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

Quality Assurance Traveler

ATTACH THIS FORM TO LCLS SYSTEMS AND COMPONENTS TO CONTROL THE SEQUENCE OF QUALITY ASSURANCE TASKS. RETURN THE COMPLETED TRAVELER TO THE LCLS QUALITY ASSURANCE COORDINATOR UPON COMPLETION.

System or Component Name: *LCLS Undulator Main Assembly*		
Part/Drawing Number: *L143-112000*	Revision: *05*	Serial Number: *~~05~~ 03*
Manufacturer: *Hi-Tech*		Purchase Order Number: *SA-13624*

Special Instructions:

This form is to be completed prior to the acceptance of LCLS Undulator Main Assemblies

Quality Assurance Tasks (attach continuation sheets if additional steps are required)

Seq No.	Task Description *Inform the LCLS Technical Lead if a task cannot be competed or a requirement met	Completed by/Date*	Requirement Met	Requirement Not Met*
1	*Perform visual inspection of the completed assembly for workmanship and correctness.*	TPM 6/29/04	☑	☐
2	*Perform visual inspection of the completed assembly for correct the following markings on the Strongback:* *L143-11200-05* *SA-381-001-35* *Serial number same as the Strongback*	↓	☐	☐
3	*Perform visual inspection of the completed assembly for correct the following markings on the Magnet Structure Assemblies:* • *Upper Left Magnet Structure Assemblies: L-143-110800-assembly no.* • *Upper Right Magnet Structure Assemblies: L143-111200-assembly no.* • *Upper Middle Magnet Structure Assemblies: L143-111000-1,2,3-assembly no.* • *Lower Left Magnet Structure Assemblies: 143-110900-assembly serial no.* • *Lower Right Magnet Structure Assemblies: L143-111300-assembly serial no.* • *Lower Middle Magnet Structure Assemblies: L143-111100-1,2-3-assembly no.*	↓	☐	☐
4	*Verify correct gap size along the entire undulator length using contactor's go/no-go gages.*	ET	☐	☐
5	*Verify correct gap size along the entire undulator length using calibrated gage blocks.*	ET	☐	☐
6	*Check the peak field at each magnet location using a portable Hall probe.*	ET	☐	☐
7	*Verify that the following quality assurance documentation has been completed by the contractor:* • *ANL Acceptance Criteria Listings E5-026046, E5-020020, E5-069069* • *LCLS Inspection/Acceptance Report for LCLS Magnets* • *LCLS Inspection/Acceptance Report for Supplier Inspection form for LCLS Magnet Assemblies* • *Magnet Sort List* • *Photographs showing correct magnet serial numbers and orientation* • *ANL Supplier Disposition Reports documenting any noncomformance to specifications drawings or other contract requirements*	TPM 6/29/04	☑	☐
8	*Verify that the magnet photographs of the magnet sub assemblies are in agreement with the magnet sort list.*	TPM 11/3/04	☑	☐
9	*Review shipping container and that the contractor has Shockwatch monitoring devices available*	TPM 6/29/04	☑	☐
10	*Forward completed traveler form to LCLS QA Coordinator Tom Barsz. B401, C4243.*		☐	☐

LCLS Task Leader Pre-Approval: _____ **Date:** _____

LCLS QA Coordinator Pre-Approval: _____ **Date:** _____

Optional Approver Comments:

Distribute completed traveler to: **Responsible Engineer, Task Leader, LCLS Quality Assurance Coordinator, Chief Engineer**

Other: _____

Enter Quality Improvements Lessons-Learned resulting from this activity below.

Not Required Fields

ARGONNE NATIONAL LABORATORY

ACCEPTANCE CRITERIA LISTING

1. DISTRIBUTION:

INSPECTION REQUIRED: ☑

4. ORIGINATOR'S NAME & DIVISION: Glen Lawrence/XFD 5. PHONE: 2-9298 6. DATE: 06/13/2005

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

10. AFTER INSPECTION, DELIVER TO BLDG. NO.: SLAC DIVISION: LCLS ATTN.:

11. REFERENCES AND/OR REMARKS:

Item may be inspected by LCLS QA at Contractor site prior to shipment with follow-up inspection at receiving site. First Articles from each of the two contractors are to be shipped to ANL/APS to be magnetically shimmed and characterized in the APS Magnet Measurement room. The 38 remaining units shall be shipped directly to SLAC to be magnetically shimmed and characterized in the LCLS Magnet Measurement room.

15. ORIGINATOR OF PLAN: Glen Lawrence DATE: 06/13/2005

16. PLAN REVIEWED/APPROVED BY: DATE: 00/00/0000

17. QAR CONCURRENCE WITH PLAN: DATE: 00/00/0000

3. ACL NO.: E5-164018 LINE NBR: 1

7. PART NO. & NAME: L143-112000 LCLS Undulator Main Assy. 8. QUANTITY: 2

12. STEP NO.	13. INSPECTION/TEST REQUIREMENT	14. INSPECTION TEST LOCATION	18. ACCEPTED BY OR NONCONFORMANCE REPORT NO.	19. DATE
1	Inspect shipping container for evidence of damage or rough handling	eceiving / Inspectic	SLAC	
2	Inspect shipping sensors for record of temperature variations and shock/g loads in x,y and z during shipping	eceiving / Inspectic	SLAC	
3	Review all required certifications for compliance and completeness	actor Fac. or Rec.	T M	6/29/06
4	Visual inspection of Undulator Assy for shipping damage	eceiving / Inspectic	SLAC	
5	Visual inspection of Undulator Assy for completeness to print, including all loose parts	actor Fac. or Rec.	T M	6/29/06

Not Required Fields

ARGONNE NATIONAL LABORATORY

ACCEPTANCE CRITERIA LISTING

12. STEP NO.	13. INSPECTION/TEST REQUIREMENT	14. INSPECTION TEST LOCATION	18. ACCEPTED BY OR NONCONFORMANCE REPORT NO.	19. DATE
6	Check the anneal certification for compliance with AMS-A801, or a specified material supplier's annealing schedule.	tor Assy Contracto	Hi Tech	4/29/04
7	Check that the machining Contractor's certified dimensional measurements are in compliance with the drawing	ANL	TM	4/29/04
8	Verify the critical dimensions as listed in the SOW, Section 4.5.2 are in compliance with the drawing	ulator Assy Contra	H. Tech	4/29/04

Not Required Fields

ARGONNE NATIONAL LABORATORY

ACCEPTANCE CRITERIA LISTING

1. DISTRIBUTION:

INSPECTION REQUIRED: ☑

4. ORIGINATOR'S NAME & DIVISION: Glen Lawrence/XFD 5. PHONE: 2-9298 6. DATE: 03/10/2005

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 will 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.

15. ORIGINATOR OF PLAN: Glen Lawrence DATE: 02/07/2005

16. PLAN REVIEWED/APPROVED BY: DATE: 00/00/0000

17. QAR CONCURRENCE WITH PLAN: DATE: 00/00/0000

3. ACL NO.: E5-069069 LINE NBR: 1

7. PART NO. & NAME: L143-110106 Upper Left Magnet Structure 8. QUANTITY: 192

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	ulator Ass'y Contra	H. Tech	6/29/04
2	Visual inspection of parts for surface chips and pits	ulator Ass'y Contra	↓	↓
3	Dimensional check of part for conformance to the drawing	ulator Ass'y Contra		
4	Review vendor certified test data agrees with SOW requirements	APS Bldg 401	TM	6/29/04
5	Review Vendor sort list for agreement with sort procedure.	APS Bldg 401	Shigeru	

Not Required Fields

ARGONNE NATIONAL LABORATORY

ACCEPTANCE CRITERIA LISTING

12. STEP NO.	13. INSPECTION/TEST REQUIREMENT	14. INSPECTION TEST LOCATION	18. ACCEPTED BY OR NONCONFORMANCE REPORT NO.	19. DATE
6	On random sampling, inspect magnetic field with magnetic visualization film for magnetic defects.	APS Magnet Grou	Shagani	
7	On random sampling, confirm Magnetic Moment magnitude and vector components agree with vendor reports	APS Magnet Grou		
8	On radom sampling, verify the magnet s demagnetization and thermal stability.	APS Magnet Grou		

Not Required Fields

ARGONNE NATIONAL LABORATORY

ACCEPTANCE CRITERIA LISTING

1. DISTRIBUTION:

INSPECTION REQUIRED: ☑

4. ORIGINATOR'S NAME & DIVISION: Glen Lawrence/XFD 5. PHONE: 2-9298 6. DATE: 01/25/2005

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

10. AFTER INSPECTION, DELIVER TO BLDG. NO.: NA DIVISION: ATTN.:

11. REFERENCES AND/OR REMARKS:

The Magnet Poles are to be delivered to the Undulator Assembly 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.

15. ORIGINATOR OF PLAN: Glen Lawrence DATE: 01/27/2005

16. PLAN REVIEWED/APPROVED BY: DATE: 00/00/0000

17. QAR CONCURRENCE WITH PLAN: DATE: 00/00/0000

3. ACL NO.: E5-026046 LINE NBR: 1

7. PART NO. & NAME: L143-110105 Upper Magnet Structure Pole 8. QUANTITY: 192

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	ulator Assy Contra	Hi Tech	6/29/06
2	Check that parts were "bagged and tagged" with serial no.'s and part no.'s (ANL & SLAC) per SOW L143-00031, Section 4.1.3	ulator Assy Contra		
3	Check that parts were marked with serial numbers per SOW section 4.1.3.	ulator Assy Contra		
4	Check that accompanying certifications have correct part serial numbers	ulator Assy Contra		
5	Check the material certification for compliance with ASTM A801, Type 1	tor Assy Contracto		

ARGONNE NATIONAL LABORATORY

ACCEPTANCE CRITERIA LISTING

12. STEP NO.	13. INSPECTION/TEST REQUIREMENT	14. INSPECTION TEST LOCATION	18. ACCEPTED BY OR NONCONFORMANCE REPORT NO.	19. DATE
6	Verify Undulator gap using Go-NoGo gauge	Contractor Facility	ET	

Quality Tools and Abrasives, Inc.
358 Country Club Drive • Bensenville, IL 60106
(630) 350-2110 • Fax (630) 350-2866
1-800-640-2110
Cutting Tools • Carbide • Shop Supplies • Inventory Management
Janitorial/Sanitation • Safety Supplies

Portable Hall Probe Measurements
of the LCLS undulator #3
06/29/2006
at "Hi-Tech Mfg"

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1-800-640-2110

Cutting Tools • Carbide • Shop Supplies • Inventory Management
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1	35 1.26	69. 1.26	~~101~~	135 1.25	169 1.27	203 1.26
2	36 1.27	70 1.26	~~102~~	136 1.27	170 1.25	204 1.27
3 1.23	37 1.28	71 1.26	103 1.27	137 1.26	171 1.25	205 1.27
4 1.29	38 1.26	72 1.26	104 1.26	138 1.27	172 1.26	206 1.26
5 1.27	39 1.26	73 1.25	105 1.26	139 1.27	173 1.25	207 1.28
6 1.27	40. 1.26	74 1.27	106 1.27	140 1.27	174 1.27	208 1.27
7 1.20	41 1.27	75 1.27	107 1.27	141 1.27	175 1.25	209 1.27
8 1.27	42 1.26	76 1.27	108 1.26	142 1.27	176 1.27	210 1.27
9 1.27	43 1.27	77 1.27	109 1.27	143 1.27	177 1.26	211 1.27
10. 1.26	44 1.26	78 1.26	110 1.26	144 1.26	178 1.25	212 1.26
11 1.26	45 1.26	79 1.26	111 1.26	145 1.27	199 1.26	213 1.26
12 1.27	46 1.25	80 1.26	112 1.25	146 1.27	180 1.27	214 1.25
13 1.26	47. 1.26	81 1.26	113 1.26	147 1.27	181 1.27	215 1.25
14 1.26	48 1.27	82 1.27	114 1.26	148 1.25	182 1.27	216 1.27
15 1.27	49 1.26	83 1.27	115 1.26	149 1.26	183 1.27	217 1.27
16 1.26	50 1.27	84 1.26	116 1.27	150 1.27	184 1.27	218 1.26
17. 1.26	51 1.26	85 1.27	117 1.26	151 1.27	185 1.26	219 1.26
18. 1.26	52 1.26	86 1.27	118 1.27	152 1.27	186 1.26	220 1.27
19. 1.26	53 1.25	87 1.27	119 1.26	153 1.27	187 1.26	221 1.27
20 1.26	54 1.26	88 1.26	120 1.26	154 1.27	188 1.27	222 1.29
21 1.25	55 1.26	89 1.27	121 1.25	155 1.26	189 1.27	223 1.21
22 1.26	56 1.26	90 1.27	122 1.27	156 1.25	190 1.27	224 0.74
23 1.26	57 1.26	91 1.27	123 1.26	157 1.27	191 1.27	225
24 1.27	58 1.25	92 1.27	124 1.27	158 1.27	192 1.27	
25 1.27	59 1.26	93 1.27	125 1.26	159 1.27	193 1.26	
26 1.26	60 1.26	94 1.26	126 1.27	160 1.27	194 1.26	
27 1.26	61 1.26	95 1.27	127 1.27	161 1.27	195 1.25	
28 1.27	62 1.26	96 1.27	128 1.27	162 1.26	196 1.26	
29 1.26	63 1.26	97 1.26	129 1.26	163 1.26	197 1.27	
30 1.26	64 1.27	98 1.26	130 1.27	164 1.25	198 1.28	
31 1.27	65 1.26	99 1.27	131 1.27	165 1.27	199 1.27	
32 1.26	66 1.26	100 1.27	132 1.28	166 1.27	200 1.26	
33 1.26	67 1.26	101 1.26	133 1.26	167 1.26	201 1.27	
34 1.26	68 1.25	102 1.27	134 1.27	168 1.26	202 1.26	

Vasen

#3

LOT5 magnets Serial # 1921-2400

Bottom Jaw

Slot Number	Serial No.	Main filed Orientation	x-axis orientation
1	2276	Upstream	Right
2	2068	Downstream	Left
3	2381	Upstream	Left
4	2391	Downstream	Right
5	2235	Upstream	Left
6	2080	Downstream	Right
7	2365	Upstream	Right
8	2312	Downstream	Right
9	2087	Upstream	Right
10	2069	Downstream	Right
11	2191	Upstream	Right
12	1949	Downstream	Right
13	2325	Upstream	Right
14	2180	Downstream	Right
15	2281	Upstream	Left
16	2242	Downstream	Right
17	2151	Upstream	Right
18	2050	Downstream	Right
19	2128	Upstream	Right
20	2288	Downstream	Right
21	2196	Upstream	Right
22	2261	Downstream	Right
23	2363	Upstream	Right
24	2207	Downstream	Right
25	1963	Upstream	Left
26	2122	Downstream	Right
27	2161	Upstream	Right
28	2070	Downstream	Left
29	2076	Upstream	Right
30	1956	Downstream	Left
31	2316	Upstream	Right
32	2001	Downstream	Left
33	2268	Upstream	Left
34	2211	Downstream	Right
35	2236	Upstream	Left
36	2051	Downstream	Right
37	2253	Upstream	Right
38	2065	Downstream	Left
39	1987	Upstream	Left
40	2079	Downstream	Right
41	2377	Upstream	Right
42	2165	Downstream	Right
43	2173	Upstream	Left
44	2071	Downstream	Right
45	1999	Upstream	Left
46	2234	Downstream	Left
47	2011	Upstream	Right

Top Jaw

Slot Number	Serial No.	Main filed Orientation	x-axis orientation
1	2279	Downstream	Right
2	2114	Upstream	Left
3	2061	Downstream	Left
4	2055	Upstream	Right
5	2092	Downstream	Right
6	2158	Upstream	Right
7	2184	Downstream	Left
8	2101	Upstream	Left
9	1955	Downstream	Right
10	2299	Upstream	Left
11	2032	Downstream	Left
12	1975	Upstream	Right
13	2380	Downstream	Right
14	2140	Upstream	Right
15	1946	Downstream	Right
16	2396	Upstream	Right
17	2247	Downstream	Left
18	2263	Upstream	Left
19	1934	Downstream	Right
20	2147	Upstream	Right
21	2254	Downstream	Right
22	2131	Upstream	Right
23	2342	Downstream	Left
24	2389	Upstream	Left
25	2198	Downstream	Left
26	2353	Upstream	Right
27	1989	Downstream	Right
28	2120	Upstream	Left
29	2334	Downstream	Left
30	2135	Upstream	Right
31	2062	Downstream	Left
32	2332	Upstream	Right
33	2049	Downstream	Right
34	1978	Upstream	Left
35	2054	Downstream	Right
36	2137	Upstream	Right
37	2154	Downstream	Right
38	2029	Upstream	Right
39	2267	Downstream	Left
40	1942	Upstream	Right
41	2208	Downstream	Right
42	2350	Upstream	Left
43	2066	Downstream	Left
44	2339	Upstream	Right
45	2124	Downstream	Right
46	1990	Upstream	Right
47	2360	Downstream	Left

48	2090	Downstream	Left
49	1980	Upstream	Right
50	2308	Downstream	Left
51	2083	Upstream	Right
52	2388	Downstream	Left
53	2385	Upstream	Right
54	2238	Downstream	Right
55	2384	Upstream	Left
56	2170	Downstream	Left
57	2109	Upstream	Left
58	2241	Downstream	Left
59	1992	Upstream	Left
60	1970	Downstream	Left
61	2176	Upstream	Right
62	2304	Downstream	Right
63	2320	Upstream	Left
64	1982	Downstream	Right
65	2356	Upstream	Right
66	2195	Downstream	Left
67	2289	Upstream	Right
68	1965	Downstream	Left
69	2227	Upstream	Left
70	2015	Downstream	Right
71	1951	Upstream	Right
72	2244	Downstream	Left
73	2259	Upstream	Right
74	2012	Downstream	Right
75	2239	Upstream	Right
76	1937	Downstream	Left
77	2348	Upstream	Right
78	2156	Downstream	Right
79	2218	Upstream	Right
80	2309	Downstream	Left
81	1943	Upstream	Left
82	2048	Downstream	Right
83	1945	Upstream	Left
84	2370	Downstream	Right
85	2132	Upstream	Right
86	2044	Downstream	Left
87	2095	Upstream	Left
88	2111	Downstream	Left
89	2301	Upstream	Left
90	2202	Downstream	Right
91	2034	Upstream	Right
92	2273	Downstream	Left
93	1957	Upstream	Right
94	2026	Downstream	Left
95	2343	Upstream	Left
96	1954	Downstream	Left
97	1959	Upstream	Left
98	2041	Downstream	Right
99	2129	Upstream	Right

48	2378	Upstream	Left	
49	2249	Downstream	Right	
50	2344	Upstream	Left	
51	2040	Downstream	Right	
52	2307	Upstream	Right	
53	2286	Downstream	Right	
54	2035	Upstream	Left	
55	2045	Downstream	Right	
56	~~1969~~	Upstream	Left	2033
57	2216	Downstream	Left	
58	2390	Upstream	Left	
59	2266	Downstream	Right	
60	2300	Upstream	Left	
61	2025	Downstream	Left	
62	2272	Upstream	Right	
63	1931	Downstream	Right	
64	1993	Upstream	Left	
65	2258	Downstream	Right	
66	2126	Upstream	Right	
67	2094	Downstream	Right	
68	2233	Upstream	Right	
69	2204	Downstream	Right	
70	2155	Upstream	Right	
71	2201	Downstream	Right	
72	2175	Upstream	Right	
73	2262	Downstream	Left	
74	2397	Upstream	Right	
75	1933	Downstream	Left	
76	2148	Upstream	Left	
77	2098	Downstream	Left	
78	1953	Upstream	Left	
79	2013	Downstream	Right	
80	2219	Upstream	Left	
81	2313	Downstream	Right	
82	2374	Upstream	Right	
83	2362	Downstream	Right	
84	2205	Upstream	Left	
85	2387	Downstream	Left	
86	2157	Upstream	Right	
87	2237	Downstream	Right	
88	1930	Upstream	Right	
89	2290	Downstream	Left	
90	1996	Upstream	Right	
91	2274	Downstream	Left	
92	2246	Upstream	Right	
93	1947	Downstream	Left	
94	2282	Upstream	Right	
95	1991	Downstream	Left	
96	2287	Upstream	Left	
97	2038	Downstream	Left	
98	2171	Upstream	Right	
99	2256	Downstream	Right	

100	2352	Downstream	Left
101	2383	Upstream	Left
102	2115	Downstream	Right
103	1981	Upstream	Right
104	2226	Downstream	Right
105	2042	Upstream	Right
106	2136	Downstream	Left
107	2223	Upstream	Right
108	2189	Downstream	Left
109	2349	Upstream	Left
110	2081	Downstream	Right
111	1940	Upstream	Left
112	2209	Downstream	Left
113	2354	Upstream	Left
114	1962	Downstream	Right
115	2369	Upstream	Left
116	1941	Downstream	Left
117	2167	Upstream	Left
118	2283	Downstream	Right
119	2217	Upstream	Left
120	2224	Downstream	Left
121	1973	Upstream	Left
122	1998	Downstream	Right
123	2213	Upstream	Left
124	1984	Downstream	Right
125	2225	Upstream	Right
126	2007	Downstream	Right
127	2193	Upstream	Right
128	2099	Downstream	Left
129	2240	Upstream	Left
130	2371	Downstream	Right
131	2318	Upstream	Left
132	2172	Downstream	Left
133	2372	Upstream	Left
134	2183	Downstream	Left
135	2125	Upstream	Right
136	2197	Downstream	Right
137	2091	Upstream	Right
138	2311	Downstream	Left
139	2139	Upstream	Right
140	2022	Downstream	Right
141	2082	Upstream	Right
142	2285	Downstream	Right
143	2335	Upstream	Left
144	2133	Downstream	Right
145	1922	Upstream	Right
146	2085	Downstream	Right
147	1950	Upstream	Left
148	2178	Downstream	Left
149	1977	Upstream	Left
150	2399	Downstream	Right

100	1927	Upstream	Left
101	2257	Downstream	Right
102	2039	Upstream	Right
103	2347	Downstream	Left
104	2024	Upstream	Left
105	1997	Downstream	Right
106	1976	Upstream	Right
107	1986	Downstream	Right
108	2310	Upstream	Left
109	2317	Downstream	Right
110	1974	Upstream	Right
111	2277	Downstream	Right
112	2146	Upstream	Right
113	2220	Downstream	Left
114	1971	Upstream	Left
115	2023	Downstream	Right
116	2231	Upstream	Left
117	1960	Downstream	Right
118	2117	Upstream	Right
119	2212	Downstream	Left
120	2367	Upstream	Left
121	2228	Downstream	Right
122	1958	Upstream	Left
123	2088	Downstream	Right
124	2248	Upstream	Right
125	2104	Downstream	Right
126	2210	Upstream	Right
127	1936	Downstream	Right
128	1972	Upstream	Left
129	2021	Downstream	Left
130	2291	Upstream	Left
131	2168	Downstream	Left
132	2364	Upstream	Left
133	2108	Downstream	Right
134	2185	Upstream	Left
135	2002	Downstream	Left
136	2368	Upstream	Right
137	1948	Downstream	Right
138	2359	Upstream	Right
139	2112	Downstream	Left
140	2398	Upstream	Left
141	2181	Downstream	Left
142	2103	Upstream	Left
143	2192	Downstream	Left
144	1921	Upstream	Right
145	2107	Downstream	Right
146	2345	Upstream	Right
147	2073	Downstream	Right
148	2003	Upstream	Left
149	2214	Downstream	Right
150	2000	Upstream	Right

151	2394	Upstream	Left
152	2020	Downstream	Right
153	2382	Upstream	Right
154	1929	Downstream	Left
155	2177	Upstream	Left
156	2152	Downstream	Right
157	2203	Upstream	Left
158	2296	Downstream	Left
159	2006	Upstream	Left
160	2123	Downstream	Right
161	2361	Upstream	Left
162	1983	Downstream	Left
163	2199	Upstream	Right
164	2306	Downstream	Left
165	2373	Upstream	Right
166	2294	Downstream	Left
167	2016	Upstream	Right
168	2005	Downstream	Left
169	2009	Upstream	Right
170	1935	Downstream	Left
171	2264	Upstream	Left
172	1928	Downstream	Right
173	2047	Upstream	Right
174	2093	Downstream	Left
175	2027	Upstream	Left
176	2063	Downstream	Left
177	2351	Upstream	Right
178	2018	Downstream	Left
179	2319	Upstream	Left
180	2232	Downstream	Right
181	1979	Upstream	Left
182	2145	Downstream	Right
183	2116	Upstream	Right
184	2010	Downstream	Left
185	2134	Upstream	Left
186	2019	Downstream	Right
187	2275	Upstream	Left
188	2164	Downstream	Right
189	2187	Upstream	Left
190	2200	Downstream	Left
191	1939	Upstream	Left
192	2138	Downstream	Right
193	2031	Upstream	Right
194	2127	Downstream	Left
195	2113	Upstream	Left
196	2366	Downstream	Right
197	2314	Upstream	Left
198	2182	Downstream	Left
199	1988	Upstream	Right
200	2322	Downstream	Right
201	2119	Upstream	Left
202	2064	Downstream	Right

151	1938	Downstream	Right
152	2400	Upstream	Left
153	1924	Downstream	Left
154	2297	Upstream	Left
155	2186	Downstream	Left
156	1968	Upstream	Left
157	2110	Downstream	Right
158	1985	Upstream	Right
159	2053	Downstream	Left
160	2395	Upstream	Right
161	2190	Downstream	Right
162	2321	Upstream	Right
163	2194	Downstream	Left
164	2179	Upstream	Left
165	2102	Downstream	Left
166	2298	Upstream	Right
167	2379	Downstream	Right
168	2143	Upstream	Right
169	1995	Downstream	Right
170	2265	Upstream	Right
171	2337	Downstream	Right
172	2329	Upstream	Left
173	2270	Downstream	Left
174	2346	Upstream	Left
175	2303	Downstream	Left
176	2017	Upstream	Left
177	2260	Downstream	Left
178	2252	Upstream	Left
179	1925	Downstream	Right
180	2315	Upstream	Left
181	2077	Downstream	Left
182	2245	Upstream	Right
183	2160	Downstream	Left
184	2340	Upstream	Right
185	2250	Downstream	Right
186	2295	Upstream	Right
187	1926	Downstream	Right
188	2072	Upstream	Right
189	2004	Downstream	Left
190	2305	Upstream	Left
191	2028	Downstream	Right
192	1964	Upstream	Left
193	2386	Downstream	Right
194	2222	Upstream	Right
195	2142	Downstream	Left
196	2229	Upstream	Left
197	2333	Downstream	Right
198	2130	Upstream	Left
199	1967	Downstream	Right
200	2149	Upstream	Right
201	2074	Downstream	Right
202	2269	Upstream	Left

203	2100	Upstream	Left
204	2206	Downstream	Left
205	2280	Upstream	Left
206	2230	Downstream	Right
207	2293	Upstream	Right
208	2075	Downstream	Right
209	2221	Upstream	Left
210	2153	Downstream	Right
211	2330	Upstream	Right
212	2336	Downstream	Left
213	2338	Upstream	Right
214	2393	Downstream	Left
215	2159	Upstream	Left
216	2060	Downstream	Left
217	2084	Upstream	Right
218	2059	Downstream	Right
219	2118	Upstream	Right
220	2292	Downstream	Left
221	2162	Upstream	Left
222	2067	Downstream	Left
223	2174	Upstream	Right
224	2052	Downstream	Left
225	2169	Upstream	Left

203	1966	Downstream	Left
204	2105	Upstream	Right
205	2030	Downstream	Right
206	2358	Upstream	Right
207	2078	Downstream	Left
208	2278	Upstream	Left
209	2163	Downstream	Left
210	2251	Upstream	Left
211	2188	Downstream	Left
212	2141	Upstream	Right
213	2008	Downstream	Left
214	2106	Upstream	Right
215	2357	Downstream	Left
216	2144	Upstream	Left
217	1944	Downstream	Right
218	2097	Upstream	Right
219	2057	Downstream	Right
220	2392	Upstream	Right
221	2243	Downstream	Right
222	2284	Upstream	Right
223	2355	Downstream	Right
224	2166	Upstream	Left
225	2058	Downstream	Left

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

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

Spare magnets

serial No.	Reduced Magnetization
2086	33%
2302	80%
2336	Btm212
2341	
1961	
2150	
2056	
2328	
2331	
2072	Top188

Sample magnets

serial No.
1952
2089
2121
2255
2375

Damaged magnets

serial No.
2323
2324
2326
2327

2215	
2271	
2376	
2033	
2025	Top61
2037	
2043	
1950	Btm147
1932	
2132	Btm085
2021	Top129
2185	Top134
1984	Btm124
2096	
1994	

Red-numbered magnets were used for replacement in LOT5.

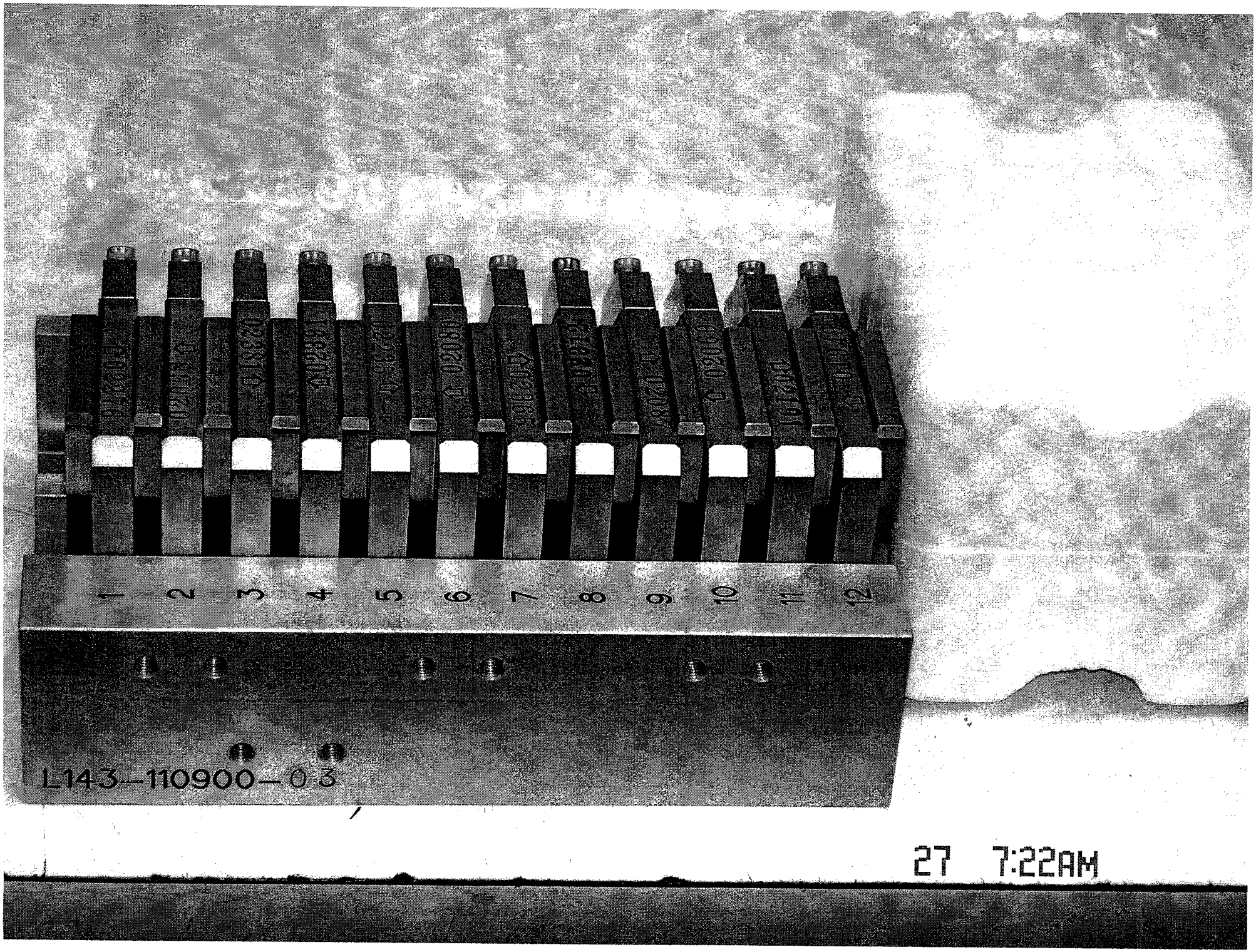
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FIG. 17

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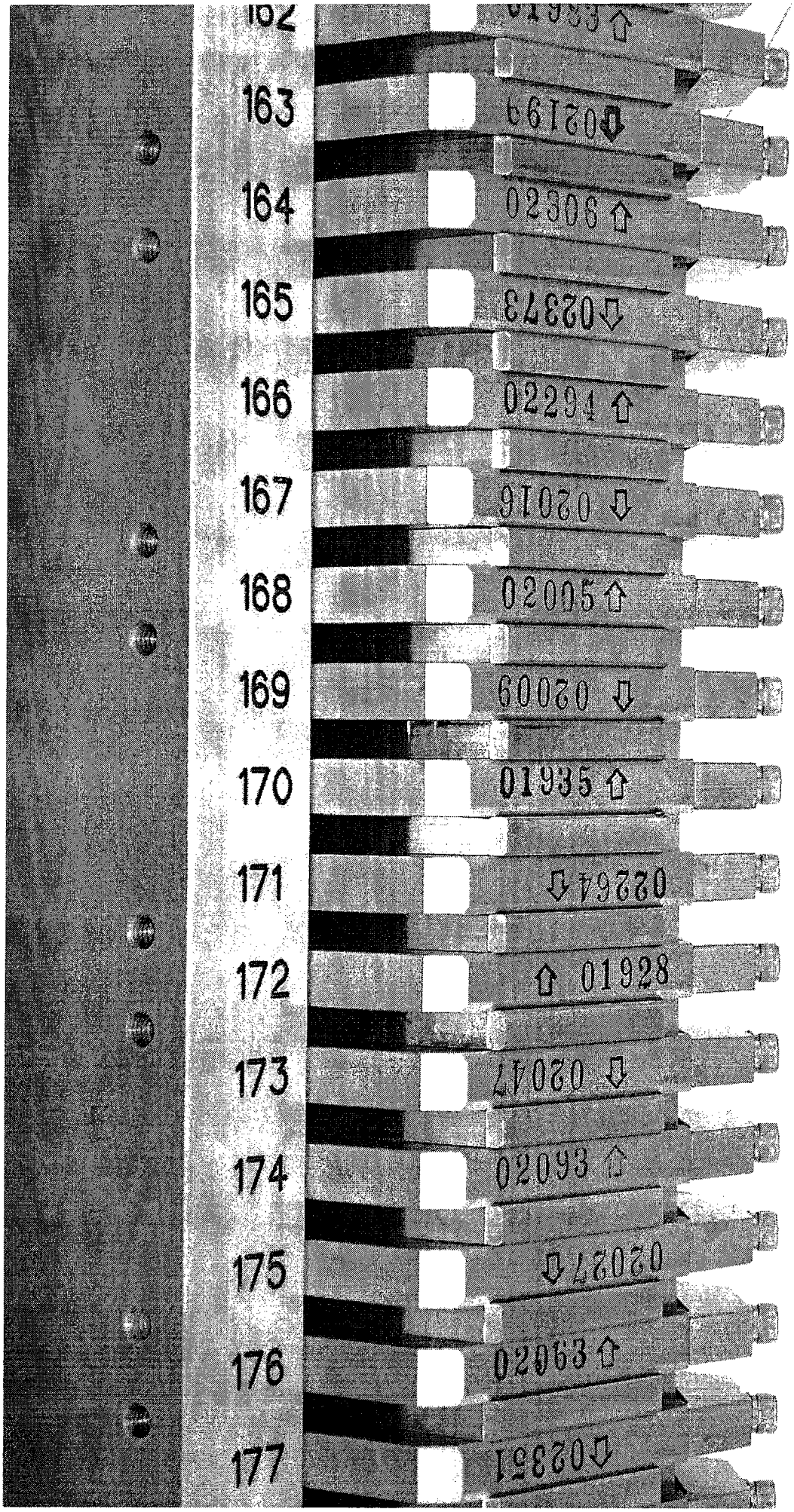
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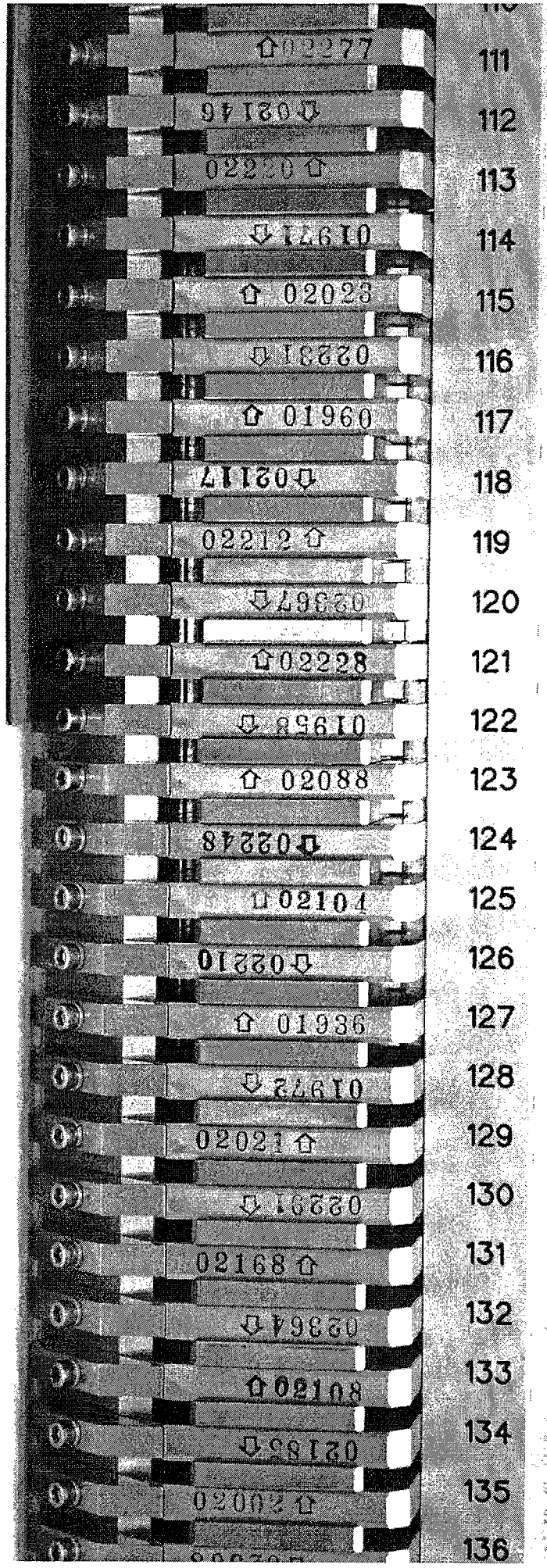
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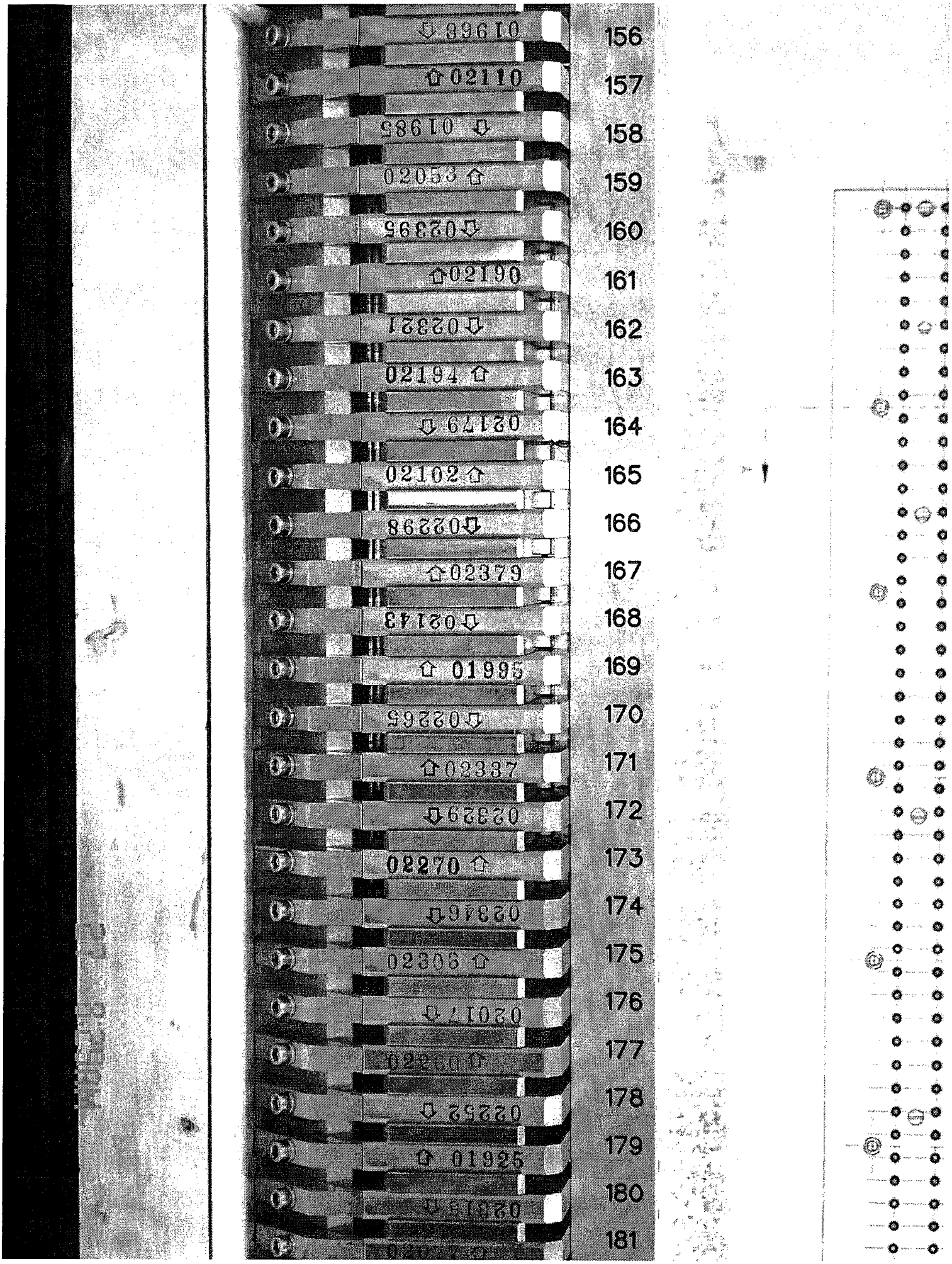
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27 1:19PM

06/23/2006 07:36 FAX 6302528303 ADVANCE 001/001

Subject: Another replacement for LOT5 undulator
From: Shigemi Sasaki <sasaki@aps.anl.gov>
Date: Thu, 22 Jun 2006 18:46:02 -0500
To: Emil Trakhtenberg <emil@aps.anl.gov>, Isaac Vasserman <isaac@aps.anl.gov>
CC: "Marion M. White" <mwhite@aps.anl.gov>, Liz Moog <moog@aps.anl.gov>

Emil, Isaac;

The damaged magnet #1969 in the slot 56 in upper jaw should be replaced to #2033. The x-axis orientation is the same with original. The #2033 magnet is one of the spare magnets for LOT5

Shigemi

I will be off tomorrow (Friday). But, if you have any urgent question, please e-mail me. I think I will have a chance to see e-mail.

Attn: Simon

SUPPLIER DISPOSITION REQUEST (SDR)

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

Page ___ of ___

(CHECK ONE)

☐ 1A. **Deviation Request**

☒ 1B. **Nonconformance Action Request**

2. SDR No. 4

3. SDR Date 2/2/06

4. Supplier Name, Address, Telephone, Fax

DIAL MACHINE, INC
2902 EASTROCK DRIVE
ROCKFORD, IL 61109

5. Purchase Order No. 5A-04889

6. Related Documents

6.1 _____ Date _____

7. Qty.	8. Describe Nonconforming Condition	9. Identify Requirement	10. Cause & Corrective Action
1	(4) MOUNTING HOLES ON TOP OF PART ARE CALLED OUT FOR 5/16-18 THREAD ARE TAPPED M8		CAUSE - OPERATOR ERROR POSSIBLE DISPOSITIONS 1. USE AS IS WITH 8MM BOLT 2. HELICOIL TO 5/16-18

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 rework, add non-magnetic insert or helicoil to 5/16-18 THD

15. SUPPLIER REPRESENTATIVE – TITLE – DATE

16. ANL REPRESENTATIVE – DATE

17. ANL Disposition and Remarks: Rework as stated above

18. Approved

02/09/06
TECHNICAL REPRESENTATIVE – DATE

2/21/06
QUALITY ASSURANCE REPRESENTATIVE – DATE

PROCUREMENT REPRESENTATIVE – DATE

ANL-311 (4-94)

SUPPLIER DISPOSITION REQUEST (SDR)

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

Page ___ of ___

(CHECK ONE)

☐ 1A. **Deviation Request**

☒ 1B. **Nonconformance Action Request**

2. SDR No. 5

3. SDR Date 3/22/06

4. Supplier Name, Address, Telephone, Fax

DIAL MACHINE, INC
2902 EASTROCK DRIVE
ROCKFORD, IL 61109

5. Purchase Order No. SA-04889

6. Related Documents

6.1 _____ Date _____

7. Qty.	8. Describe Nonconforming Condition	9. Identify Requirement	10. Cause & Corrective Action
1	(6) X M12 X 1.75-6H TAP HOLES IN SUPPORT PADS (1) OF (6) HOLES HAS A TORN THREAD SERIAL #3		CAUSE - CHIPS IN TAP CORRECTIVE ACTION - PLUG HOLE WITH THREADED 1" TITANIUM. DRILL & RE-TAP HOLE.

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:

15. SUPPLIER REPRESENTATIVE – TITLE – DATE 3/21/05

16. ANL REPRESENTATIVE – DATE

17. ANL Disposition and Remarks:

18. Approved

TECHNICAL REPRESENTATIVE – DATE

QUALITY ASSURANCE REPRESENTATIVE – DATE

PROCUREMENT REPRESENTATIVE – DATE

ANL-311 (4-94)

SUPPLIER DISPOSITION REQUEST (SDR)

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

Page ___ of ___

(CHECK ONE)

☐ 1A. **Deviation Request**

☐ 1B. **Nonconformance Action Request**

2. SDR No. 5

3. SDR Date 2/27/06

4. Supplier Name, Address, Telephone, Fax

DIAL MACHINE, INC.
2902 EASTROCK DRIVE
ROCKFORD, IL 61125

5. Purchase Order No. 51-0488

6. Related Documents

6.1 _____ Date _____

7. Qty.	8. Describe Nonconforming Condition	9. Identify Requirement	10. Cause & Corrective Action
3	OUTSIDE DIAMETER OF BAR IS OVERSIZE ACT 311.2 MM NOM 304.8 +2.-2.0/-.00 SER #19 - 309.6 MM SER #17 - 311.9 MM SER #3 - 308.4 MM		CAUSE - SUPPLIER DEVIATION

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:
Accept the deviation for these three cases

15. SUPPLIER REPRESENTATIVE – TITLE – DATE

16. ANL REPRESENTATIVE – DATE

17. ANL Disposition and Remarks: Accept the O.D. oversize for these three parts

18. Approved

06/6/06 — TECHNICAL REPRESENTATIVE – DATE

6/9/06 — QUALITY ASSURANCE REPRESENTATIVE – DATE

PROCUREMENT REPRESENTATIVE – DATE

ANL-311 (4-94)

SDR #5

Steve Lewis

To: stevel@dialmachine.com
Subject: FW: Strongback bars

I talked to Emil on 3/3/06 about this. Reviewed our measured actual sizes.

He said that he could, and would work around these size parts.

We do not need to take any action.

Steve

-----Original Message-----
From: Emil Trakhtenberg [mailto:emil@aps.anl.gov]
Sent: Friday, March 03, 2006 11:29 AM
To: SteveL@dialmachine.com
Subject: Re: Strongback bars

Steve,
I have add 5mm over nominal diameter of the titanium strong back for the earth field shield. Tell me if I have to add more.
Thank you.
Emil

Steve Lewis wrote:

> Emil, Glen,
>
> I know that Glen is gone for a few days.
>
> I had asked him if there was possibility for bars to be used if the outside
> diameter was oversized. He consulted Emil and gave me the answer.
>
> I took his call in the shop and do not remember whether he said that it was
> 4mm over nominal, or 4mm over high limit.
>
> Could you help refresh my memory.
>
> I did submit this as SDR #5.
>
> Thanks very much.
>
>
>
> Steve Lewis
> Dial Machine
>
> ph 815-397-5660
> fax 815-397-0562
> SteveL@dialmachine.com
>
> 2902 Eastrock Dr.
> Rockford, IL 61125
>
>

SUPPLIER DISPOSITION REQUEST (SDR)

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

Page ___ of ___

(CHECK ONE)

☒ 1A. **Deviation Request**

☐ 1B. **Nonconformance Action Request**

2. SDR No. 6

3. SDR Date 3/24/06

4. Supplier Name, Address, Telephone, Fax

DIAL MACHINE, INC
2902 EASTROCK DRIVE
ROCKFORD, IL 61109

5. Purchase Order No. 51-0488

6. Related Documents

6.1 _____ Date _____

7. Qty.	8. Describe Nonconforming Condition	9. Identify Requirement	10. Cause & Corrective Action
	SERIAL #3		
1	ONE MOUNTING PAD 142.4 MM DIMENSION. 11.050 NOM. 11.055 ACTUAL		POSSIBLE CORRECTIVE ACTION 1. ACCEPT AS IS 2. DUST MILL TO CORRECT

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:

15. SUPPLIER REPRESENTATIVE – TITLE – DATE 3/21/05

16. ANL REPRESENTATIVE – DATE

17. ANL Disposition and Remarks:

18. Approved

TECHNICAL REPRESENTATIVE – DATE

QUALITY ASSURANCE REPRESENTATIVE – DATE

PROCUREMENT REPRESENTATIVE – DATE

ANL-311 (4-94)

Subject: Strongback #3 Corrective Action
From: Steve Lewis <SteveL@dialmachine.com>
Date: Wed, 19 Apr 2006 14:20:37 -0700
To: Tom Barsz <tbarsz@aps.anl.gov>, gsl@aps.anl.gov

Tom,

re: our Strongback #3
Our SDR # 5 and SDR #6

SDR #5 is to repair torn threads using non-magnetic Helicoil. This is done.

SDR #6 is to dustmill the 142.4mm mounting pad.
The CMM report showed one pad out of parallel to -A- surface by .055mm, or .005mm above the tolerance band. When we had the Strongback on the machine for tap hole repair, we milled the pad surface as well. We used the machine and dial indicators to record before and after measurements, witnessed by the Manufacturing Manager. We improved the surface by .013mm.

Tom, will you accept this e-mail report of the corrective action and measurement of results in lieu of putting the bar back on the CMM?

If so, this bar is ready for shipment. This is the bar that you and Glen reviewed during your last visit.

Please let me know.

Thanks.

Steve Lewis
Dial Machine

ph 815-397-6660
fax 815-397-0562
SteveL@dialmachine.com

2902 Eastrock Dr.
Rockford, IL 61125

#1 – #11

CORROSION MATERIALS TEST REPORT

2262 Groom Rd.
Baker, LA 70714
(225) 775 - 3675 (Main Office)
(225) 778 - 6436 (Quality Control)
(225) 778 - 6489 (Fax)

Date: 11/9/2005

Customer: DIAL MACHINE
PO No: 102437
Alloy: Ti GR2
Heat No: 063-1
CMI No: C71263
Quantity:
Item Description: 12" DIA RD BAR X R/L

Specifications DIN 50049 3.1B ASTM B348, ASTM B381
EN 10204 3.1B

Chemical Components

C	CO	CR	CU	FE	MN	MO	NI	P	S
0.01	—	—	—	0.05	—	—	—	—	—
SI	TI	V	W	CB+TA	SN	AL	ZN	PB	N
—	—	—	—	—	—	—	—	—	0.013

Mechanical Properties

Tensile Strength:
Yield Strength:
Hardness:
Elongation in 2":
Reduction in Area:

Remarks: O=0.04, H=0.002, Ti=BAL

HEAT# PBA1063778 ANNEAI FCC 5 SOAK TIME 4HR SOAK TEMP 1250

The information stated in this document is true and accurate based upon information acquired by and maintained on file at Corrosion Materials.

Certified by: Tom Holstein

Title: Quality Control Coordinator

According to records provided by mill sources, all material has been manufactured free from mercury.

Corrosion Materials is an ISO 9001-2000 certified company, registered with RWTUV USA.

DIAL MACHINE, INC.
2902 Eastrock Drive • Eastrock Industrial Park • P.O. Box 5246
Rockford, Illinois 61125
Phone 815/397-6660 • Fax 815/397-0562
www.dialmachine.com

Packing Slip No. 23282

Bill To

ARGONNE NATIONAL LABORATORY
ATTN: ACCOUNTS PAYABLE BLDG 201
9700 SOUTH CASS AVENUE
ARGONNE IL 60439-4874

Ship To

HI-TECH MANUFACTURING INC
4637 NORTH 25TH AVENUE
SCHILLER PARK IL 60176

Ship Date	04/28/2006
Your Order	5A-04889
FOB	ROCKFORD
Ship Via	OUR TRUCK
Terms	NET 30
Our Order	21279

Order Qty	Ship Qty	Part ID/Description	Rev	U/M
1	1	SA-381-000-86 TITANIUM STRONGBACK SERIAL #03		EA
1	1	SA-381-000-86 TITANIUM STRONBACK SERIAL #11		EA

MACHINED COMPLETE PER PRINT
INSPECTION REPORTS ENCLOSED

R Juarez

Argonne National Lab
Strongback -L143-110700
Inspection and Test Results

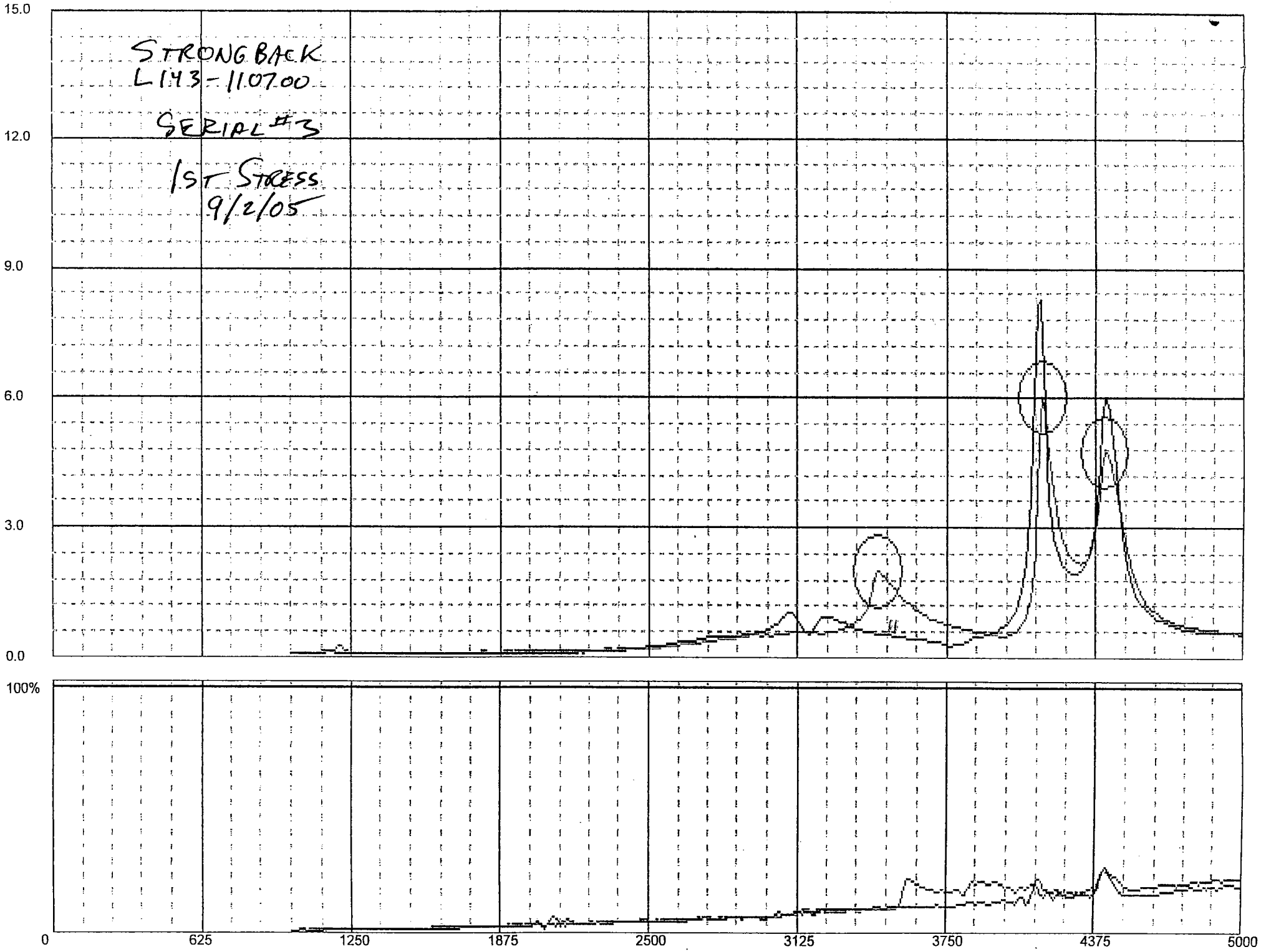
Serial Number	# 3		Inspector	Floyd
Date	3/14/2006			

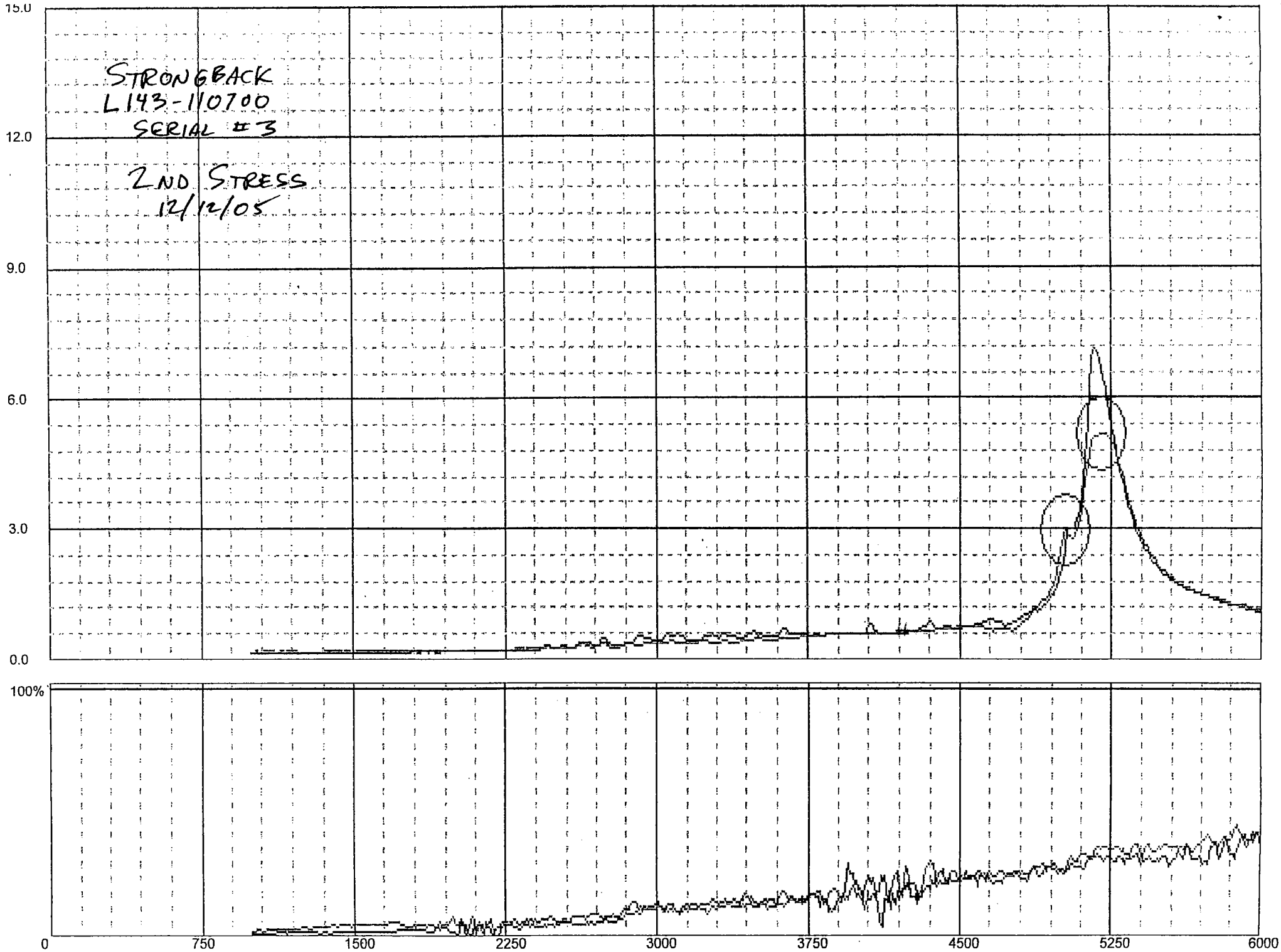
CMM Critical Feature Results	*Req*	*Tolr*	*Actual*	
flatness - plane -A-		.050	.016	
side opposite -A- flatness		.050	.017	
surface finish -A-	1.6		.63	
surface finish side opposite -A-	1.6		.63	
-B- surface flatness		.050	.050	
-B- surface perp to -A-		.100	.039	
Pads				
RH Mounting Pad parallel to -A-		.050	.006	
LH Mounting Pad parallel to -A-		.050	.055	
Overall Length	3400.00	+.000/-.200	3399.902	
LH end to 1700mm holes right	1700.00	+.000/-.100	1699.902	
LH end to 1700mm holes left	1700.00	+.000/-.100	1700.00	
side opposite -A- 167.00 dim	167.00	+.050/-.000	167.011	plane to plane
Individual Gaps	167.00		167.005	direct gaps
side -A- to Centerline 83.5	83.50	+/- .080	83.504	
Other Dimensions		***Date***	***Reviewer***	
		3/14	SKL	no deviations

Material and Certifications		*Date*	*Reviewer*	
Material Certs		3/14	skl	
Heat Treat Certs		3/14	skl	
Visual inspection of Material		3/22	skl	1 bad thread - SDR #5

Approvals	

Temps	
20.5	Start
21.2	Finish


STRONGBACK
L143-110700
SERIAL #3
1ST STRESS
9/2/05
15.0
12.0
9.0
6.0
3.0
0.0
100%
0
625
1250
1875
2500
3125
3750
4375
5000


STRONGBACK
L143-110700
SERIAL #3
2ND STRESS
12/12/05
15.0
12.0
9.0
6.0
3.0
0.0
100%
0
750
1500
2250
3000
3750
4500
5250
6000

#1 — #11

CORROSION MATERIALS TEST REPORT

2262 Groom Rd.
Baker, LA 70714
(225) 775 - 3675 (Main Office)
(225) 778 - 6436 (Quality Control)
(225) 778 - 6489 (Fax)

Date: 11/9/2005

Customer: DIAL MACHINE
PO No: 102437
Alloy: Ti GR2
Heat No: 063-1
CMI No: C71263
Quantity:
Item Description: 12" DIA RD BAR X R/L

Specifications DIN 50049 3.1B ASTM B348, ASTM B381
EN 10204 3.1B

Chemical Components

C	CO	CR	CU	FE	MN	MO	NI	P	S
0.01	—	—	—	0.05	—	—	—	—	—
SI	TI	V	W	CB+TA	SN	AL	ZN	PB	N
—	—	—	—	—	—	—	—	—	0.013

Mechanical Properties

Tensile Strength:
Yield Strength:
Hardness:
Elongation in 2":
Reduction in Area:

Remarks: O=0.04, H=0.002, Ti=BAL

HEAT# PBA1063778 ANNEAI FCC 5 SOAK TIME 4HR SOAK TEMP 1250

The information stated in this document is true and accurate based upon information acquired by and maintained on file at Corrosion Materials.

Certified by: Tom Holstein

Title: Quality Control Coordinator

According to records provided by mill sources, all material has been manufactured free from mercury.

Corrosion Materials is an ISO 9001-2000 certified company, registered with RWTUV USA.

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: **Dial Machine, Inc.**

PART NAME: **LCLS Strongback**

DRAWING #: **L143-110700**

SERIAL #: 03

P.O.#: **5A-13624**

DATE: 06-21-06

#	Inspection/Test Requirement	Inspection Test Location	Accepted by or Nonconformance Report No.	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?	H.T.	SIMON	06/21/06
2	Check Strongback is marked with serial number & part no.'s (ANL & SLAC) per SOW Section 4.1.3?	H.T.	SIMON	06/20/06
3	Check all accompanying Certifications have correct part serial number	H.T.	SIMON	06/21/06
4	Check Material Certification for compliance with ASTM B381-03, Grade F2	H.T.	SIMON	06/21/06
5	Check Forging Annealing Certification for annealing conformance to AMS-H-81200A, Table V, commercial Pure, Bars & Forgings, including Note 8	H.T.	SIMON	06/21/06
6	Check Rough Machining Anneal Certification for annealing conformance to AMS-2801B section 3.2.9	H.T.	SIMON	06/21/06
7	Check the Strongback contractor's reported dimensional measurements against the part drawing	H.T.	SIMON	06/21/06
8	Verify the Strongback critical dimensions as listed in the SOW section 4.5.2 are in compliance with the print	H.T	SIMON	06/21/06

INSPECTOR: SIMON

QA Supervisor: Murlaze

TEST EQUIPMENT USED: VISUAL

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR:

PART NAME: LCLS Strongback

DRAWING #: L143-110700

SERIAL #: 03

P.O. #: SA-13624

DATE: 06-21-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Overall length	3400.00	+0 / -.04	3400.00	Accept/Reject
Gap height	167.00	+0.05 / -.0	167.00	Accept/Reject
Gap flatness (top and bottom)	<= .05	N/A	<= 1.03	Accept/Reject
Gap depth	130.00	+/- .08	130.06	Accept/Reject
Flatness of front face	<= .05	N/A	<= .03	Accept/Reject
Perpendicularity of front face to A	<= .1	N/A	<= .03	Accept/Reject
End face perpendicularity to A and B	<= .05	N/A	<= 1.03 <= 1.03	Accept/Reject

INSPECTOR: SIMON

QA Supervisor: Mullaze

TEST EQUIPMENT USED: DROP INDICATOR
DIAL CALIPER
SQUAR PRECISION

COMMENTS:

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: Dial Machine, Inc.

PART NAME: LCLS Strongback

DRAWING #: L143-110700

SERIAL #: 03

P.O.#: 5A-13624

DATE: 6-20-06

FEATURE: Gap Flatness

#	Distance (mm)	Measured A	Measured B	Comments
1	50	.0002	.0006	OK
2	350	.0005	.0002	OK
3	650	.0008	.0002	OK
4	950	.0011	.0014	OK
5	1250	.0016	.0012	OK
6	1550	.0014	.0012	OK
7	1850	.0004	.0014	OK
8	2150	.0002	.0008	OK
9	2450	.0005	.0006	OK
10	2750	.0004	.0005	OK
11	3050	-.0003	.0003	OK
12	3350	.0000	.0000	OK

INSPECTOR: SIMON

QA Supervisor: Muelaze

TEST EQUIPMENT USED: CUBIC PRECISION MODEL: 711010

SERIAL # 231067

COMMENTS:

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

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

#3

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: [redacted] 2276

P.O. #: **5A13624**

DATE: 06-12-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.00	Accept/Reject
Magnet Width	66.00	+/- .25	66.01	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.97	Accept/Reject

INSPECTOR: Simon.

QA Supervisor: Huitage

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: [redacted]02191

P.O. #: **5A13624**

DATE: 06-12-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.01	Accept/Reject
Magnet Width	66.00	+/- .25	66.06	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.96	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Mulaze

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 02196

P.O. #: **5A13624**

DATE: 06-12-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	56.98	Accept/Reject
Magnet Width	66.00	+/- .25	66.05	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.95	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Mwlaze

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 02316

P.O. #: **5A13624**

DATE: 06-12-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.00	Accept/Reject
Magnet Width	66.00	+/- .25	66.05	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.96	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Muelez

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 02377

P.O. #: **5A13624**

DATE: 06-12-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.00	Accept/Reject
Magnet Width	66.00	+/- .25	66.02	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.96	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Mulaze

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 02083

P.O. #: **5A13624**

DATE: 06-12-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.01	Accept/Reject
Magnet Width	66.00	+/- .25	66.01	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.96	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Mwlaze

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 02176

P.O. #: **5A13624**

DATE: 06-12-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	56.98	Accept/Reject
Magnet Width	66.00	+/- .25	66.04	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.95	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Mullaze

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 01951

P.O. #: **5A13624**

DATE: 06-12-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.01	Accept/Reject
Magnet Width	66.00	+/- .25	66.03	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.96	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Mulaze

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: [redacted]1943

P.O. #: **5A13624**

DATE: 06-12-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.00	Accept/Reject
Magnet Width	66.00	+/- .25	66.03	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.96	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Mullaz

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 020349

P.O. #: **5A13624**

DATE: 06-12-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	56.99	Accept/Reject
Magnet Width	66.00	+/- .25	66.05	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.96	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Mulaze

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 02383

P.O. #: **5A13624**

DATE: 06-12-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	56.98	Accept/Reject
Magnet Width	66.00	+/- .25	66.05	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.96	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Mulate

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 01940

P.O. #: **5A13624**

DATE: 06-12-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.00	Accept/Reject
Magnet Width	66.00	+/- .25	66.04	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.96	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Mulaze

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 01973

P.O. #: **5A13624**

DATE: 06-12-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.00	Accept/Reject
Magnet Width	66.00	+/- .25	66.03	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.96	Accept/Reject

INSPECTOR: SIMON

QA Supervisor: Murlaze

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 02318

P.O. #: **5A13624**

DATE: 06-12-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	56.98	Accept/Reject
Magnet Width	66.00	+/- .25	66.01	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.95	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Mullaz

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 02082

P.O. #: **5A13624**

DATE: 06-12-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.01	Accept/Reject
Magnet Width	66.00	+/- .25	65.84	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.96	Accept/Reject

INSPECTOR: SIMON

QA Supervisor: Mwlaze

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 02394

P.O. #: **5A13624**

DATE: 06-12-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	56.99	Accept/Reject
Magnet Width	66.00	+/- .25	66.03	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.97	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Murlez

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 02361

P.O. #: **5A13624**

DATE: 06-13-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.00	Accept/Reject
Magnet Width	66.00	+/- .25	66.06	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.96	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Mwlaz

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 02264

P.O. #: **5A13624**

DATE:

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	56.98	Accept/Reject
Magnet Width	66.00	+/- .25	66.03	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.95	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Mullaze

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 01979

P.O. #: **5A13624**

DATE: 06-13-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.00	Accept/Reject
Magnet Width	66.00	+/- .25	66.03	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.95	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Muelaz

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 01939

P.O. #: **5A13624**

DATE: 06-13-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.01	Accept/Reject
Magnet Width	66.00	+/- .25	66.04	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.97	Accept/Reject

INSPECTOR: S. Sora

QA Supervisor: Muelaze

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 02119

P.O. #: **5A13624**

DATE: 06-13-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	56.99	Accept/Reject
Magnet Width	66.00	+/- .25	66.03	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.96	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Mulage

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 02330

P.O. #: **5A13624**

DATE: 06-13-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	56.99	Accept/Reject
Magnet Width	66.00	+/- .25	66.04	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.96	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Mulaze

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 02162

P.O. #: **5A13624**

DATE: 06-13-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	56.98	Accept/Reject
Magnet Width	66.00	+/- .25	66.05	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.96	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Mulaza

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

#3

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 02279

P.O. #: **5A13624**

DATE: 06-13-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.01	Accept/Reject
Magnet Width	66.00	+/- .25	66.04	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.95	Accept/Reject

INSPECTOR: SIMON

QA Supervisor: Murlatz

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS: Magnet Lot 5

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 02032

P.O. #: **5A13624**

DATE: 06-13-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.01	Accept/Reject
Magnet Width	66.00	+/- .25	66.03	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.95	Accept/Reject

INSPECTOR: SIMON

QA Supervisor: Mulare

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 02254

P.O. #: **5A13624**

DATE: 06-13-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	56.98	Accept/Reject
Magnet Width	66.00	+/- .25	66.02	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.95	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Muelaza

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 02062

P.O. #: **5A13624**

DATE: 06-13-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.01	Accept/Reject
Magnet Width	66.00	+/- .25	66.02	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.96	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Mullaz

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 02208

P.O. #: **5A13624**

DATE: 06-13-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.02	Accept/Reject
Magnet Width	66.00	+/- .25	66.05	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.95	Accept/Reject

INSPECTOR: Simmod

QA Supervisor: Mulaze

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 02040

P.O. #: **5A13624**

DATE: 06-13-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

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

INSPECTOR: Simon

QA Supervisor: Murtaza

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 02201

P.O. #: **5A13624**

DATE: 06-13-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	56.09	Accept/Reject
Magnet Width	66.00	+/- .25	66.04	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.96	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Mulaze

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 01931

P.O. #: **5A13624**

DATE: 06-13-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.01	Accept/Reject
Magnet Width	66.00	+/- .25	66.03	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.95	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Mulaze

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 02315

P.O. #: **5A13624**

DATE: 06-13-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	56.98	Accept/Reject
Magnet Width	66.00	+/- .25	66.00	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.95	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Mulaz

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 02274

P.O. #: **5A13624**

DATE: 06-13-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	56.96	Accept/Reject
Magnet Width	66.00	+/- .25	66.04	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.96	Accept/Reject

INSPECTOR: Simon.

QA Supervisor: Muñoz

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 02257

P.O. #: **5A13624**

DATE: 06-13-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

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

INSPECTOR: Simon.

QA Supervisor: Muelle

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 02277

P.O. #: **5A13624**

DATE: 06-13-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.00	Accept/Reject
Magnet Width	66.00	+/- .25	66.04	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.96	Accept/Reject

INSPECTOR: Simod

QA Supervisor: Muelaz

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 02228

P.O. #: **5A13624**

DATE: 06-13-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	56.98	Accept/Reject
Magnet Width	66.00	+/- .25	66.01	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.95	Accept/Reject

INSPECTOR: SIMON

QA Supervisor: Mualaze

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 02168

P.O. #: **5A13624**

DATE: 06-13-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.00	Accept/Reject
Magnet Width	66.00	+/- .25	66.04	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.95	Accept/Reject

INSPECTOR: SIMON

QA Supervisor: Muelaz

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 02187

P.O. #: **5A13624**

DATE: 06-13-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	56.08	Accept/Reject
Magnet Width	66.00	+/- .25	66.02	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.96	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Mullaz

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 01938

P.O. #: **5A13624**

DATE: 06-13-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.00	Accept/Reject
Magnet Width	66.00	+/- .25	66.02	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.96	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Muelaza

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 02190

P.O. #: **5A13624**

DATE: 06-13-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	56.98	Accept/Reject
Magnet Width	66.00	+/- .25	66.04	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.95	Accept/Reject

INSPECTOR: SIMON

QA Supervisor: [illegible]

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 02337

P.O. #: **5A13624**

DATE: 06-13-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.02	Accept/Reject
Magnet Width	66.00	+/- .25	66.03	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.96	Accept/Reject

INSPECTOR: SIMON

QA Supervisor: Muelaz

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 02077

P.O. #: **5A13624**

DATE: 06-13-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.01	Accept/Reject
Magnet Width	66.00	+/- .25	65.85	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.95	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Muller

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 02028

P.O. #: **5A13624**

DATE: 06-13-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.00	Accept/Reject
Magnet Width	66.00	+/- .25	66.04	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.96	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Mulaze

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 02074

P.O. #: **5A13624**

DATE: 06-13-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.01	Accept/Reject
Magnet Width	66.00	+/- .25	65.86	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.96	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Muñoz

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 02188

P.O. #: **5A13624**

DATE: 06-13-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	56.97	Accept/Reject
Magnet Width	66.00	+/- .25	66.05	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.95	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Muelaza

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

DRAWING #: **L143-110106-04**

SERIAL #: 02243

P.O. #: **5A13624**

DATE: 06-13-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.00	Accept/Reject
Magnet Width	66.00	+/- .25	66.06	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.96	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Mulay

TEST EQUIPMENT USED: **Drop Indicators**

COMMENTS:

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

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

#3

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Hi-Tech Manufacturing, Inc. PART NAME: Lower Middle Magnet Structure Base

DRAWING #: L143-111101-01 SERIAL #: L143-111100-3-03

P.O. #:5A13624 DATE: 06-29-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE(S)	
Bottom surface to pole base surface (all surfaces)	30	+0 / -.03	Max / Min 30.00/29.98	Accept/Reject
Bottom surface flatness	</= .04	N/A	.04	Accept/Reject
Overall length	1005	+0 / -.1	1004.92	Accept/Reject
Overall width	128	+0 / -.1	127.98	Accept/Reject

INSPECTOR: Mullaze QA Supervisor: Mullaze

TEST EQUIPMENT USED: CMM & Micrometer.

COMMENTS:

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 LCLS MAGNET ASSEMBLIES

VENDOR: Hi-Tech Manufacturing, Inc. PART NAME: Lower Middle Magnet Structure Base

DRAWING #: L143-111101-01 SERIAL #: L143-111100-2-03

P.O. #:5A13624 DATE: 06-29-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE(S)	
Bottom surface to pole base surface (all surfaces)	30	+0 / -.03	Max / Min 29.99/29.97	Accept/Reject
Bottom surface flatness	</= .04	N/A	.04	Accept/Reject
Overall length	1005	+0 / -.1	1004.94	Accept/Reject
Overall width	128	+0 / -.1	127.99	Accept/Reject

INSPECTOR: Mullaze QA Supervisor: Mullaze

TEST EQUIPMENT USED: CMM & Micrometer.

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Hi-Tech Manufacturing, Inc. PART NAME: Lower Middle Magnet Structure Base

DRAWING #: L143-111101-01 SERIAL #: L143-111100-1-03

P.O. #:5A13624 DATE: 06-29-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE(S)	
Bottom surface to pole base surface (all surfaces)	30	+0 / -.03	Max / Min 30.0/29.99	Accept/Reject
Bottom surface flatness	</= .04	N/A	.04	Accept/Reject
Overall length	1005	+0 / -.1	1004.92	Accept/Reject
Overall width	128	+0 / -.1	127.97	Accept/Reject

INSPECTOR: Muñoz QA Supervisor: Muñoz

TEST EQUIPMENT USED: CMM & Micrometer.

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Hi-Tech Manufacturing, Inc. PART NAME: Upper Middle Magnet Structure Base

DRAWING #: L143-111001-01 SERIAL #: L143-111000-3-03

P.O. #: 5A13624 DATE: 06-29-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE(S)	
Bottom surface to pole base surface (all surfaces)	30	+0 / -.03	Max / Min 30.0/29.975	Accept/Reject
Bottom surface flatness	</= .04	N/A	.04	Accept/Reject
Overall length	1005.0	+0 / -.1	1004.95	Accept/Reject
Overall width	128	+0 / -.1	127.97	Accept/Reject

INSPECTOR: Mueloza QA Supervisor: Mueloza

TEST EQUIPMENT USED: CMM & Micrometer.

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Hi-Tech Manufacturing, Inc. PART NAME: Upper Middle Magnet Structure Base

DRAWING #: L143-111001-01 SERIAL #: L143-111000-2-03

P.O. #: 5A13624 DATE: 06-29-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE(S)	
Bottom surface to pole base surface (all surfaces)	30	+0 / -.03	Max / Min 30.0/29.98	Accept/Reject
Bottom surface flatness	</= .04	N/A	.04	Accept/Reject
Overall length	1005.0	+0 / -.1	1004.93	Accept/Reject
Overall width	128	+0 / -.1	127.96	Accept/Reject

INSPECTOR: Mwalaze QA Supervisor: Mwalaze

TEST EQUIPMENT USED: CMM & Micrometer.

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Hi-Tech Manufacturing, Inc. PART NAME: Upper Middle Magnet Structure Base

DRAWING #: L143-111001-01 SERIAL #: L143-111000-1-03

P.O. #: 5A13624 DATE: 06-29-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE(S)	
Bottom surface to pole base surface (all surfaces)	30	+0 / -.03	Max / Min 30.0/29.97	Accept/Reject
Bottom surface flatness	</= .04	N/A	.04	Accept/Reject
Overall length	1005.0	+0 / -.1	1004.92	Accept/Reject
Overall width	128	+0 / -.1	127.98	Accept/Reject

INSPECTOR: Mulaza QA Supervisor: Mulaza

TEST EQUIPMENT USED: CMM & Micrometer.

COMMENTS:

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

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Hi-Tech Manufacturing, Inc. PART NAME: Upper Right Magnet Structure Base

DRAWING #: L143-111201 SERIAL #: Ll43-111200-03

P.O. #: 5A13624 DATE: 06-29-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE(S)	
Bottom surface to pole base surface (all surfaces)	30	+0 / -.03	Max / Min 30.00/29.995	Accept/Reject
Bottom surface flatness	</= .04	N/A	0.02	Accept/Reject
Overall length	189	+0 / -.1	188.98	Accept/Reject
Overall width	128	+0 / -.1	127.98	Accept/Reject

INSPECTOR: Mullaza QA Supervisor: Mullaza

TEST EQUIPMENT USED: CMM & Micrometer.

COMMENTS:

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

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Hi-Tech Manufacturing, Inc. PART NAME: Upper Left Magnet Structure Base

DRAWING #: L143-110801 SERIAL #: L143-110800-03

P.O. #: 5A13624 DATE: 06-29-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE(S)	
Bottom surface to pole base surface (all surfaces)	30	+0 / -.03	Max / Min 30.00/29.98	Accept/Reject
Bottom surface flatness	<= .04	N/A	0.012	Accept/Reject
Overall length	195	+0 / -.1	194.96	Accept/Reject
Overall width	128	+0 / -.1	127.96	Accept/Reject

INSPECTOR: Mullaze QA Supervisor: Mullaze

TEST EQUIPMENT USED: CMM & Micrometer.

COMMENTS:

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

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Hi-Tech Manufacturing, Inc. PART NAME: Lower Right Magnet Structure Base

DRAWING #: L143-111301 SERIAL #: L143-111300-03

P.O. #: 5A13624 DATE: 06-29-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE(S)	
Bottom surface to pole base surface (all surfaces)	30	+0 / -.03	Max / Min 30.00/29.998	Accept/Reject
Bottom surface flatness	<= .04	N/A	0.015	Accept/Reject
Overall length	189	+0 / -.1	188.99	Accept/Reject
Overall width	128	+0 / -.1	127.98	Accept/Reject

INSPECTOR: Muelaze QA Supervisor: Muelaze

TEST EQUIPMENT USED: CMM & Micrometer.

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: Hi-Tech Manufacturing, Inc. PART NAME: Lower Left Magnet Structure Base

DRAWING #: L143-110901 SERIAL #: L143-110900-03

P.O. #: 5A13624 DATE: 06-29-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE(S)	
Bottom surface to pole base surface (all surfaces)	30	+0 / -.03	Max / Min 30.00/29.985	Accept/Reject
Bottom surface flatness	</= .04	N/A	.015	Accept/Reject
Overall length	195	+0 / -.1	194.99	Accept/Reject
Overall width	128	+0 / -.1	127.98	Accept/Reject

INSPECTOR: Muelaze QA Supervisor: Muelaze

TEST EQUIPMENT USED: CMM & Micrometer .

COMMENTS: .