350	
F) True position of "D3" holes 2X \varnothing .1 [.004] A B C \varnothing .03 [.0012] B C	E3	CMM MX1269	.038 AND .032 <hr/> .001	
F) True position of "D2" holes 2X \varnothing .1 [.004] A B C \varnothing .03 [.0012] B C	E6	CMM MX1269	.015 AND .026 <hr/> .019	
F) Locations of "D1" holes 444.50 [17.500]	E7	CMM MX1269	444.523	

STAMP 	INSPECTED BY THOMAS G COOK	DATE 12/4/07	PAGE] OF 2	QTY ACC /	QTY REJ 0
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		INSPECTION PLANNING & REPORT FORM Metalex Mfg 5750 Cornell Rd 1 Cincinnati, OH 45242 1 (513) 489-0507		Job No. 2007-7558	Qty 1
Inspection Origin <input type="checkbox"/> Receiving <input type="checkbox"/> In-Process <input checked="" type="checkbox"/> Final <input type="checkbox"/> Rework/Repair <input type="checkbox"/> First Article		Vendor (Sub-Tier Source) Identification Vendor Name N/A Date Rec'd N/A		Customer Identification Part No. L1430401-100400 REV 6 P.O. Number 16185	
At Oper. 170	Serial Numbers. 22	Part Name Undulator Support Girder Customer Name Hi-Tech Manufacturing			
SPECIFICATION		B/P ZONE	INSPECTION METHOD / GAGE NO.	ACTUAL DIMENSION / GAGE VERIFICATION (Range of Readings or Accept Status)	QTY ACC QTY REJ

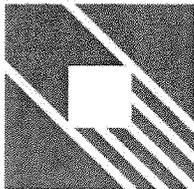
1968.50 [77.500]	E4	CMM MX1269	1968.474	
3492.50 [137.500]	E2	CMM MX1269	3492.432	
2X 523.6 [20.61]	E1	CMM MX1269	523.573 523.585 523.587	
3185.26 [125.404]	D2	CMM MX1269	3185.195	
845.29 [33.179]	D6	CMM MX1269	845.265	
2X 95.10 [3.744]	D8	CMM MX1269	95.118 95.112	
SHEET 2 - SIDE VIEW				
A) <input type="checkbox"/> C / / .030 [.0012] 2X Surface "I"	C8	CMM MX1269	.013	
B) <input type="checkbox"/> C / / .05 [.002]	C8	CMM MX1269	.022	
SHEET 2 - BOTTOM VIEW				
A) 2X 749.78 ± .15	C7	CMM MX1269	749.821 749.822	
B) 2X 2340.00 ± .15	C5	CMM MX1269	2340.021 2339.993	
C) 4X // .05 [.002] B	B2	CMM MX1269	.001 .006 .009 .004	
D) 4X // .030 [.0012] A	B7	CMM MX1269	.001 .001 .002 .006	
SHEET 3 - SECTION B-B				
E) // .07 [.003] C	C2	CMM MX1269	.068	
F) 4X 109.47 ± .08	C2	CMM MX1269	109.449 - 109.517	
ALL OTHER FEATURES ARE ACCEPTED PER METALEX OPERATOR ACCEPTANCE PROGRAM (OAP) MXW117001 & OPERATOR SIGNOFF OF ROUTER OPERATIONS FOR COMPLIANCE TO ALL DRAWING FEATURES GENERATED WITHIN THAT DEFINED OPERATION.	ROUTER SIGNOFF MX5009	CONFORMS		

STAMP 	INSPECTED BY THOMAS G COOK	DATE 12/4/07	PAGE 2 OF 2	QTY ACC 1	QTY REJ 0
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HTI-TECH

Manufacturing, Inc.

ISO 9001:2000
certified



Weld Certificate

This certificate is presented to

Argonne National Laboratory

Per PO # 7A-08189, part # L1430802-200030 quantity of 76 pcs

Procedure: #PQR101

Customer Specification: #AWS D1.1

Weld wire Spec: #AWS A5.28, Type: ER80S-D2, Heat: 83479, Dia: .045

Welder: Tadeusz Sutowski

Have been welded in accordance with the referenced welding specification.

Muelay A. Francis
Q.C. Supervisor

11-17-07
Date

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

Certification ID
36870

Order ID
98156

CERTIFICATION OF COMPLIANCE

CUSTOMER

Metalex Mfg., Inc.
5750 Cornell Road

Cincinnati OH
Bkkt Ord # 45242

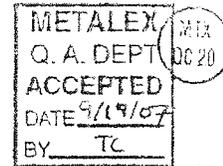
Purchase Order 72559 Customer Cust

Qty Part No / Description
4 L1430401-100400
SUPPORT GIRDER

Material
A36

REV 05V S/N 7A-08198-21 THRU 7A-08198-24

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



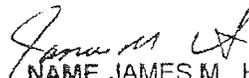
HT Chart w/ S/N-24

RESULTS

THE ABOVE PARTS HAVE BEEN HEAT TREATED TO THE FOLLOWING:

HEAT TREATMENT CYCLE STRESS RELIEVED AT 1150F
PER AWS D1.1 REV 2004

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


NAME JAMES M. HUNT
TITLE QA MANAGER
DATE 9/14/2007

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



CERTIFICATE OF CONFORMANCE

Date:	<u>12/14/07</u>	Metalex Job#	<u>2007-7558</u>
Customer:	<u>Hi-Tech Manufacturing, Inc.</u>	Purchase Order #	<u>16185</u>
	<u>4637 N. 25th Ave.</u>	MX Packing List #	<u>41519</u>
	<u>Schiller Park, IL 60176</u>		
Attention:	<u>Simon Sorsher</u>		

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

ITEM	QTY	PART NUMBER	REV	PART NAME	ID # *
001	4	L1430401-100400	6	Support Girder	See Below

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

KCB 12/14/07

COMMENTS: "FIRST ARTICLE" submitted on Metalex Shipper # 408588, dated 08/13/07 (S/N: 7A-08198-01).

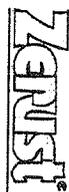
Applicable serial numbers of this shipment are 7A-08198-20 thru 7A-08198-23.

Some internal documents in this quality package may contain documents certifying to revision level "5" or "5V". Metalex certifies these documents and processes conform to the rev 6 revision level and the parts conform to revision level "6".

Metalex is in compliance with Statement of Worksopce Document No. L143-00093, Revision New, dated 12/12/06.

Manufactured from Metalex purchased material. Reference heat numbers: T7257, T7232, T7130, T7141, U9728, 0129862, X25899, J62810, JF6843, J70358, and 478765.

<u><i>Katrina Black</i></u>	<u>Katrina Black</u>	<u>12/14/07</u>
Metalex Representative Signature	Print Name	Date



Material Safety Data Sheet

Z-Maxx Lube – Heavy Duty Grease

SECTION 1

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

SECTION 2 - INGREDIENTS

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

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

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

SECTION 3 – PHYSICAL DATA

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

SECTION 4 – FIRE AND EXPLOSION DATA

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

SECTION 5 – REACTIVITY DATA

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

SECTION 6 – HEALTH HAZARDS

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

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

SECTION 7 – SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

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

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

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

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

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

BLUE 1a/1

E.360

Keeler LongKeeler & Long/PPG
856 Echo Lake Road
Watertown, CT
1-800-238-8596**PPG** PPG High Performance Coatings

Product Data Sheet

Kolor-Poxy™ Enamel
KLJ Series**Product Information****Product Code:** KLJ1XXXX Part A
KLJ2XXXX Part A
Where XXXX is a color designation.
KLJ1B Curing Agent Part B
Product: Polyamide Epoxy**Suggested Use:** A two component, polyamide epoxy enamel formulated to provide excellent chemical abrasion and direct impact resistance for interior exposures.

Use as a topcoat for interior steel, concrete and masonry surfaces, especially in alkaline environments.

Not Recommended: Exterior exposures; areas subject to splash and spillage of strong acids; immersion in strong acids.**Product Description****Color:** A full range of colors is available**Gloss 60°:** KLJ1XXXX 85 minimum
KLJ2XXXX 35 - 65**VOC:** 3.47 lbs./gal. (416 g/L) mixed, unthinned**Method:** Calculated**In Service Heat****Limitations:** 250° F (121° C) dry heat**Weight/Gallon:** 10.2 ± 0.6 lbs./gal. ***Flash Point:** Part A 82°F (27.7°C)

Part B 104°F (40°C)

Package: Part A is available in one gallon containers filled at 0.80 gallons (3.03 liters) and five gallon containers filled at 4.00 gallons (15.1 liters).

KLJ1B Part B is available in quart containers filled at 25.6 fluid ounces (767 mL) and full filled gallon containers.

Percent Solids by**Volume:** 53.9 ± 3.0% ***Percent Solids by****Weight:** 66.1 ± 3.0% ***Drying Schedule****Air Dry @ 77°F (25°C) ASTM D5895****Dry to Touch:** 4 hours**Dry to Handle:** 8 hours**Drying Schedule (continued)****Dry to Recoat:** 24 hours

Drying times listed may vary depending on temperature, humidity and air movement.

Application Data**Substrate:** Metal or masonry**Substrate Preparation:** The service life of the coating is directly related to the surface preparation. The surface to be coated must be dimensionally stable, properly prepared and primed, dry, clean and free of all contamination including oil, dirt, grease and rust.**Basecoats:** Kolorane™ Aluminum Primer, Kolorane™ Zinc Rich Primer, Kolor-Poxy™ Primers and Enamels, Kolor-Poxy™ Surfacer**Application Method:** Apply by spray, brush or roller application.**Air Spray:** DeVilbiss MBC gun, 704 or 777 air cap with "E" or "F" tip and needle or equivalent equipment. Atomization Pressure: 30 - 60 psi.**Airless Spray:** Equipment capable of maintaining a minimum of 2500 psi at the tip without surge. 0.011" (0.279 mm) to 0.017" (0.432 mm) orifice.**Brush:** Use a high quality natural bristle brush.**Roller:** Use a 3/8" nap polyester nylon roller cover with a solvent resistant core.

Refer to Application Guide APG-3 for additional information.

Parts Base by**Volume:** 4 parts A**Parts Catalyst by****Volume:** 1 part KLJ1B Part B**Digestion Time:** 1 hour @ 77°F (25°C)**Pot Life @ 72°F:** 8 hours @ 77°F (25°C)**Thinner Code & Percent:** Thin up to 5% by volume with KL3700 as needed for application.**Coverage Sq. Ft./Gal.****@ 25 mils:** 346 sq. ft./gal. ***Wet Film Per****Coat:** 4.6 to 7.4 mils***Dry Film Per****Coat:** 2.5 to 4.0 mils

The statement and methods presented in this bulletin are based upon the best available data and practices known to PPG Architectural Finishes, Inc. at the present time. They are not representations or warranties of performance, results or comprehensiveness of such data. Since PPG Architectural Finishes, Inc. is constantly improving its coatings and paint formulas, future technical data may vary somewhat from what was available when this bulletin was printed. Contact your PPG Sales Representative, Distributor of Pittsburgh Paints or the Pittsburgh Paints Information Center for the most up-to-date information. E.360 Mg., 2004

BLUE 1/2

E.360

Keeler Long

PPG High Performance Coatings

Keeler & Long/PPG
856 Echo Lake Road
Watertown, CT
1-800-238-8596

Product Data Sheet

Kolor-Poxy™ Enamel
KLJ Series

Application Data (continued)

Mixing Instructions: Thoroughly mix Part A before blending. Add KLJ1B Part B to Part A. Mix until uniform. Allow to digest 1 hour before use.**Clean Up Solvent:** KL3700

Additional Information

Apply only when air, product and surface temperatures are at least 50°F (10°C) and the surface temperature is at least 5°F (3°C) above the dew point. Curing is retarded below 60°F (15.6°C).

Store materials at temperatures between 50°F (10°C) and 95°F (35°C).

Permissible substrate temperature during application is 50°F (10°C) and 120°F (48.9°C).

*Values are calculated using KLJ16002 White, Part A mixed 4:1 by volume with KLJ1B, Curing Agent, Part B. Values will vary with color.

Read all label and Material Safety Data Sheet (MSDS) information prior to use. MSDS are available by calling 1-800-238-8596.

Not intended for residential use.

Spray equipment must be handled with due care and in accordance with manufacturer's recommendation.

High-pressure injection of coatings into the skin by airless equipment may cause serious injury, requiring immediate medical attention at a hospital.

WARNING! If you scrape, sand, or remove old paint, you may release lead dust or fumes. LEAD IS TOXIC. EXPOSURE TO LEAD DUST OR FUMES CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a properly fitted NIOSH-approved respirator and prevent skin contact to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the USEPA National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead. In Canada contact a regional Health Canada office. Follow these instructions to control exposure to other hazardous substances that may be released during surface preparation.

The statement and methods presented in this bulletin are based upon the best available data and practices known to PPG Architectural Finishes, Inc. at the present time. They are not representations or warranties of performance, results or comprehensiveness of such data. Since PPG Architectural Finishes, Inc. is constantly improving its coatings and paint formulas, future technical data may vary somewhat from what was available when this bulletin was printed. Contact your PPG Sales Representative, Distributor of Pittsburgh Paints or the Pittsburgh Paints Information Center for the most up-to-date information. E.360 May, 2004

Primer 1 of 2

E.140

Product Data Sheet

Keeler Long

Keeler & Long/PPG
856 Echo Lake Road
Watertown, CT 06795
1-800-238-8596

Kolor-Poxy™ Primer

KL3200 Series

 PPG High Performance Coatings
Product Information

Product Code: KL3200 White Part A
KL32004279 Red Oxide Part A
KL3200B Curing Agent Part B

Product Type: Polyamide-Epoxy

Suggested Use: Use where a high build primer/topcoat is required that provides abrasion, impact and chemical resistance when applied to steel and concrete surfaces exposed to a wide range of conditions. May be used in Nuclear Coating Service areas Level II, balance of plant, and certain Level III areas.

Not Recommended: Immersion in strong solvents.

Compatible Topcoats: Acrythane™ Enamels, Hydro-Poxy™ Enamels, Kolorane™ Enamels, Kolor-Poxy™ HI-Build Enamels, Kolor-Poxy™ Primers and Enamels, Kolor-Sil™ Enamels, Poly-Silicone Enamels

Product Description

Color: White and light colors, Red Oxide

Gloss 60°: Flat

VOC: 2.50 lbs./gal. (302 g/L) *

Method: Calculated (mixed)

Weight/Gallon: 13.6 +/- 0.5 lbs./gal. (mixed) *

In Service Heat Limitations: 250°F (121°C) maximum, dry heat.
150°F (66°C) maximum, immersion.

Flash Point: KL3200 Part A 78°F (26°C)
KL3200B Part B 123°F (51°C)

Package: KL3200 Part A is available in short filled gallon and five gallon containers.
KL3200B Part B is available in short filled quart and full filled gallon containers.

Percent Solids by Volume: 66.2% +/- 3.0% (mixed) *

Percent Solids by Weight: 81.5% +/- 3.0% (mixed) *

Application Data

Substrate: Ferrous metal or masonry

Substrate Preparation: The service life of the coating is directly related to the surface preparation. The surface to be coated must be properly prepared, dry, clean and free of contamination.

Minimum surface preparation is SSPC-SP6 (NACE #3) Commercial Blast Cleaning for ferrous substrates.

Brush blasting or acid etching is required for masonry.

Stabilizers on the surface of hot dipped galvanized steel must be removed by either brush blasting, sanding or chemical treatment.

Near White Metal Blast Cleaning per SSPC-SP10 (NACE #2) is minimum surface preparation for immersion service.

Basecoat: Self priming when used on recommended substrates.

Application Method: Apply by spray, brush or roller application.

Air Spray: DeVilbiss MBC gun, 704 or 777 air cap with "E" tip and needle or equivalent equipment. Atomizing pressure 30-60 psi.

Airless Spray: Equipment capable of maintaining a minimum of 2500 psi at the tip without surge. 0.015" (0.38 mm) to 0.019" (0.48 mm) orifice.

Brush: Use a high quality natural bristle brush.

Roller: Use a 3/8" nap polyester-nylon roller cover with a solvent resistant core.

Refer to Application Guide AGP-3 for additional information.

Parts Base by Volume: 4 parts KL3200 Part A

Parts Catalyst by Volume: 1 part KL3200B Part B

Thinner Code & Percent: Thin up to 5% by volume with KL3700 as needed for application.

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E.140 March, 2005

Primer 2 of 2

E.140

Product Data Sheet

Keeler Long

Keeler & Long/PPG
856 Echo Lake Road
Watertown, CT 06795
1-800-238-8596

Kolor-Poxy™ Primer
KL3200 Series

PPG PPG High Performance Coatings

Application Data (continued)

Digestion Time: 45 minutes
Pot Life: 8 hours at 77°F (25°C).
Wet Film Per Coat: 3.8 to 9.1 mils *
Dry Film Per Coat: 2.5 to 6.0 mils
Coverage Sq. Ft./Gal. @ 1 mil: 1082 sq. ft./gal *
Mixing Instructions: Under mechanical agitation, mix Part A thoroughly. Add KL3200B Part B and mix until uniform. Allow to digest for 45 minutes before use.
Clean Up Solvent: KL3700

Drying Schedule

Drying Schedule: Per ASTM D5895, air dry @ 77°F (25°C) and 50% relative humidity
Dry to Touch: 2.5 hours
Dry Through: 6 hours
Dry to Recoat: 24 hours
Immersion Service: 10 days

Drying time may vary depending on temperature, humidity and air movement.

Additional Information

Apply only when air, product and surface temperatures are above 50°F (10°C) and surface temperature is at least 5°F (3°C) above the dew point. Curing is retarded below 60°F (15.5°C) without the addition of accelerator.

Permissible substrate temperature during application is 50°F (10°C) to 120°F (49°C).

Store materials at temperatures between 50°F (10°C) and 95°F (35°C).

Read all label and Material Safety Data Sheet (MSDS) information prior to use. MSDS are available by calling 1-800-238-8596.

*Values are calculated for KL3200 White mixed with KL3200B. Values will vary with color.

Spray equipment must be handled with due care and in accordance with manufacturer's recommendation.

High-pressure injection of coatings into the skin by airless equipment may cause serious injury, requiring immediate medical attention at a hospital.

Not intended for residential use.

WARNING! If you scrape, sand, or remove old paint, you may release lead dust or fumes. LEAD IS TOXIC, EXPOSURE TO LEAD DUST OR FUMES CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a properly fitted NIOSH-approved respirator and prevent skin contact to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the USEPA National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead. In Canada contact a regional Health Canada office. Follow these instructions to control exposure to other hazardous substances that may be release during surface preparation.

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E.140 March, 2005



Bodycote Taussig Inc.
Metallurgical & Materials Engineers



AWS WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

WELDER OR WELDING OPERATOR'S NAME: Tadeusz Sutowski I.D. #39
 WELDING PROCESS: GMAW MANUAL SEMIAUTO XXX MACHINE
 POSITION: 4G - Overhead PROGRESSION: N/A
 WPS NO.: AWS Prequalified TYPE OF JOINT TESTED: Single V Groove
 BASE METAL SPECIFICATION: ASTM A36, Qualifies All Groups
 PIPE DIAMETER: N/A JOINT THICKNESS: 3/8"
 QUALIFICATION RANGES: 3/4" Max. Groove/Unlimited Fillet, Flat, Horiz., Overhead

FILLER METAL

SPECIFICATION NO.: AWS A5.18 CLASSIFICATION: ER80S-D2 F NO.: N/A
 DIAMETER: .035" FLUX/SHIELDING GAS: AR/O₂ - 92/8 FLOW RATE: 25 cfh
 BACKING OR BACK GOUGING METHOD: None

VISUAL INSPECTION RESULTS

APPEARANCE: Satisfactory UNDERCUT: None POROSITY: None

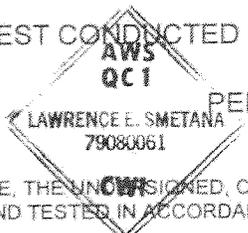
GUIDED BEND TEST RESULTS

TYPE	RESULTS	TYPE	RESULTS
FACE	PASS	ROOT	PASS

FILLET TEST RESULTS

SIZE: N/A FRACTURE TEST: N/A MACROETCH: N/A
 LOCATION, NATURE, SIZE OF DISCONTINUITIES: N/A
 NOTED: _____

TEST CONDUCTED BY: BODYCOTE TAUSSIG, INC. LABORATORY NO.: 134477



PER: Lawrence E. Smetana, CWI TEST DATE: March 20, 1997

WE, THE UNDERSIGNED, CERTIFY THAT THIS RECORD IS CORRECT AND THAT THE WELDS WERE PREPARED AND TESTED IN ACCORDANCE WITH AWS D1.1-1996

MANUFACTURER OR CONTRACTOR: Hi-Tech Manufacturing

AUTHORIZED BY/DATE: _____

THIS CERTIFICATE OR REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN APPROVAL OF BODYCOTE TAUSSIG, INC.

Where quality is an ongoing commitment

Metalex PO# 70772-JG-7558

ATTN: JAMES GRIFFIN

Certificate of Conformance

Hi-Tech Job# 7558

METALEX
Q. A. DEPT
ACCEPTED
DATE 01/5/07
BY KKB

MTX QC 19

Customer: Metalex Mfg. Inc.
 Address: 5730 Cornell Rd.
 Cincinnati, Oh. 45242
 Attention: Quality Engineering Dept.

KKB 615107
 MTX QC 19

Shelf life ID# 2835 thru 2839

Item	Qty	Part Number	Rev.	Part Name	Lot#	Shelf Life
1.	5	B624211		TILE CLAD H.S. EW. MC-56		36 MONTH OR OPEN
2.	5	B60VZ-72		TILE CLAD H.S. HARONZ		36 MONTH OR OPEN
3.	1	R7K54		SI REDUCER		3 YEARS

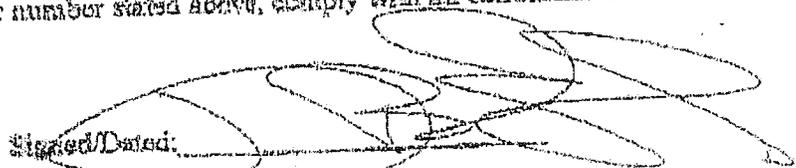
L Shelf life ID# 2834

KKB 615107
 MTX QC 19

MX Shelf Life ID# 2841 thru 2844
 KKB 615107
 MTX QC 19

SHERWIN WILLIAMS certifies that all materials, processes, etc. furnished to
Supplier Name

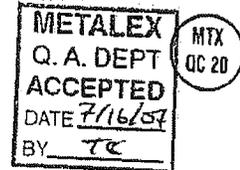
Metalex, for the purchase order number stated above, comply with all conditions stated in the P.O. for the items shown.

Signed/Date: 
 Verify Quality Exp.

Metalex PO# 71829-BL-7558

Certificate of Conformance

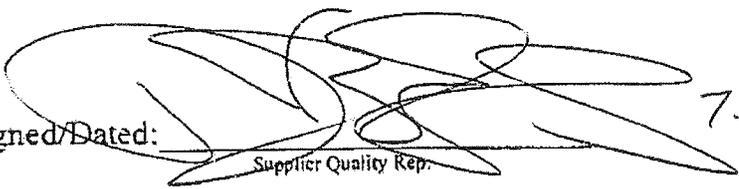
Customer: Metalex Mfg. Inc.
Address: 5750 Cornell Rd.
Cincinnati, Oh: 45242
Attention: Quality Engineering Dept.



<u>Item</u>	<u>Qty.</u>	<u>Part Number</u>	<u>Rev. Part Name</u>	<u>Job #</u>
<u>1</u>	<u>5</u>	<u>B62WZ11</u>	<u>BATCH# 061637L</u> <u>TILE CIAD H.S. SW4026</u> <u>Shelf life 36 months</u>	<u>7558</u>

Stewart Williams certifies that all materials, processes, etc. furnished to
Supplier Name

Metalex, for the purchase order number stated above, comply with all conditions stated in the P.O. for the items shown.

Signed/Dated:  7.16-0
Supplier Quality Rep.

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

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

MTX
06/20

J.B. 7558

**CERTIFICATE OF COMPLIANCE
STATEMENT OF QUALITY**

METALEX

PURCHASE ORDER 71261-JG
DATE OF MFG
SHELF LIFE
PART

QUANTITY
BATCH

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

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

AUTHORIZED SIGNATURE
CUSTOMER SERVICE ADM

Shelf life 36 months
OX28965
Batch date OX27165
OX27855 B67NS
OX0275C B67HS
OX2905Z



SHERWIN-WILLIAMS

SHERWIN-WILLIAMS
3143 E KEMPER RD
SHARONVILLE OH 45241

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

PACKING
SLIP
No. 5888-8

ACCOUNT: 6538-0111-8 JOB 01 METALEX MFG

PO: 7126/JG

METALEX MFG
5750 CORNELL RD
CINCINNATI OH 45242 2010

DATE: 06/20/07
TIME: 8:30 AM

E23/13651 11

(513) 489-0507

SALES NUMBER	SIZE	PRODUCT	DESCRIPTION	QUANTITY
630-4240	GALLON	B67H5	RCT EPX PR BUFF A	5
630-4265	GALLON	B67V5	RCT EPX PR HARD B	5
			TOTAL LINES	2
				10

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

MTX
QC 20

J6 7558

RECEIVED

JUN 20 2007

METALEX MFG.
BY CO

MERCHANDISE RECEIVED IN GOOD ORDER BY:

BILLY

DATE (CENTRALIZED INVOICE)



SHERWIN-WILLIAMS.

SHERWIN-WILLIAMS
3143 E KEMPER RD
SHARONVILLE OH 45241

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

PACKING
SLIP
No. 7233-5

ACCOUNT: 6538-0111-8 JOB 01 METALEX MFG

METALEX MFG
5750 CORNELL RD
CINCINNATI OH 45242 2010

PO: 71829-EL-7558
ORDER: CE0025007Q1246
DATE: 07/16/07
TIME: 8:08 AM

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

E16/13651 11

SALES NUMBER	SIZE	PRODUCT	DESCRIPTION	QUANTITY
6405-18998	GALLON	B62W2111	TC HS EX WHT A	5
Color: SW4026 SLATE GRAY				
EAC Blend-a-Color OZ 32 64 128				
B1	Black	2	16 1 2	
G2	New Green	-	3 - -	
Y3	Deep Gold	-	2 - -	
Sher-Color Formula				
TOTAL LINES				5

O E 1637L

MYT
RECEIVED
JUL 17 2007
METALEX MFG.
BY CD

MERCHANDISE RECEIVED IN GOOD ORDER BY:

BILLY BLANTON

DATE (CENTRALIZED INVOICE)

Metalex Manufacturing
L1430401-100400 Girder Support
Hi-Tech Purchase Order No. 16185

Visual Weld Inspection Report

Metalex Job: 2007-7558 Serial Number: 7A-08198-(22)

Welding and Visual Welding Inspection Requirements:

Per SOW L143-00093 Section 4.1.4.2: For all welded parts, the welding practice shall conform to the Structural Welding Code, ANSI/AWS D1.1-D1.1M:2004.

Per SOW L143-00093 Section 4.1.4.2.2: All structural welds shall be visually inspected as defined in section 6.9 of the Structural Welding Code. The contractor shall certify that the welds were inspected and were acceptable.

Part Print L1430401-100400 sheet 1 of 3.

Fabrication Stage#1

Features: W1 and W2

Acceptable (Y/N) ACCEPT Initial:  B.H. Date: 8/20/07

Fabrication Stage#2

Features: W3, W4 and W5

Acceptable (Y/N) ACCEPT Initial:  B.H. Date: 8/20/07

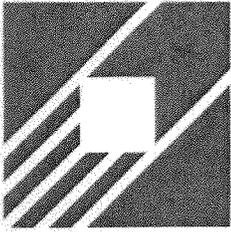
Fabrication Stage#3

Features: W6, W7, W8, W9, W10, W11 and W12

Acceptable (Y/N) ACCEPT Initial:  B.H. Date: 9/5/07

Verification of completion of weld visual inspection:

Completed By:   Date: 9/6/07



Hi-Tech Manufacturing, Inc.

CNC Milling & Turning
Prototypes & Special Machinery
General Machining & Heliarc Welding Facilities
ISO 9002 Registered
4637 N. 25th Ave., Schiller Park, IL 60176
Phone (847) 678-1616, Fax (847) 678-1617

Visual Weld Inspection Report.

Per Statement of Work # L143-00093 Section 4.1.4.2, Motion System Assembly ## L1430401-100396 and L1430802-200000, contract # 7A-08189, for all welded parts, the welding practice shall conform to the Structural Welding Code, ANSI/AWS D1.1-D1.1 M:2004.

Part Print L1430802-200030 sheet 1 of 2.

Quantity: 76 pcs

Fabrication Stage #1

Features: # 1, 4, 2, 3

Acceptable (Y/N) Y Initials: S.S. Date: 11-16-07

Verification of completion of weld visual inspection:

Completed by: *Samuel Sosa* Date: 11-17-07

From: Simon Sorsher
Date: 1/17/2008 9:04:40 AM
To: Simon Sorsher
Subject: Fw: Re: FW: Argonne Exploded View

-----Original Message-----

From: Emil Trakhtenberg
Date: 1/17/2008 8:52:44 AM
To: Simon Sorsher; Marion M. White
Subject: Re: FW: Argonne Exploded View

Simon,
Design of the crate for the SMS pedestal is approved.
Thank you,
Emil