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: 13
Manufacturer: Hi-Tech MFG		Purchase Order Number: 5A-13624

Special Instructions:

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

* NR = Not required for acceptance, only 1st article thru #7

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.*	NR*	☑	☐
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	NR	☑	☐
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.	NR	☑	☐
4	*Verify correct gap size along the entire undulator length using contactor's go/no-go gages.*	[illegible] 7/26/04	☑	☐
5	*Verify correct gap size along the entire undulator length using calibrated gage blocks.*	[illegible] 7/26/04	☑	☐
6	*Check the peak field at each magnet location using a portable Hall probe.*	[illegible] 7/26/04	☐	☐
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	TM 11/6/04	☑	☐
8	*Verify that the magnet photographs of the magnet sub assemblies are in agreement with the magnet sort list.*	TM 11/6/04	☑	☐
9	*Review shipping container and that the contractor has Shockwatch monitoring devices available*	NR	☑	☐
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.	TRJ	11/4/04
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.	SLAC	

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	7/24/04	7/24/04

Not Required Fields

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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	NA	
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	NA	
3	Check that parts were marked with serial numbers per SOW section 4.1.3.	ulator Assy Contra	Hi-tech	7/26/05
4	Check that accompanying certifications have correct part serial numbers	ulator Assy Contra	Hi-tech	7/26/05
5	Check the material certification for compliance with ASTM A801, Type 1	tor Assy Contracto	↓	↓

Not Required Fields

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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	7/24/04
7	Check that the machining Contractor's certified dimensional measurements are in compliance with the drawing	ANL	TMZ	11/4/04
8	Verify the critical dimensions as listed in the SOW, Section 4.5.2 are in compliance with the drawing	ulator Assy Contra	Hi Tech	7/24/04

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	7/24/04
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	TMJ	11/6/04
5	Review Vendor sort list for agreement with sort procedure.	APS Bldg 401	TMJ	11/6/06

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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 Group	Shigeki Sasaki	11/6/06
7	On random sampling, confirm Magnetic Moment magnitude and vector components agree with vendor reports	APS Magnet Group	S. S.	
8	On radom sampling, verify the magnet s demagnetization and thermal stability.	APS Magnet Group	S. S.	

#13

Quality Tools AND ABRASIVES INC.

Quality Tools and Abrasives, Inc.
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(630) 350-2110 • Fax (630) 350-2866
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Portable Hall Probe Measurements of the pure field for LCLS Undulator #13

1		35	1.27	69	1.27	103	1.27	137	1.27	171	1.27	205	1.27
2		36	1.26	70	1.27	104	1.27	138	1.27	172	1.27	206	1.27
3	1.29	37	1.27	71	1.27	105	1.26	139	1.27	173	1.27	207	1.27
4	1.25	38	1.26	72	1.27	106	1.27	140	1.27	174	1.27	208	1.27
5	1.27	39	1.27	73	1.27	107	1.27	141	1.26	175	1.27	209	1.28
6	1.26	40	1.27	74	1.27	108	1.27	142	1.27	176	1.27	210	1.28
7	1.26	41	1.27	75	1.27	109	1.27	143	1.26	177	1.27	211	1.27
8	1.27	42	1.27	76	1.27	110	1.27	144	1.26	178	1.27	212	1.27
9	1.27	43	1.27	77	1.27	111	1.26	145	1.27	179	1.26	213	1.27
10	1.25	44	1.27	78	1.27	112	1.27	146	1.27	180	1.27	214	1.27
11	1.26	45	1.27	79	1.27	113	1.26	147	1.26	181	1.27	215	1.27
12	1.27	46	1.27	80	1.27	114	1.26	148	1.27	182	1.27	216	1.27
13	1.27	47	1.27	81	1.27	115	1.27	149	1.27	183	1.27	217	1.27
14	1.28	48	1.26	82	1.27	116	1.27	150	1.27	184	1.27	218	1.27
15	1.27	49	1.26	83	1.27	117	1.27	151	1.28	185	1.27	219	1.27
16	1.27	50	1.27	84	1.27	118	1.27	152	1.27	186	1.27	220	1.27
17	1.27	51	1.26	85	1.27	119	1.26	153	1.27	187	1.27	221	1.26
18	1.27	52	1.27	86	1.27	120	1.27	154	1.27	188	1.27	222	1.29
19	1.27	53	1.26	87	1.27	121	1.27	155	1.27	189	1.26	233	1.21
20	1.27	54	1.27	88	1.26	122	1.27	156	1.27	190	1.27		
21	1.27	55	1.26	89	1.26	123	1.27	157	1.27	191	1.27		
22	1.27	56	1.27	90	1.27	124	1.27	158	1.27	192	1.27		
23	1.27	57	1.27	91	1.27	125	1.27	159	1.27	193	1.27		
24	1.26	58	1.26	92	1.27	126	1.27	160	1.27	194	1.27		
25	1.28	59	1.27	93	1.27	127	1.27	161	1.27	195	1.27		
26	1.27	60	1.27	94	1.27	128	1.26	162	1.27	196	1.27		
27	1.27	61	1.26	95	1.27	129	1.26	163	1.26	197	1.27		
28	1.27	62	1.27	96	1.27	130	1.27	164	1.27	198	1.27		
29	1.27	63	1.27	97	1.27	131	1.27	165	1.27	199	1.28		
30	1.27	64	1.27	98	1.27	132	1.27	166	1.27	200	1.28		
31	1.26	65	1.28	99	1.27	133	1.27	167	1.27	201	1.27		
32	1.27	66	1.27	100	1.27	134	1.27	168	1.27	202	1.28		
33	1.27	67	1.27	101	1.27	135	1.27	169	1.27	203	1.27		
34	1.28	68	1.27	102	1.27	136	1.27	170	1.27	204	1.27		

Emil Trachtenberg

Isaac Vasserman

07/26/2006

LOT9 magnets Serial # 3841-4320

Bottom Jaw

Slot Number	Serial No.	Main filed Orientation	x-axis orientation
1	4104	Upstream	Right
2	4055	Downstream	Right
3	3984	Upstream	Right
4	4239	Downstream	Left
5	4316	Upstream	Left
6	4301	Downstream	Right
7	4118	Upstream	Left
8	3952	Downstream	Right
9	4054	Upstream	Right
10	4007	Downstream	Right
11	3937	Upstream	Right
12	4300	Downstream	Right
13	4124	Upstream	Right
14	4019	Downstream	Left
15	3872	Upstream	Right
16	4044	Downstream	Left
17	4052	Upstream	Right
18	4286	Downstream	Right
19	3929	Upstream	Right
20	3881	Downstream	Left
21	3918	Upstream	Left
22	4058	Downstream	Left
23	3865	Upstream	Right
24	3954	Downstream	Left
25	4175	Upstream	Left
26	4287	Downstream	Right
27	4010	Upstream	Right
28	3980	Downstream	Right
29	4099	Upstream	Left
30	3855	Downstream	Right
31	3981	Upstream	Right
32	4026	Downstream	Right
33	4022	Upstream	Left
34	3942	Downstream	Left
35	4242	Upstream	Right
36	4089	Downstream	Right
37	3874	Upstream	Left
38	4073	Downstream	Left
39	3931	Upstream	Right
40	3849	Downstream	Right
41	4016	Upstream	Right
42	4008	Downstream	Left
43	3868	Upstream	Right
44	4046	Downstream	Right
45	4015	Upstream	Left

Top Jaw

Slot Number	Serial No.	Main filed Orientation	x-axis orientation	
1	4299	Downstream	Left	
2	3989	Upstream	Left	
3	3968	Downstream	Left	
4	4267	Upstream	Right	
5	4017	Downstream	Left	
6	3899	Upstream	Right	
7	4306	Downstream	Left	
8	3841	Upstream	Left	
9	4278	Downstream	Right	Top4279 -> 4278
10	3924	Upstream	Right	
11	4028	Downstream	Left	
12	3909	Upstream	Left	
13	3947	Downstream	Left	
14	4240	Upstream	Left	
15	4307	Downstream	Right	
16	4320	Upstream	Right	
17	3960	Downstream	Right	
18	3933	Upstream	Right	
19	4006	Downstream	Left	
20	4177	Upstream	Right	
21	3982	Downstream	Right	
22	4189	Upstream	Right	
23	4283	Downstream	Right	
24	3889	Upstream	Left	
25	4092	Downstream	Right	
26	3879	Upstream	Left	
27	4297	Downstream	Right	
28	3932	Upstream	Left	
29	4037	Downstream	Left	
30	3893	Upstream	Right	
31	4000	Downstream	Left	
32	4100	Upstream	Left	
33	3992	Downstream	Left	
34	4232	Upstream	Left	Top3911 -> 4232
35	4311	Downstream	Left	Btm4241 -> 4242
36	4231	Upstream	Left	
37	4080	Downstream	Right	
38	4051	Upstream	Right	
39	4298	Downstream	Right	
40	4002	Upstream	Right	
41	4035	Downstream	Right	
42	4197	Upstream	Left	
43	4318	Downstream	Left	
44	4106	Upstream	Right	
45	3943	Downstream	Right	

46	3903	Downstream	Left
47	4182	Upstream	Left
48	3958	Downstream	Right
49	4201	Upstream	Left
50	4050	Downstream	Left
51	4160	Upstream	Left
52	3991	Downstream	Right
53	4098	Upstream	Right
54	3916	Downstream	Left
55	4111	Upstream	Left
56	4031	Downstream	Left
57	4203	Upstream	Right
58	3886	Downstream	Right
59	3966	Upstream	Right
60	4086	Downstream	Right
61	4191	Upstream	Left
62	3961	Downstream	Left
63	3928	Upstream	Left
64	3930	Downstream	Right
65	4186	Upstream	Left
66	4215	Downstream	Left
67	4244	Upstream	Right
68	4277	Downstream	Left
69	3859	Upstream	Right
70	4063	Downstream	Right
71	3846	Upstream	Left
72	4243	Downstream	Right
73	3915	Upstream	Left
74	3964	Downstream	Right
75	4237	Upstream	Right
76	4084	Downstream	Right
77	4103	Upstream	Left
78	4188	Downstream	Left
79	4161	Upstream	Left
80	4313	Downstream	Left
81	3951	Upstream	Right
82	4129	Downstream	Right
83	3971	Upstream	Left
84	4205	Downstream	Right
85	3898	Upstream	Right
86	3996	Downstream	Left
87	3941	Upstream	Left
88	4170	Downstream	Right
89	3860	Upstream	Right
90	4068	Downstream	Left
91	3888	Upstream	Left
92	4059	Downstream	Right
93	4145	Upstream	Left
94	4139	Downstream	Left
95	4121	Upstream	Left

46	3857	Upstream	Right	
47	4309	Downstream	Right	
48	4049	Upstream	Left	
49	3990	Downstream	Left	
50	3876	Upstream	Left	
51	4223	Downstream	Left	
52	3949	Upstream	Right	
53	4013	Downstream	Left	
54	3862	Upstream	Left	
55	3917	Downstream	Left	
56	4127	Upstream	Right	
57	4174	Downstream	Left	
58	4262	Upstream	Left	
59	4047	Downstream	Left	
60	4150	Upstream	Left	
61	3962	Downstream	Left	
62	4235	Upstream	Left	
63	4018	Downstream	Left	
64	4251	Upstream	Right	
65	3979	Downstream	Left	
66	3956	Upstream	Right	
67	4294	Downstream	Left	
68	4225	Upstream	Left	
69	4038	Downstream	Left	
70	4179	Upstream	Right	
71	4076	Downstream	Left	
72	4153	Upstream	Right	
73	3858	Downstream	Left	
74	4221	Upstream	Right	
75	4056	Downstream	Left	
76	3884	Upstream	Left	
77	4069	Downstream	Left	
78	4245	Upstream	Right	
79	3953	Downstream	Left	
80	4152	Upstream	Left	
81	4296	Downstream	Right	
82	4172	Upstream	Right	
83	3847	Downstream	Left	
84	3843	Upstream	Left	
85	3976	Downstream	Left	
86	4149	Upstream	Left	
87	4259	Downstream	Left	
88	4226	Upstream	Left	
89	4126	Downstream	Right	TopJ Org 3969
90	4256	Upstream	Left	
91	4077	Downstream	Left	BtmJ Org 4888
92	4224	Upstream	Left	
93	3973	Downstream	Left	
94	4167	Upstream	Right	
95	4263	Downstream	Left	

96	3880	Downstream	Right
97	4176	Upstream	Right
98	4209	Downstream	Left
99	4198	Upstream	Right
100	4144	Downstream	Left
101	4196	Upstream	Right
102	4134	Downstream	Right
103	3936	Upstream	Left
104	4173	Downstream	Right
105	4266	Upstream	Left
106	4075	Downstream	Right
107	3890	Upstream	Left
108	4233	Downstream	Right
109	3887	Upstream	Left
110	4204	Downstream	Left
111	4168	Upstream	Left
112	4102	Downstream	Right
113	3922	Upstream	Left
114	4218	Downstream	Right
115	4169	Upstream	Right
116	4192	Downstream	Left
117	4020	Upstream	Left
118	4143	Downstream	Right
119	4181	Upstream	Right
120	4138	Downstream	Right
121	4185	Upstream	Right
122	4114	Downstream	Left
123	3845	Upstream	Left
124	4260	Downstream	Right
125	3850	Upstream	Left
126	4289	Downstream	Left
127	4264	Upstream	Left
128	4141	Downstream	Left
129	4238	Upstream	Right
130	4132	Downstream	Right
131	4120	Upstream	Right
132	4113	Downstream	Right
133	4213	Upstream	Right
134	4199	Downstream	Left
135	4219	Upstream	Right
136	4057	Downstream	Right
137	3904	Upstream	Right
138	4292	Downstream	Left
139	4115	Upstream	Left
140	4105	Downstream	Right
141	3923	Upstream	Left
142	4041	Downstream	Right
143	4261	Upstream	Right
144	3967	Downstream	Right
145	4254	Upstream	Left

96	4220	Upstream	Right
97	4272	Downstream	Left
98	4257	Upstream	Right
99	3892	Downstream	Left
100	3906	Upstream	Left
101	4130	Downstream	Left
102	4208	Upstream	Left
103	3883	Downstream	Left
104	4122	Upstream	Left
105	4071	Downstream	Left
106	4110	Upstream	Right
107	3948	Downstream	Left
108	4095	Upstream	Right
109	4200	Downstream	Left
110	4164	Upstream	Right
111	4147	Downstream	Right
112	4252	Upstream	Left
113	4078	Downstream	Right
114	4119	Upstream	Left
115	4025	Downstream	Right
116	4131	Upstream	Right
117	4183	Downstream	Left
118	4154	Upstream	Left
119	3939	Downstream	Right
120	3913	Upstream	Right
121	4187	Downstream	Left
122	4166	Upstream	Right
123	4217	Downstream	Left
124	3867	Upstream	Right
125	4157	Downstream	Right
126	4125	Upstream	Left
127	4214	Downstream	Right
128	4193	Upstream	Right
129	3934	Downstream	Right
130	4180	Upstream	Left
131	4312	Downstream	Left
132	3907	Upstream	Left
133	3957	Downstream	Left
134	4136	Upstream	Left
135	4291	Downstream	Left
136	4137	Upstream	Left
137	4023	Downstream	Right
138	3921	Upstream	Left
139	4178	Downstream	Right
140	4128	Upstream	Left
141	4081	Downstream	Left
142	4146	Upstream	Right
143	4227	Downstream	Left
144	4253	Upstream	Right
145	3987	Downstream	Right

BtmJ Org 4009

146	4234	Downstream	Right
147	4151	Upstream	Right
148	4066	Downstream	Right
149	4265	Upstream	Right
150	4065	Downstream	Left
151	4212	Upstream	Left
152	4083	Downstream	Right
153	4171	Upstream	Right
154	4228	Downstream	Right
155	4207	Upstream	Right
156	4004	Downstream	Left
157	3869	Upstream	Right
158	3842	Downstream	Right
159	4302	Upstream	Right
160	4082	Downstream	Right
161	3882	Upstream	Left
162	4003	Downstream	Right
163	4248	Upstream	Left
164	3919	Downstream	Right
165	3970	Upstream	Right
166	3856	Downstream	Left
167	4133	Upstream	Right
168	4043	Downstream	Right
169	4206	Upstream	Right
170	3974	Downstream	Left
171	3897	Upstream	Left
172	3938	Downstream	Left
173	4140	Upstream	Right
174	4216	Downstream	Left
175	3853	Upstream	Left
176	4061	Downstream	Right
177	4194	Upstream	Right
178	4040	Downstream	Right
179	4210	Upstream	Left
180	4039	Downstream	Right
181	3863	Upstream	Right
182	4314	Downstream	Left
183	3870	Upstream	Left
184	3994	Downstream	Right
185	4195	Upstream	Right
186	3895	Downstream	Right
187	4247	Upstream	Left
188	3977	Downstream	Right
189	4117	Upstream	Left
190	3963	Downstream	Left
191	3901	Upstream	Right
192	3864	Downstream	Left
193	3914	Upstream	Right
194	4271	Downstream	Left
195	4303	Upstream	Right

146	4184	Upstream	Right	
147	4280	Downstream	Left	
148	4158	Upstream	Right	
149	4093	Downstream	Left	
150	3927	Upstream	Left	
151	3972	Downstream	Right	
152	3986	Upstream	Right	
153	4070	Downstream	Right	
154	4101	Upstream	Right	
155	4062	Downstream	Left	
156	3878	Upstream	Right	
157	4024	Downstream	Right	
158	4229	Upstream	Left	
159	3993	Downstream	Left	
160	4246	Upstream	Left	
161	4273	Downstream	Left	
162	4315	Upstream	Right	
163	3871	Downstream	Left	
164	4236	Upstream	Right	
165	4014	Downstream	Left	
166	4249	Upstream	Right	
167	4060	Downstream	Left	
168	4116	Upstream	Left	
169	3873	Downstream	Right	
170	4255	Upstream	Left	
171	4074	Downstream	Left	
172	3851	Upstream	Left	
173	3940	Downstream	Right	
174	4034	Upstream	Right	BtmJ Org 4087
175	4288	Downstream	Right	
176	4156	Upstream	Right	
177	4275	Downstream	Right	
178	3975	Upstream	Right	
179	4091	Downstream	Right	
180	4148	Upstream	Left	
181	3885	Downstream	Right	
182	4107	Upstream	Right	
183	4293	Downstream	Left	
184	3920	Upstream	Right	
185	4270	Downstream	Left	
186	4230	Upstream	Right	
187	3925	Downstream	Left	
188	3866	Upstream	Right	
189	3891	Downstream	Right	
190	4123	Upstream	Right	
191	4285	Downstream	Left	
192	4159	Upstream	Right	
193	4027	Downstream	Right	
194	3877	Upstream	Left	
195	4096	Downstream	Right	

196	4048	Downstream	Left
197	3844	Upstream	Right
198	4090	Downstream	Right
199	4165	Upstream	Right
200	3854	Downstream	Left
201	4155	Upstream	Left
202	4310	Downstream	Left
203	4268	Upstream	Left
204	4029	Downstream	Right
205	3998	Upstream	Right
206	3944	Downstream	Right
207	4094	Upstream	Left
208	3908	Downstream	Right
209	3965	Upstream	Left
210	3955	Downstream	Left
211	4108	Upstream	Left
212	3945	Downstream	Left
213	4097	Upstream	Left
214	4304	Downstream	Left
215	4109	Upstream	Left
216	4274	Downstream	Right
217	4079	Upstream	Left
218	3875	Downstream	Left
219	3985	Upstream	Right
220	3896	Downstream	Left
221	4033	Upstream	Left
222	4282	Downstream	Left
223	4112	Upstream	Right
224	4276	Downstream	Right
225	3978	Upstream	Right

196	3912	Upstream	Right
197	4308	Downstream	Right
198	4067	Upstream	Left
199	3905	Downstream	Left
200	3926	Upstream	Right
201	3910	Downstream	Right
202	4211	Upstream	Left
203	4072	Downstream	Left
204	3848	Upstream	Right
205	3902	Downstream	Left
206	4045	Upstream	Left
207	4030	Downstream	Right
208	4250	Upstream	Right
209	3988	Downstream	Left
210	4001	Upstream	Left
211	4295	Downstream	Left
212	3995	Upstream	Left
213	4319	Downstream	Right
214	3861	Upstream	Left
215	4011	Downstream	Left
216	3997	Upstream	Left
217	4305	Downstream	Left
218	4021	Upstream	Right
219	4281	Downstream	Left
220	3852	Upstream	Right
221	4317	Downstream	Right
222	4163	Upstream	Right
223	3959	Downstream	Right
224	4042	Upstream	Right
225	3950	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

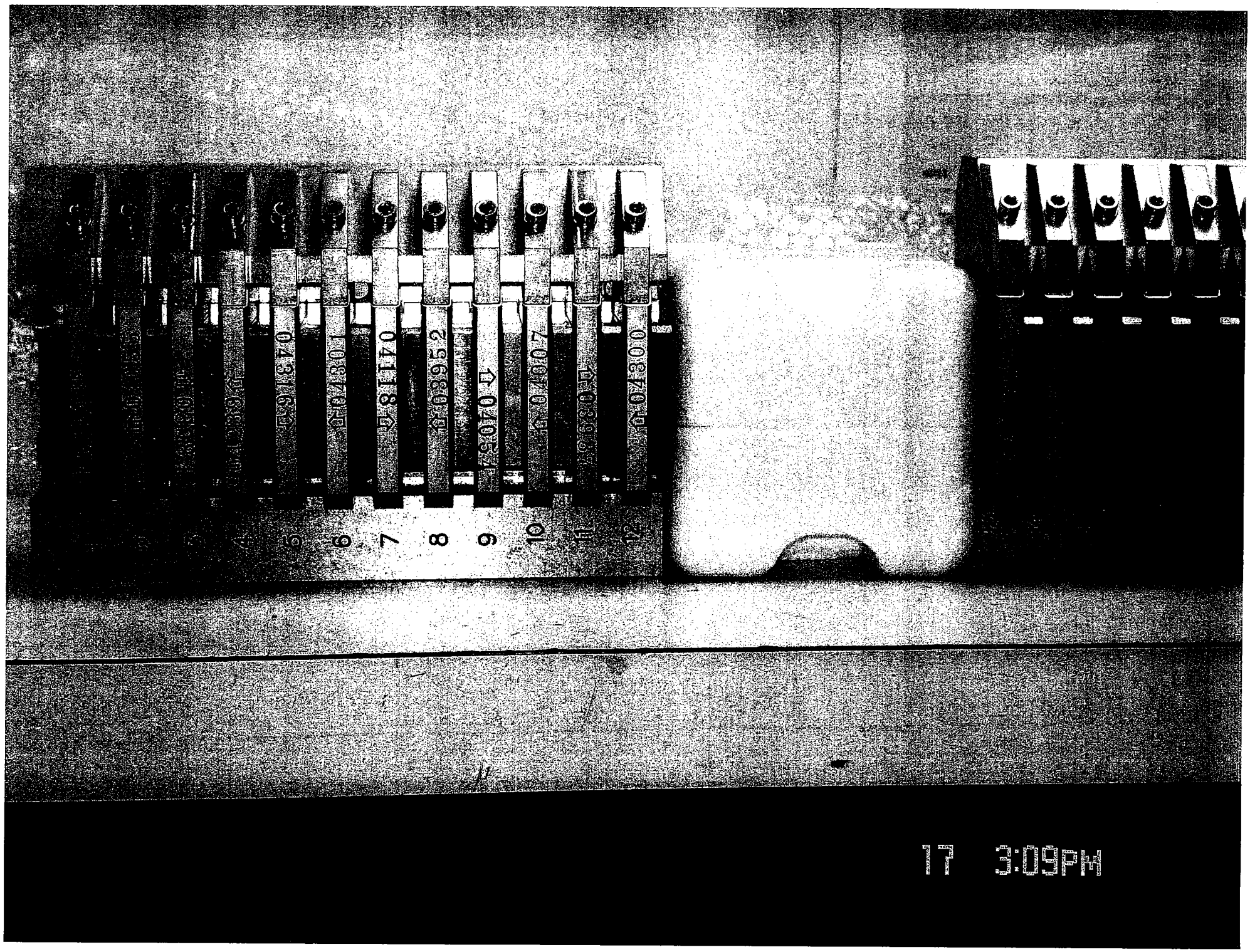
For "Main-Field Orientation" column (see Assembly Procedure Document)
"Downstream" side corresponts to the direction of lower-numbered slot.
Arrow should point toward the lower numbered slots.
"Upstream" side corresponds to the direction of higher-numbered slot.
Arrow should point toward the higher numbered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

Spare magnets

serial No.	Reduced Magnetization	
4290	33%	
4012	80%	
4278		went TopSlot#9
4162		
4269		
3983		
4053		
4232		went to Top J slot#34 for replacement to 3911
4064		
4242		went BtmSlot#35
4216		went to Btm J slot#174 for replacement to 4087
4036		
4005		
4135		
3946		
4142		
4032		
4261		went to Btm J slot#143 for replacement to 4009
4126		went to Top J slot#89 for replacement to 3969
3888		went to Btm J slot#91 for replacement to 4088
3935		
4202		
3894		
4258		
4222		

Sample magnets

serial No.
3900
3999
4085
4190
4284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03952
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04007
04300
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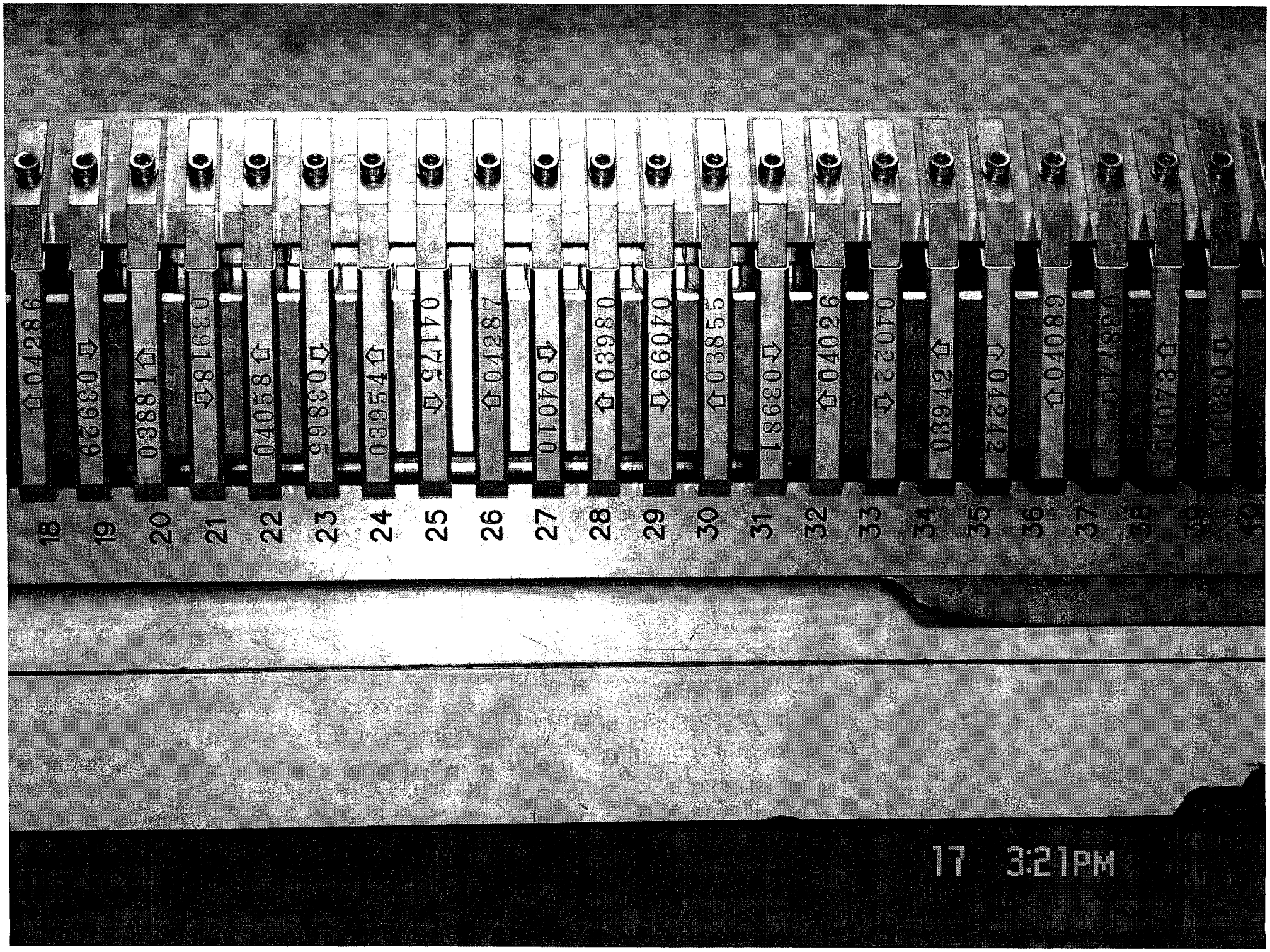
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04084
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04237
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03964
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03915
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04243
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03846
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04063
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04191
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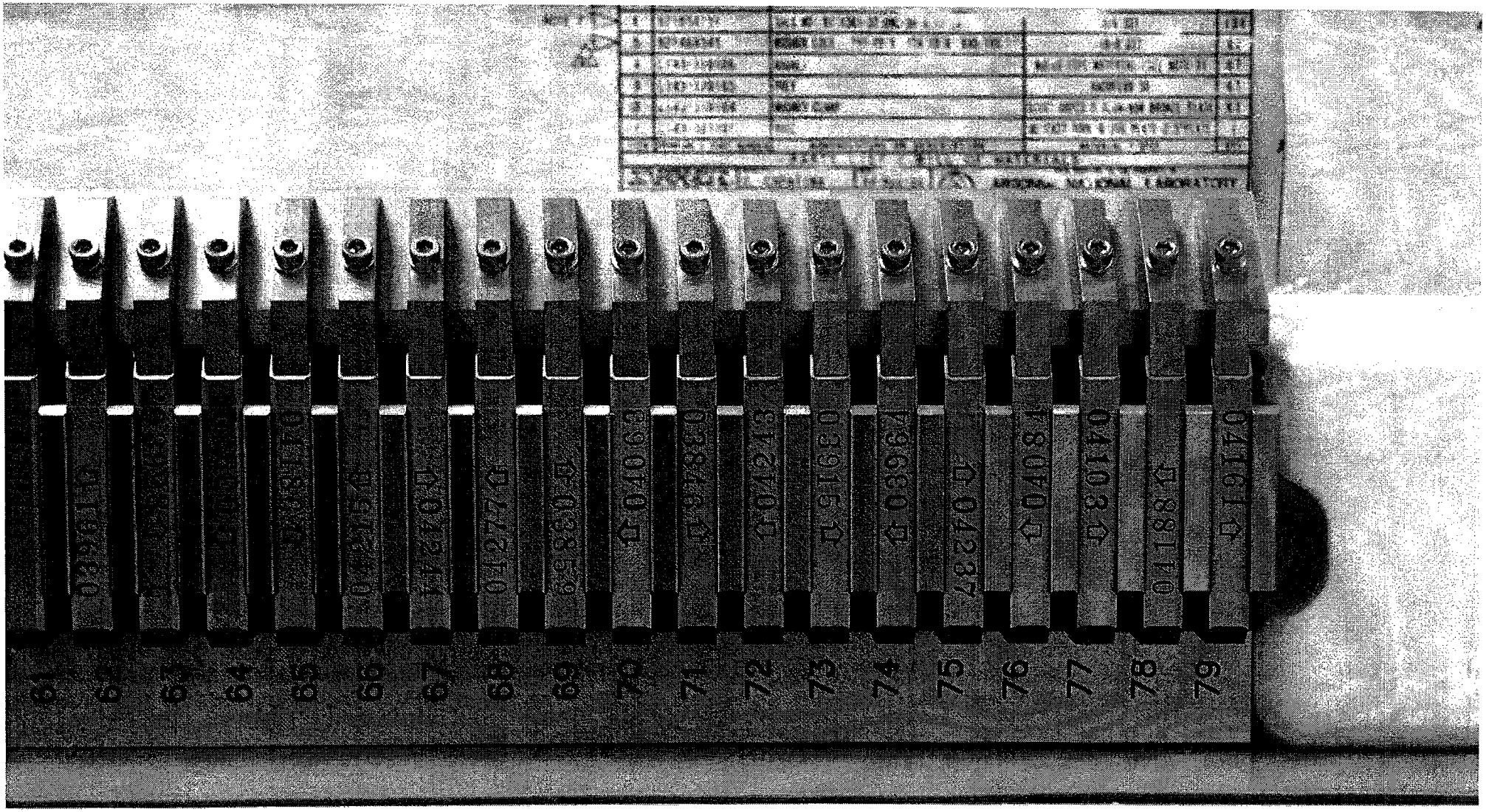
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0.02820
0.03020
0.03220
0.03420
0.03620
0.03820
0.04020
0.04220
0.04420
0.04620
0.04820
0.05020
0.05220
0.05420
0.05620
0.05820
0.06020
0.06220
0.06420
0.06620
0.06820
0.07020
0.07220
0.07420
0.07620
0.07820
0.08020
0.08220
0.08420
0.08620
0.08820
0.09020
0.09220
0.09420

04196
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04144
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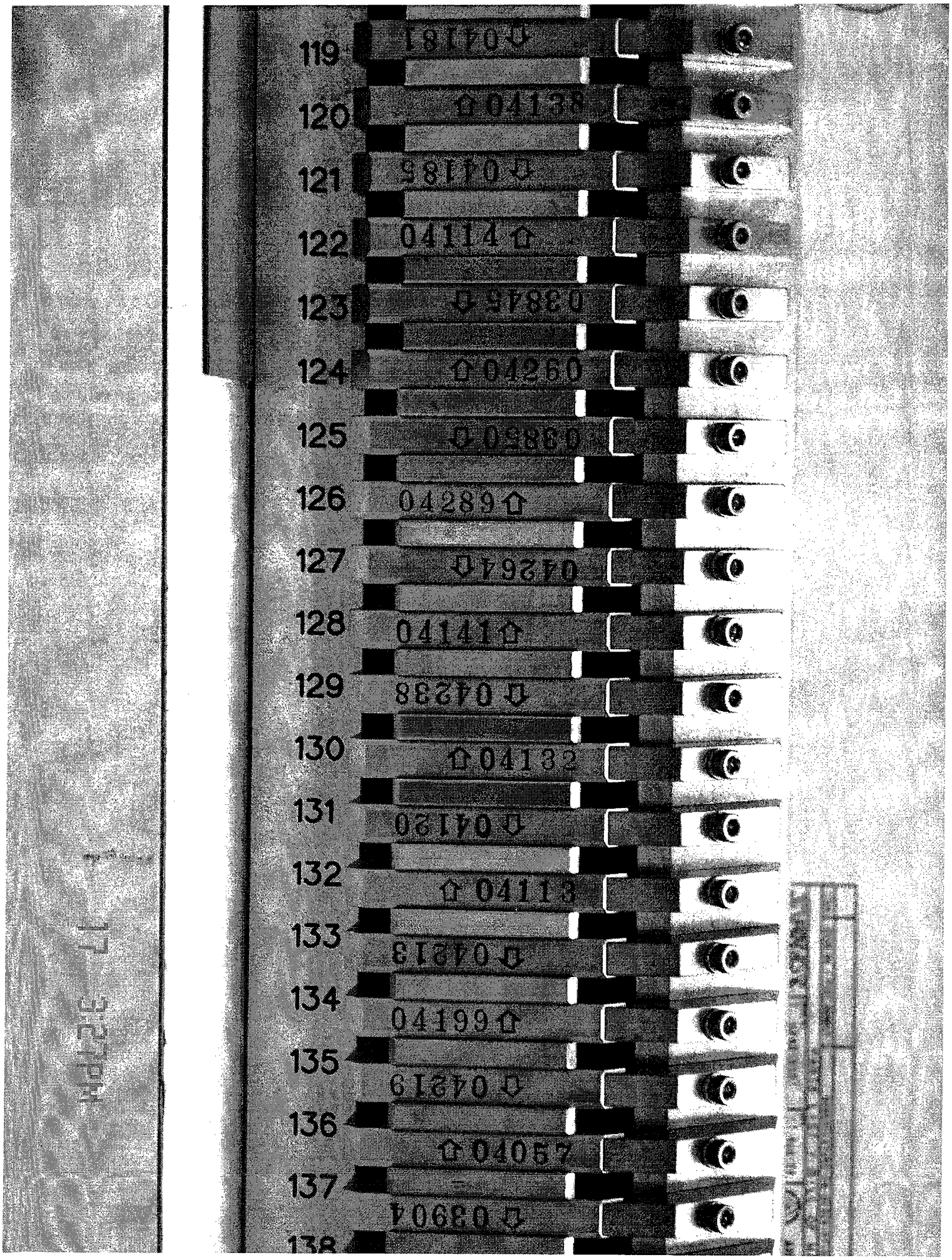
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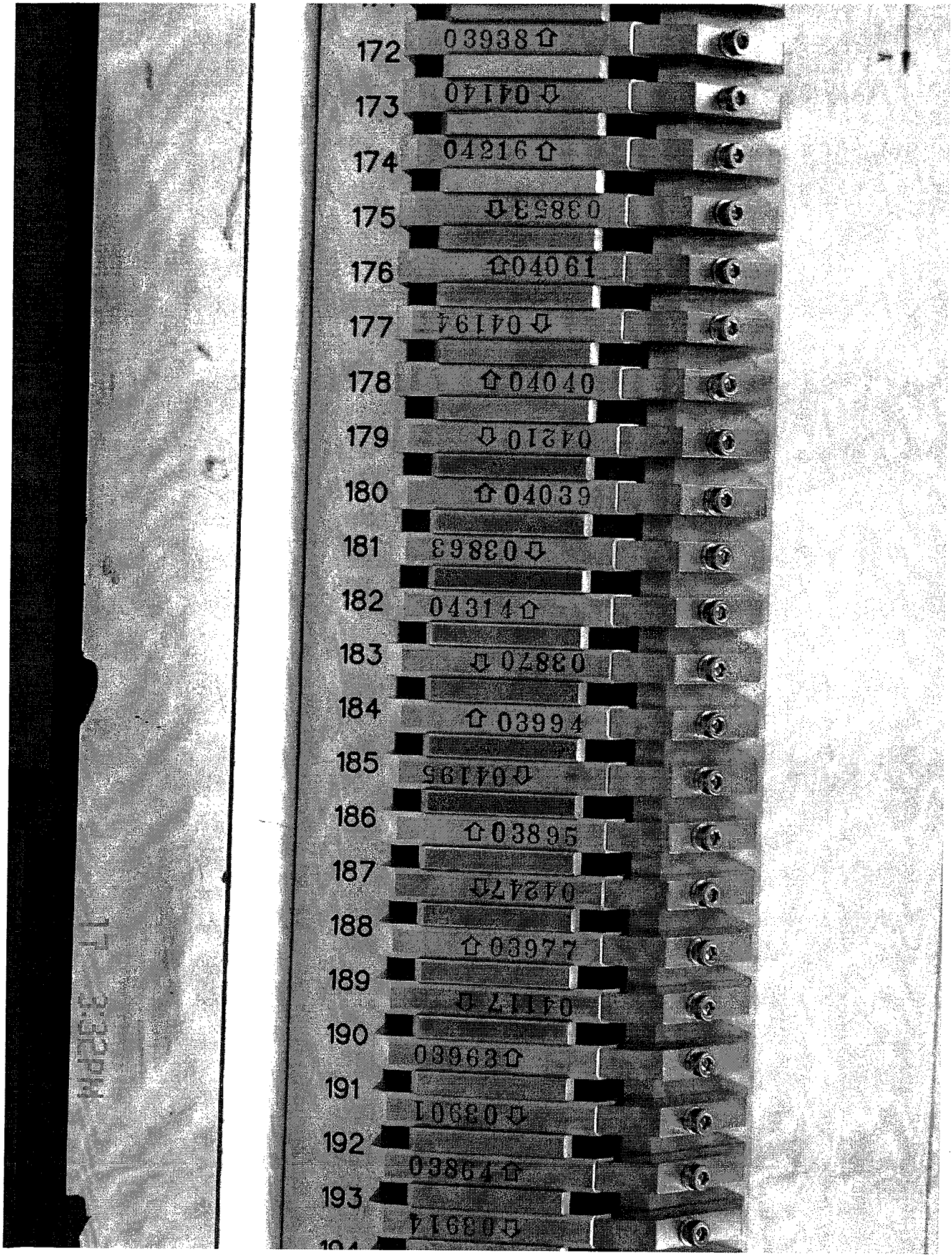
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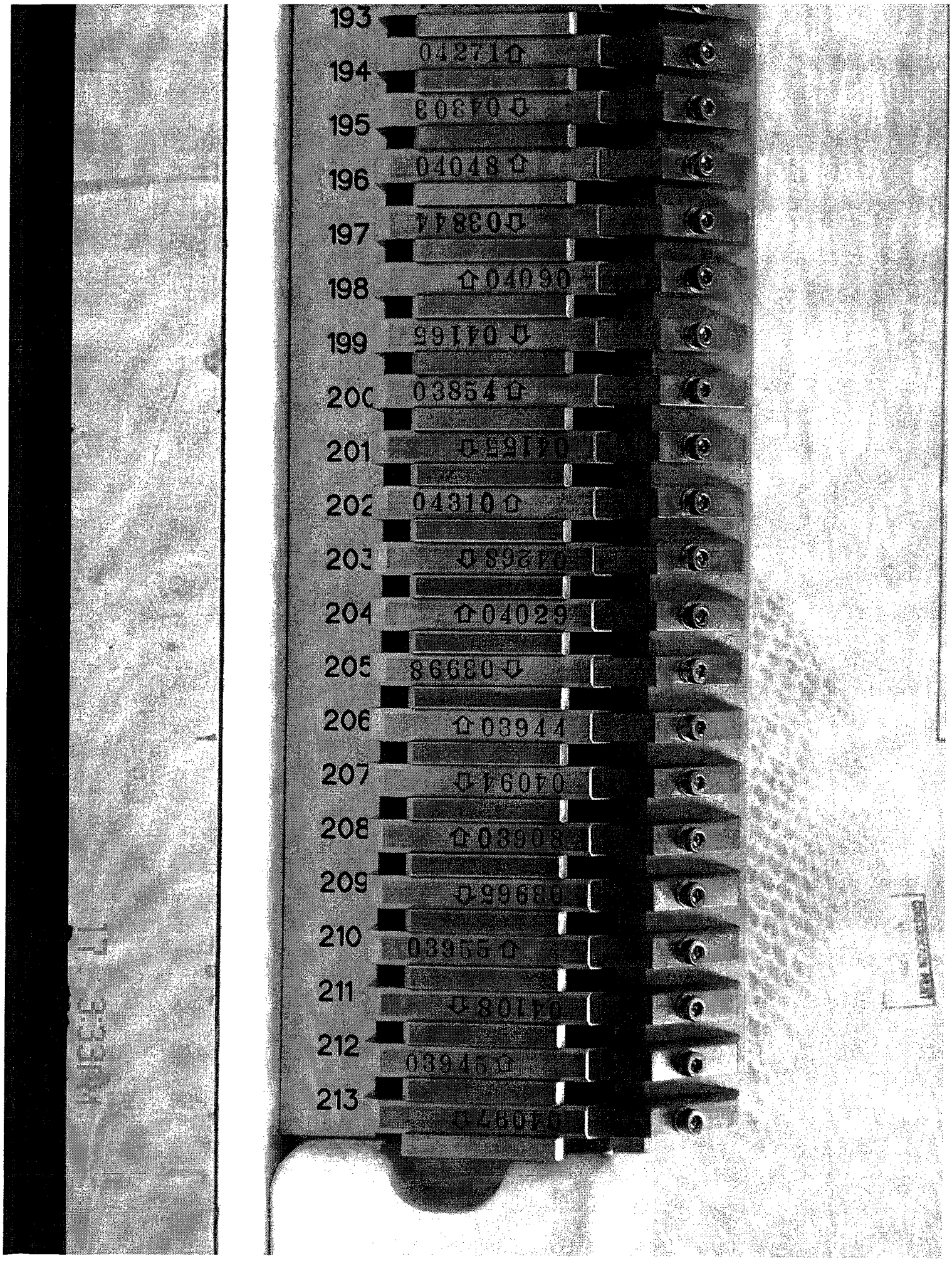
193 03914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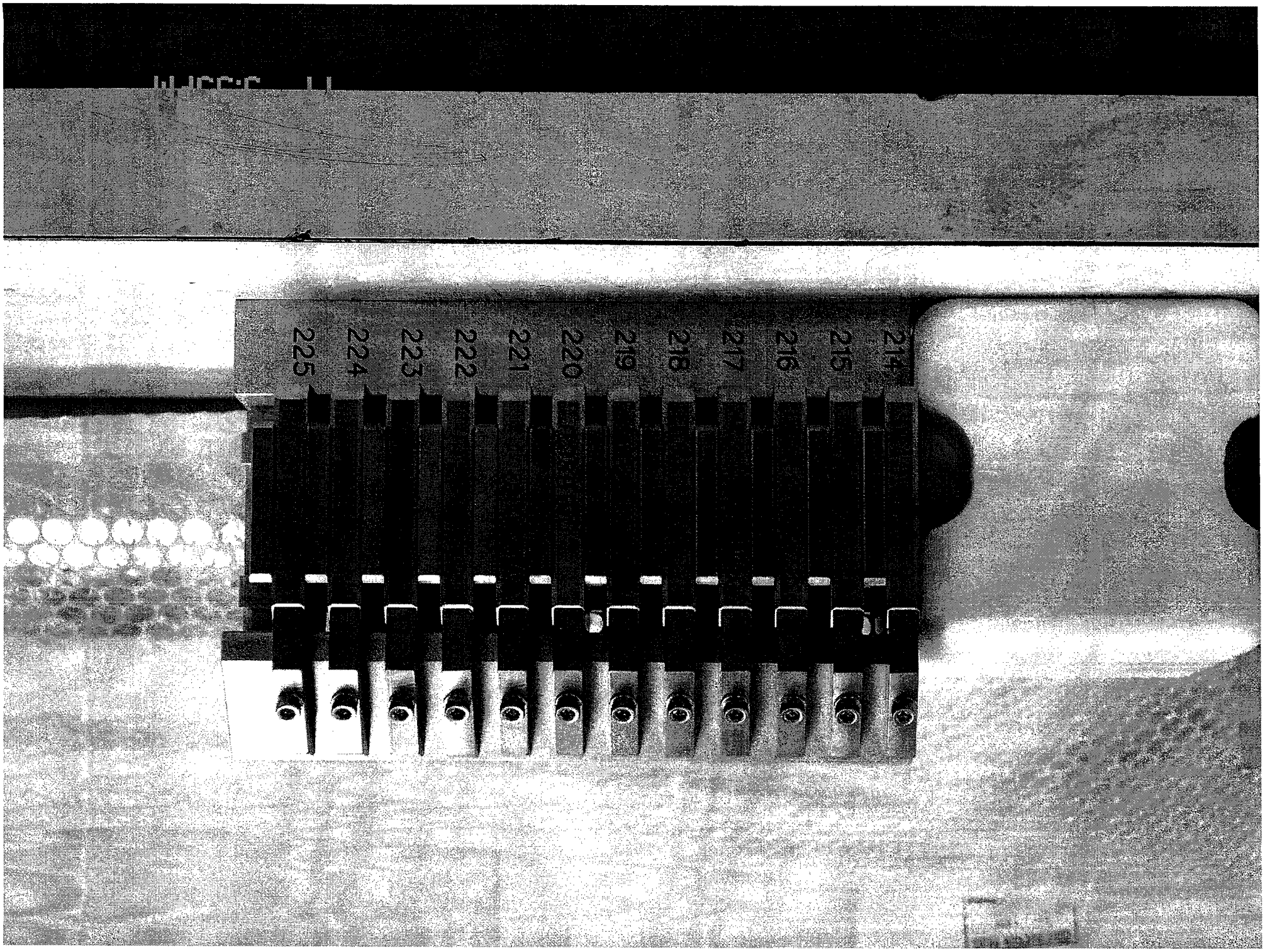
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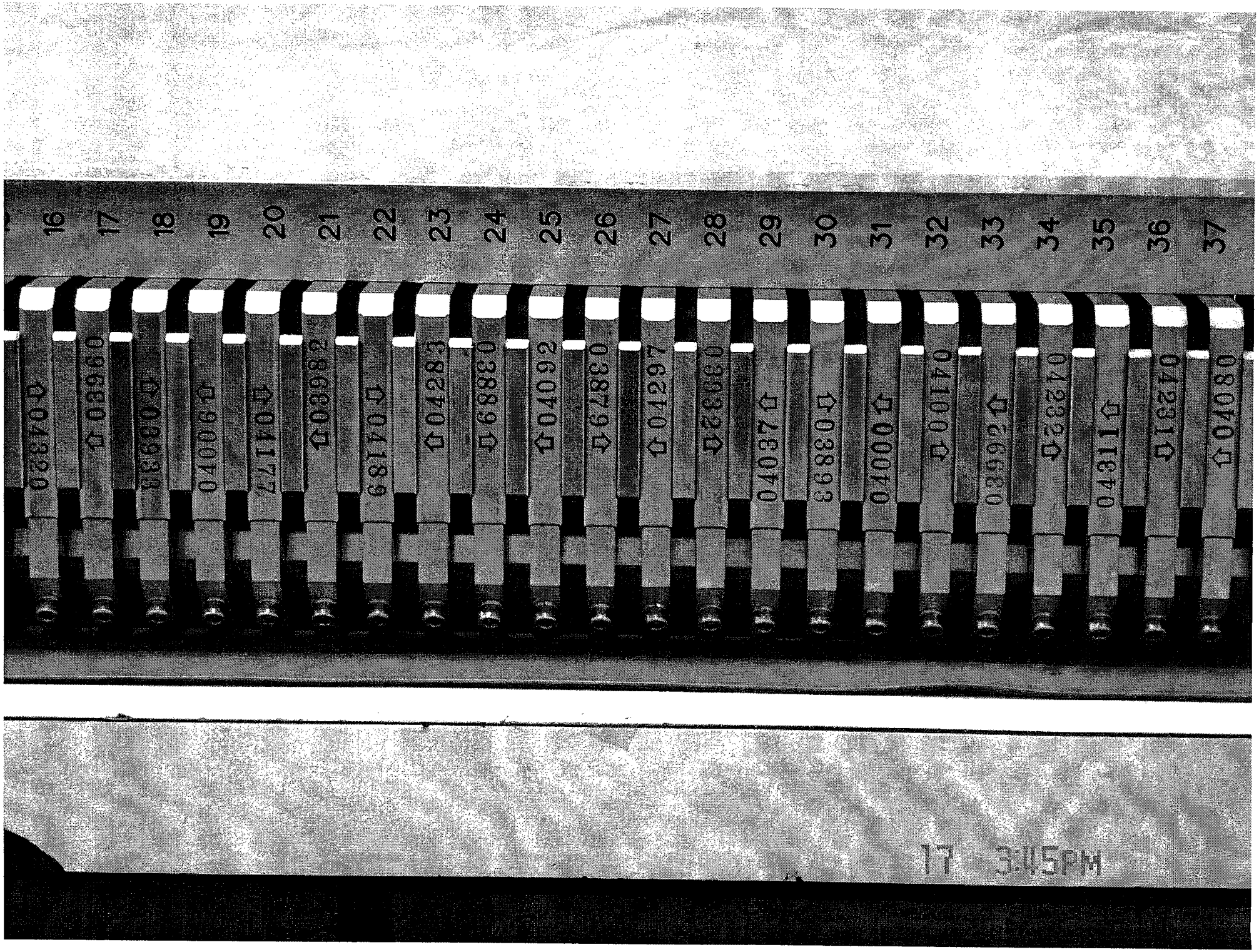
FIGURE 11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38	⇧04051
39	⇩04298
40	⇧04002
41	⇩04035
42	⇧04197
43	⇩04318
44	⇧04106
45	⇩03943
46	⇧03857
47	⇩04309
48	⇧04049
49	⇩03990
50	⇧03876
51	⇩04223
52	⇧03949
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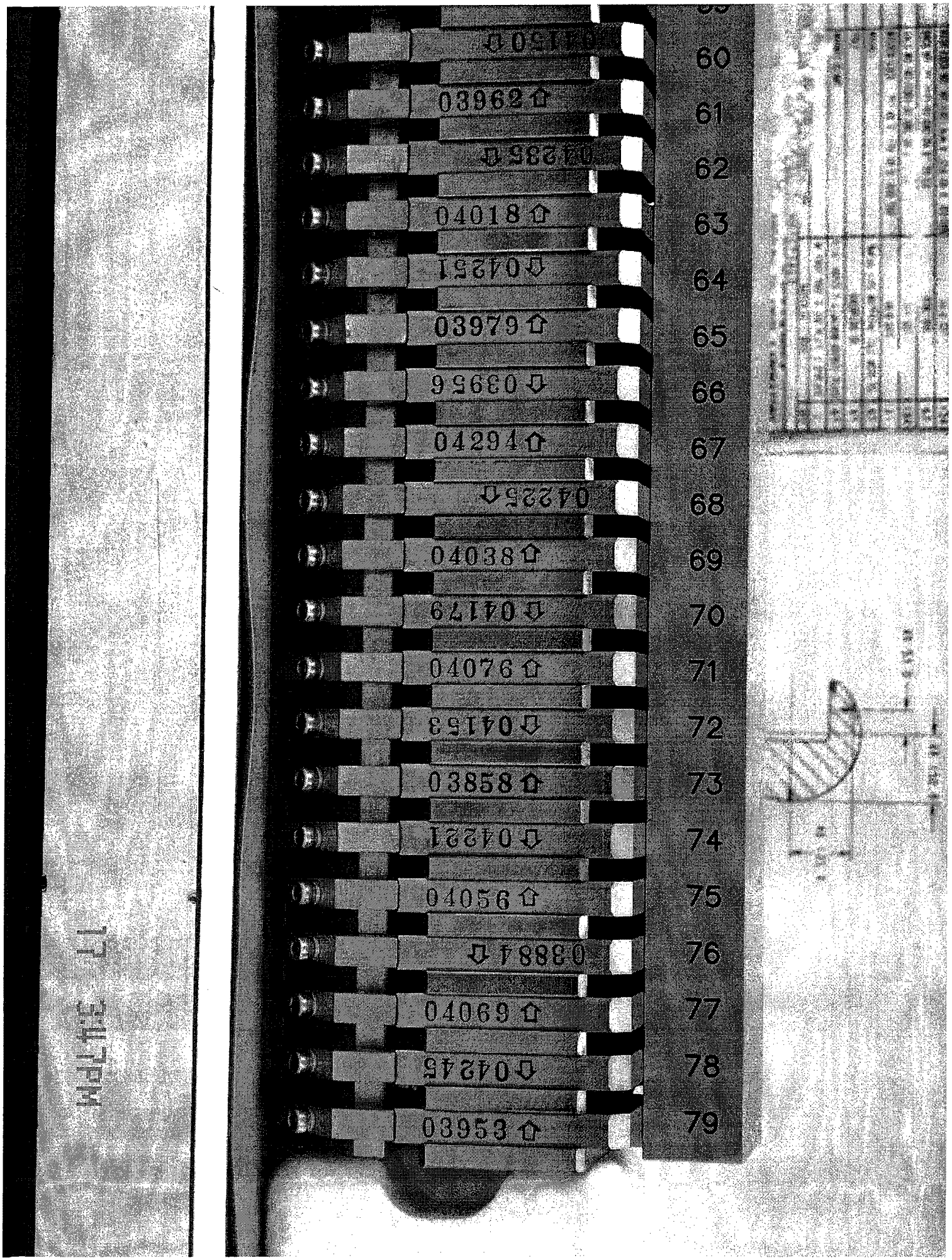
59	⇩04047



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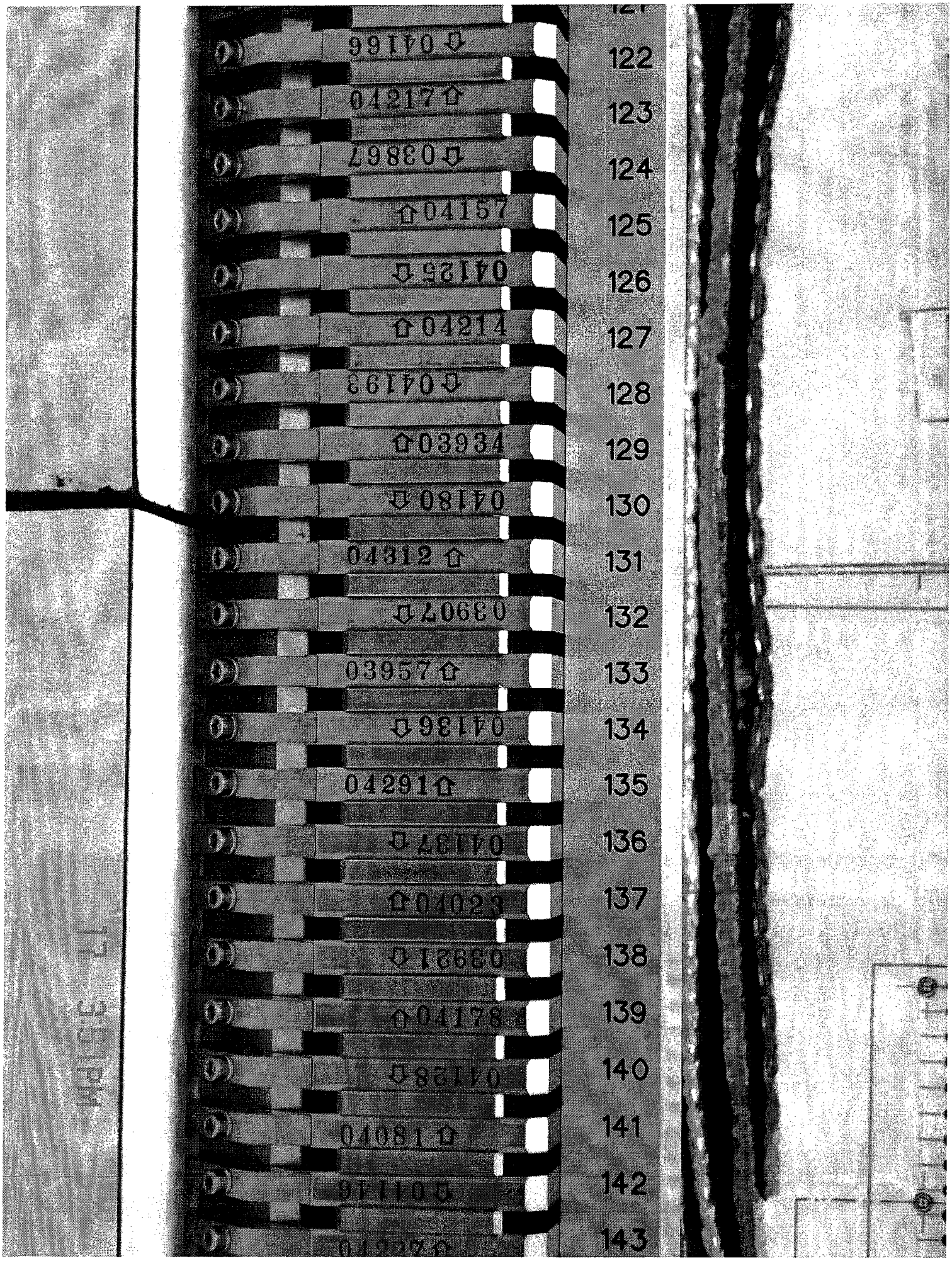
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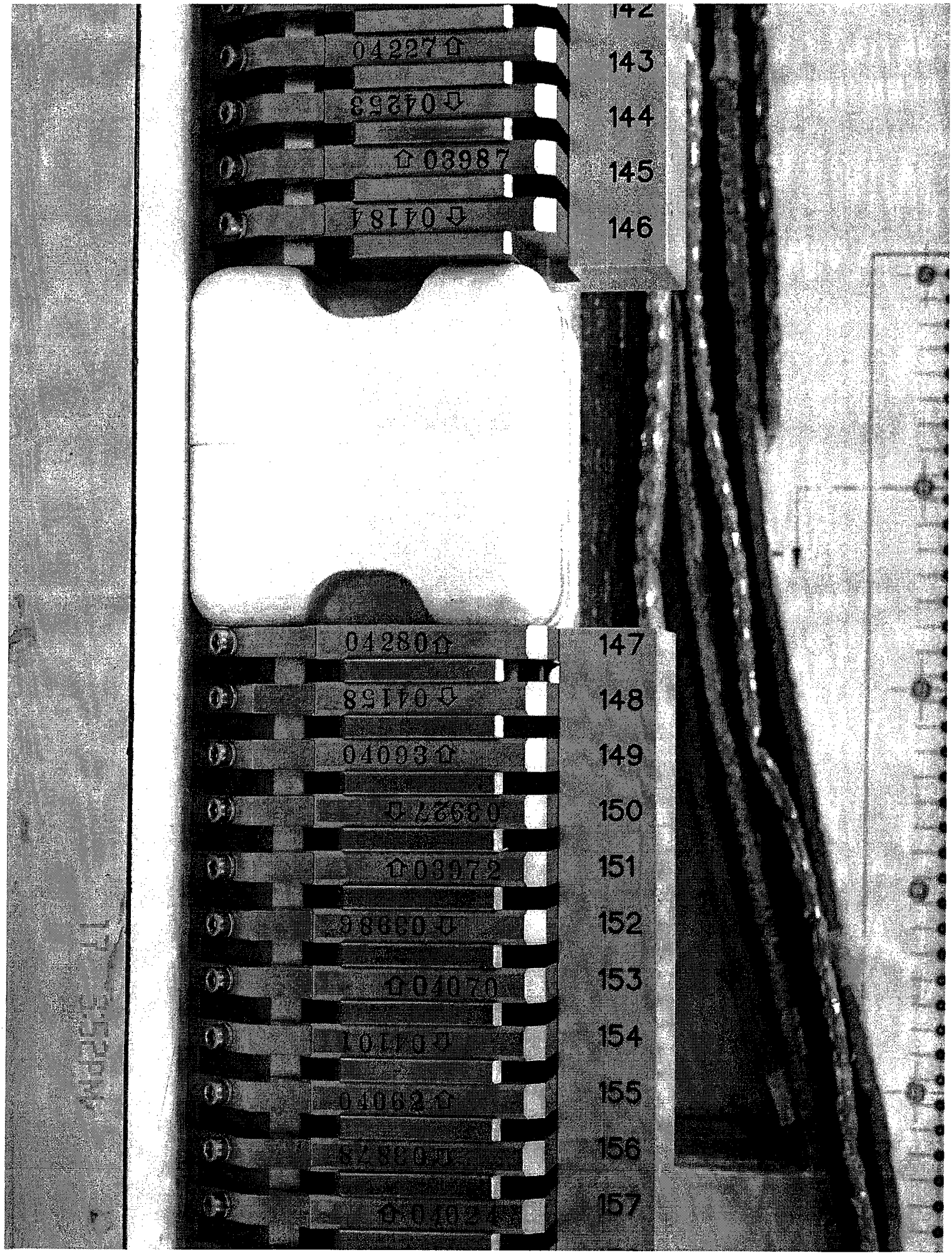

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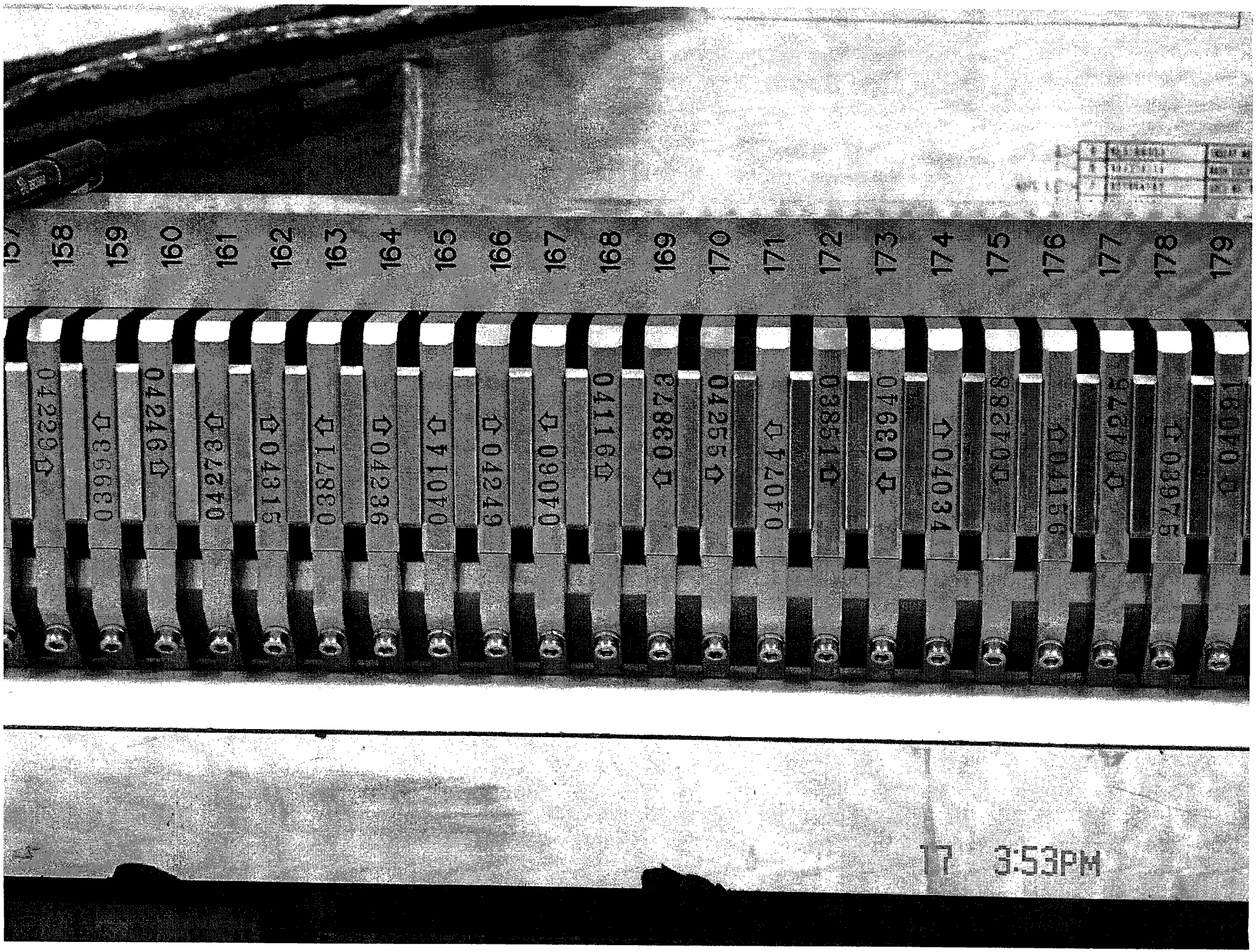
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INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: **Dial Machine, Inc.**

PART NAME: **LCLS Strongback**

DRAWING #: **L143-110700**

SERIAL #: 13

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

DATE: 07-18-06

#	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	07/18/06
2	Check Strongback is marked with serial number & part no.'s (ANL & SLAC) per SOW Section 4.1.3?	H.T.	SIMON	07/18/06
3	Check all accompanying Certifications have correct part serial number	H.T.	SIMON	07/18/06
4	Check Material Certification for compliance with ASTM B381-03, Grade F2	H.T.	SIMON	07/18/06
5	Check Forging Annealing Certification for annealing conformance to AMS-H-81200A, Table V, commercial Pure, Bars & Forgings, including Note 8	H.T.	SIMON	07/18/06
6	Check Rough Machining Anneal Certification for annealing conformance to AMS-2801B section 3.2.9	H.T.	SIMON	07/18/06
7	Check the Strongback contractor's reported dimensional measurements against the part drawing	H.T.	SIMON	07/18/06
8	Verify the Strongback critical dimensions as listed in the SOW section 4.5.2 are in compliance with the print	H.T.	SIMON	07/18/06

INSPECTOR: SIMON

QA Supervisor: Mullage

TEST EQUIPMENT USED: VISUAL

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR:

PART NAME: LCLS Strongback

DRAWING #: L143-110700

SERIAL #: 13

P.O. #: SA-13624

DATE: 07-18-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Overall length	3400.00	+0 / -.04	3399.80	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: Mullage

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 #: 13

P.O.#: 5A-13624

DATE: 07-18-06

FEATURE: Gap Flatness

#	Distance (mm)	Measured A	Measured B	Comments
1	50	.0000	.0001	OK
2	350	-.0003	.0000	OK
3	650	.0004	.0002	OK
4	950	-.0003	.0002	OK
5	1250	-.0004	-.0001	OK
6	1550	-.0004	-.0001	OK
7	1850	-.0003	.0006	OK
8	2150	-.0005	.0004	OK
9	2450	.0007	.0008	OK
10	2750	.0005	.0004	OK
11	3050	.0004	.0004	OK
12	3350	-.0006	-.0002	OK

INSPECTOR: Simon

QA Supervisor: Muelaz

TEST EQUIPMENT USED: CUBIC PRECISION MODEL - 711010 SERIAL # 231067

COMMENTS:

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. 23115

Bill To

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

Ship To

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

Ship Date	03/23/2006
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 REV 03 TITANIUM STRONG BACK MACHINED COMPLETE PER PRINT L143-110700 R07 SA-381-000-86 SERIAL #13 CONTRACT #5A-04889 MOD-09		EA

Concho Flores

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

Serial Number	# 13		Inspector	Floyd
Date	2/14/06			

CMM Critical Feature Results	*Req*	*Tolr*	*Actual*	
flatness - plane -A-		.050	.010	
side opposite -A- flatness		.050	.017	
surface finish -A-	1.6		0.6	
surface finish side opposite -A-	1.6		0.4	
-B- surface flatness		.050	.035	
-B- surface perp to -A-		.100	.036	
Pads				
RH Mounting Pad parallel to -A-		.050	.004	
LH Mounting Pad parallel to -A-		.050	.007	
Overall Length	3400.00	+.000/-.200	3399.825	
LH end to 1700mm holes right	1700.00	+.000/-.100	1699.825	
LH end to 1700mm holes left	1700.00	+.000/-.100	1700.000	
side opposite -A- 167.00 dim	167.00	+.050/-.000	167.022	plane to plane
Individual Gaps	167.00		167.015	direct gaps
side -A- to Centerline 83.5	83.50	+/- .080	83.511	
Other Dimensions		*Date*	*actual*	
			none	out of tolerance

Certifications		*Date*		
Material Certs			attached	
Heat Treat Certs			attached	

Approvals	
.	
.	

Temps	
21.2	Start
20.9	Finish

#13-19

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: 2/17/2006

Customer: DIAL MACHINE

PO No:

CMI No:

Alloy: TI GR2 Heat No: 064-1 Quantity:

Item Description: 12" DIA RND BAR X RL

Specifications DIN 50049 3.1B ASTM B348, ASME SB348
EN 10204 3.1B

Chemical Components

C	CO	CR	CU	FE	MN	MO	NI	P	S
0.001	—	—	—	0.05	—	—	—	—	—
SI	**TI**	**V**	**W**	**CB+TA**	**SN**	**AL**	**ZN**	**PB**	**N**
—	—	—	—	—	—	—	—	—	0.018

Mechanical Properties

Tensile Strength:	50.70	KSI	Elongation in 2":	43.5 %
Yield Strength:	32.90	KSI	Reduction in Area:	77 %
Hardness:	56.00	HRB		

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

REFERENCE# PBA1063777 ANNEAI FCC 5 SOAK TIME 4HR SOAK TEMP 1250

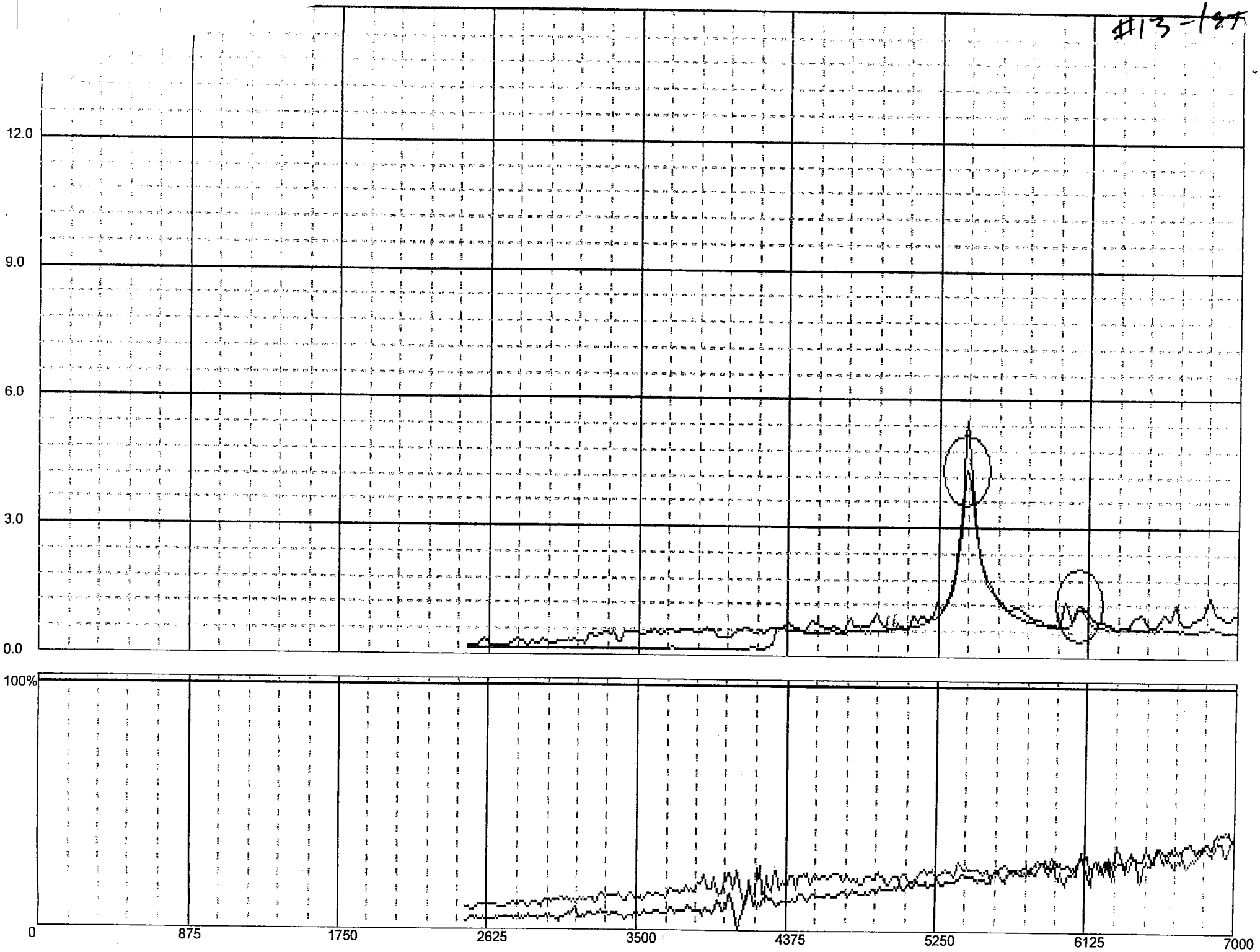
The information stated in this document is true and accurate based upon information acquired by and maintained on file at Corrosion Materials.

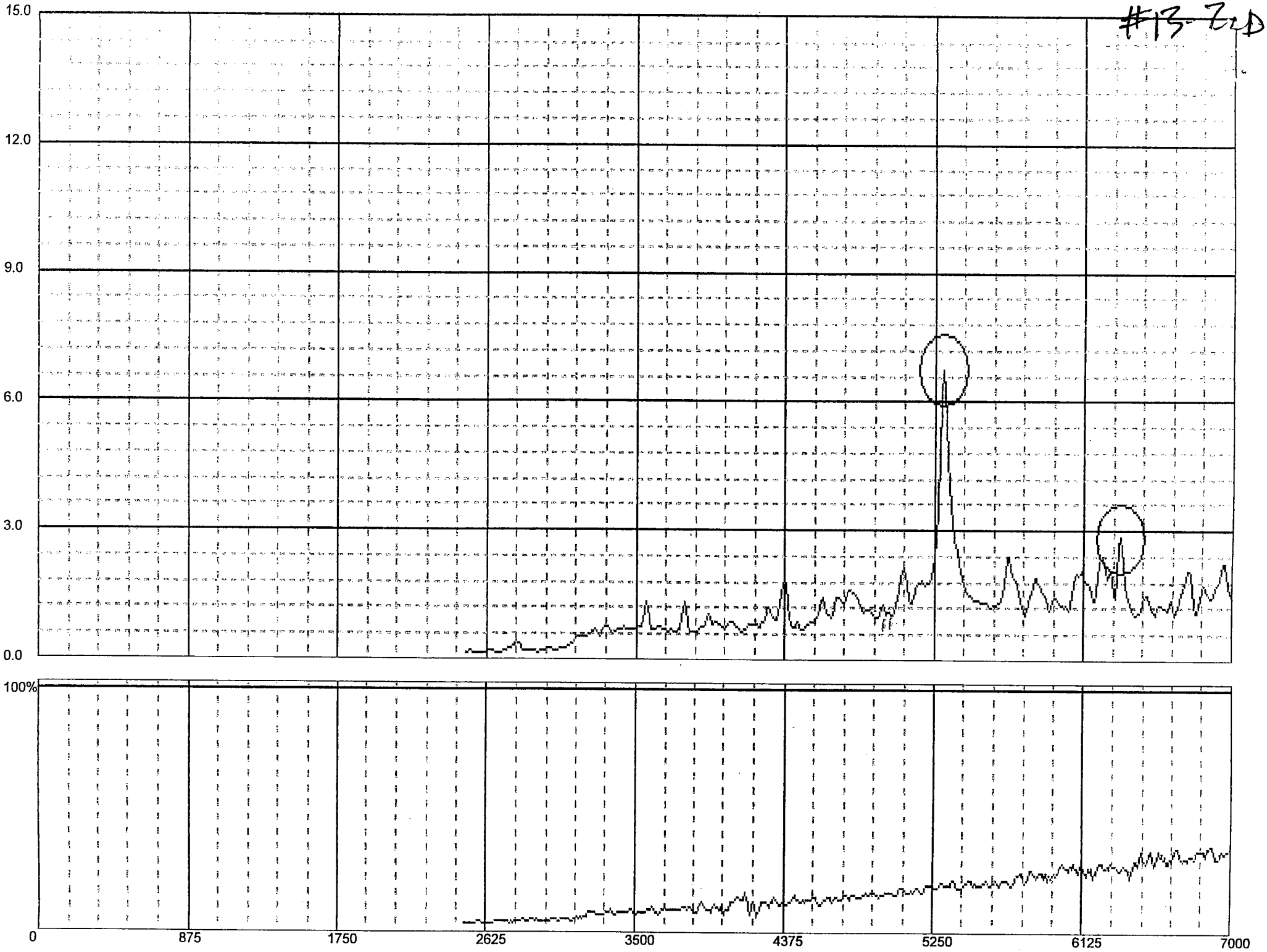
Certified by: Tom Holstein

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.

#13-127




#13-Z2D
15.0
12.0
9.0
6.0
3.0
0.0
100%
0
875
1750
2625
3500
4375
5250
6125
7000

Shin-Etsu

DATE: 31 MAY, 2006

SHIP TO:
HI-TECH MANUFACTORING
4637 N 25th AVE
SCHILLER PARK, IL 60176
TEL:(847) 678 1616

LOT #13

SHIN-ETSU MAGNETICS, INC.
799 ROOSEVELT ROAD
BLDG. #6, SUITE #215
GLEN ELLYN, IL 60137
ATTN: MS. YOSHIE BUTLER
TEL: (630) 858-9340

CARRIER: HOUSE TRUCK

P.O. NO: 5A-06868

PART NO: L143-110106

LOT NO: 15040304-01-2

QUANTITY: 40 CTN(S) (475 PCS.)

TOTAL WEIGHT: 359 LBS.

YAS-2261 4071: 1-39 @ 12 PCS EACH (468 PCS)

1 @ 7 PCS

YUSEN AIR & SEA SERVICE (USA),INC.
1001 N. MITTEL DRIVE
WOOD DALE, IL 60191
TEL:(630) 350-1720

Lot #13

Shin-Etsu

Shin-Etsu Rare Earth Magnets

検 査 表 INSPECTION REPORT

発行日: Issued Date: 26/05/2006

需要家名: Customer: ARGONNE NATIONAL LABORATORY

品名: Material: SEREM N39UH　品名コード: Our Code No.: 300000　図面No.: Our Dwg.No.:

需要家注文No.: Customer's P/O No.: 5A-06868　需要家図面No.: Customer's Dwg.No.: L143-110106 REV.04

指図No.: Our P/O No.: 1504030401-02　数量: Quantity: 475 PCS

単位重量: Unit Weight: 255.00g/pc　磁化方向: Magnetization Through: T　着磁有無: Magnetization: MAGNETIZED

極表示: Marking:

寸法: Dimension:

66.000L	57.000W	9.000T
+0.250	+0.050	+0.000
-0.250	-0.050	-0.100

磁気特性: Magnetic Properties:

Br	[T]	1.2399
	[G]	12399
H_{cJ}	[kA/m]	2190
	[Oe]	27518
H_{cB}	[kA/m]	968
	[Oe]	12166
(BH)max	[kJ/m³]	300.8
	[MGOe]	37.8

その他特性: Additional Specification:

備考: Notes:

PACKING LIST

(CARTON NO.)	(QUANTITIES)	(NET WEIGHT)	(GROSS WEIGHT)
1	12	3.00	4.0
-			
39			
40	7	1.80	2.8
TOTAL	475	118.80	158.8

SIZE OF CARTON (CM)... 41X31X15.5

総合判定: Judgment: Passed

承認: Approved by: R. Tsukeida

担当: Checked by: J. Kawamoto

信越化学工業株式会社 Shin-Etsu Chemical Co.,Ltd.

本社 電子材料事業本部:〒100-0004 東京都千代田区大手町2-6-1
マグネット部……TEL:(03)3246-5246 FAX:(03)3246-5367

武生工場:〒915-8515 福井県越前市北府2-1-5
品質保証部……TEL:(0778)21-8116 FAX:(0778)21-8134

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

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

SERIAL #: 04/04

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

DATE: 07-06-06

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	66.02	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.95	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Muelaz

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 #: 03937

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

DATE: 07-06-06

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: Murtaza

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 #: 03918

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

DATE: 07-06-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Magnet height	57.00	+/- .05	57.03	Accept/Reject
Magnet Width	66.00	+/- .25	66.04	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.97	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Muhaze

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 #: 03981

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

DATE: 07-06-06

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: Muelaz

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 #: 04016

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

DATE: 07-06-06

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:

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 #: 04160

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

DATE: 07-06-06

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	66.04	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.97	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 #: 04191

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

DATE: 07-06-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

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

INSPECTOR: SIMON

QA Supervisor: Muelaze

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 #: 03846

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

DATE: 07-06-06

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: Murloz

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 #: 03951

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

DATE: 07-06-06

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	8.97	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 #: 04196

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

DATE: 07-06-06

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: Murtaza

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 #: 04059

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

DATE: 07-06-06

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	8.97	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Mustaza

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 #: 04168

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

DATE: 07-06-06

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: 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 #: 04185

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

DATE: 07-06-06

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	65.99	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.96	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Muelaz

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 #: 04120

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

DATE: 07-06-06

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: Simons

QA Supervisor: [illegible]

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 #: 03923

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

DATE: 07-06-06

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: Muelaz

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 #: 04212

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

DATE: 07-06-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

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

INSPECTOR: Simon

QA Supervisor: Murlaze

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 #: 03882

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

DATE: 07-06-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

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

INSPECTOR: Simon

QA Supervisor: Murlaga

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 #: 03897

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

DATE: 07-06-06

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: Mulaza

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 #: 03863

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

DATE: 07-06-06

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: Mwelaze

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 #: 03901

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

DATE: 07-06-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

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

INSPECTOR: SIMON

QA Supervisor: Marlaze

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 #: 04155

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

DATE: 07-06-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

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

INSPECTOR: Simon

QA Supervisor: Mueller

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 #: 04108

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

DATE: 07-06-06

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	8.95	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Mulaza

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 #: 04033

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

DATE: 07-06-06

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: Mulaza

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 #: 04299

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

DATE: 07-06-06

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	8.94	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Muellage

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 #: 04028

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

DATE: 07-06-06

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	66.00	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.96	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 #: 03982

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

DATE: 07-06-06

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	8.95	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 #: 04000

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

DATE: 07-06-06

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	65.99	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.95	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Muelaze

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 #: 04035

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

DATE: 07-06-06

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: Muelaze

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 #: 04223

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

DATE: 07-06-06

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	66.01	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.95	Accept/Reject

INSPECTOR: SIMON

QA Supervisor: Murbe

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 #: 03962

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

DATE: 07-06-06

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	8.96	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Muelaz

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 #: 04076

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

DATE: 07-06-06

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	66.01	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.95	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Muelaze

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 #: 04296

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

DATE: 07-06-06

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	66.02	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.95	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Muelage

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 #: 04077

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

DATE: 07-06-06

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: Martez

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 #: 04130

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

DATE: 07-06-06

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	8.94	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Mullen

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 #: 04147

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

DATE: 07-06-06

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	8.94	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Muelaze

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 #: 04187

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

DATE: 07-06-06

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	65.99	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.96	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Mulaz

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 #: 04312

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

DATE: 07-06-06

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: 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 #: 04081

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

DATE: 07-06-06

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	8.96	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 #: 03972

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

DATE: 07-06-06

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: Muelez

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 #: 04273

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

DATE: 07-06-06

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	8.95	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 #: 04074

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

DATE: 07-06-06

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	65.99	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.96	Accept/Reject

INSPECTOR: SIMON

QA Supervisor: Muelaz

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 #: 03858

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

DATE: 07-06-06

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	8.97	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Muelaze

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 #: 04285

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

DATE: 07-06-06

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	8.96	Accept/Reject

INSPECTOR: Simon

QA Supervisor: Murtaza

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 #: 03910

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

DATE: 07-06-06

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	8.94	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 #: 04295

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

DATE: 07-06-06

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	8.97	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 #: 04317

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

DATE: 07-03-03

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	66.00	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

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 #: Ll43-111200-13

P.O. #: 5A13624 DATE: 07-07-06

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 30.00/29.975	Accept/Reject
Bottom surface flatness	</= .04	N/A	0.03	Accept/Reject
Overall length	189	+0 / -.1	188.98	Accept/Reject
Overall width	128	+0 / -.1	127.98	Accept/Reject

INSPECTOR: Muelaze QA Supervisor: Muelaze

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: Lower Right Magnet Structure Base

DRAWING #: L143-111301 SERIAL #: L143-111300-13

P.O. #: 5A13624 DATE: 07-07-06

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 29.998/29.978	Accept/Reject
Bottom surface flatness	</= .04	N/A	0.025	Accept/Reject
Overall length	189	+0 / -.1	188.98	Accept/Reject
Overall width	128	+0 / -.1	127.96	Accept/Reject

INSPECTOR: Muelaze QA Supervisor: Muelaze

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 Left Magnet Structure Base

DRAWING #: L143-110801 SERIAL #: L143-110800-13

P.O. #: 5A13624 DATE: 07-07-06

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 29.99/29.987	Accept/Reject
Bottom surface flatness	</= .04	N/A	0.03	Accept/Reject
Overall length	195	+0 / -.1	194.97	Accept/Reject
Overall width	128	+0 / -.1	127.96	Accept/Reject

INSPECTOR: Mustaza QA Supervisor: Mustaza

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 Left Magnet Structure Base

DRAWING #: L143-110901 SERIAL #: L143-110900-13

P.O. #: 5A13624 DATE: 07-07-06

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	.018	Accept/Reject
Overall length	195	+0 / -.1	194.98	Accept/Reject
Overall width	128	+0 / -.1	127.99	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 Middle Magnet Structure Base

DRAWING #: L143-111101-01 SERIAL #: L143-111100-1-13

P.O. #:5A13624 DATE: 07-07-06

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	1004.90	Accept/Reject
Overall width	128	+0 / -.1	127.97	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 Middle Magnet Structure Base

DRAWING #: L143-111101-01

SERIAL #: L143-111100-2-13

P.O. #:5A13624

DATE: 07-07-06

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	.035	Accept/Reject
Overall length	1005	+0 / -.1	1004.95	Accept/Reject
Overall width	128	+0 / -.1	127.96	Accept/Reject

INSPECTOR: Muelage

QA Supervisor: Muelage

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 #: L143-111100-3-13

P.O. #:5A13624

DATE: 07-07-06

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 / -.1	1004.99	Accept/Reject
Overall width	128	+0 / -.1	127.98	Accept/Reject

INSPECTOR: Murlaza

QA Supervisor: Murlaza

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 #: L143-111000-1-13

P.O. #: 5A13624 DATE: 07-07-06

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 29.995/29.980	Accept/Reject
Bottom surface flatness	</= .04	N/A	.03	Accept/Reject
Overall length	1005.0	+0 / -.1	1004.97	Accept/Reject
Overall width	128	+0 / -.1	127.98	Accept/Reject

INSPECTOR: Murlaza QA Supervisor: Murlaza

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 #: L143-111000-2-13

P.O. #: 5A13624 DATE: 07-07-06

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	.03	Accept/Reject
Overall length	1005.0	+0 / -.1	1004.95	Accept/Reject
Overall width	128	+0 / -.1	127.97	Accept/Reject

INSPECTOR: Mwlaze QA Supervisor: Mwlaze

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 #: L143-111000-3-13

P.O. #: 5A13624 DATE: 07-07-06

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	.035	Accept/Reject
Overall length	1005.0	+0 / -.1	1004.95	Accept/Reject
Overall width	128	+0 / -.1	127.96	Accept/Reject

INSPECTOR: Murlaza QA Supervisor: Murlaza

TEST EQUIPMENT USED: CMM & Micrometer.

COMMENTS: