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: ____	Serial Number: 19
Manufacturer: Hi-Tech MFG		Purchase Order Number: SA-B624

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.*	Not req'd	☐	☐
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.*	Steve Sorli 8/14/06	☐	☐
5	*Verify correct gap size along the entire undulator length using calibrated gage blocks.*	S.S. 8/14/06	☐	☐
6	*Check the peak field at each magnet location using a portable Hall probe.*	S.S. 8/14/06	☐	☐
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*		☐	☐
8	*Verify that the magnet photographs of the magnet sub assemblies are in agreement with the magnet sort list.*		☐	☐
9	*Review shipping container and that the contractor has Shockwatch monitoring devices available*	Not req'd	☐	☐
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.

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.	TMJ	11/6/05
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	

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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	Verify Undulator gap using Go-NoGo gauge	Contractor Facility	[illegible] 11/06/06 S.S. 11/6/06	8/14/06

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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	8/14/06
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	Check the anneal certification for compliance with AMS-A801, or a specified material supplier's annealing schedule.	tor Assy Contracto	H. Tcy	8/14/04
7	Check that the machining Contractor's certified dimensional measurements are in compliance with the drawing	ANL	TMz	14/6/04
8	Verify the critical dimensions as listed in the SOW, Section 4.5.2 are in compliance with the drawing	ulator Assy Contra	H. Tcy	8/14/04

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	6/14/06
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	TMz	11/6/06
5	Review Vendor sort list for agreement with sort procedure.	APS Bldg 401	TMz	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	SS [signature]	11/6/06
7	On random sampling, confirm Magnetic Moment magnitude and vector components agree with vendor reports	APS Magnet Group	SS S.S.	
8	On radom sampling, verify the magnet s demagnetization and thermal stability.	APS Magnet Group	SS S.S.	

Undulator # 19 from „Hi-Tech"

	LOT#13 Device#19 Date		08/14/06		
Slot No		Slot No		Slot Number	
1		51	1.30	100	1.29
2		52	1.29	101	1.28
3	1.30	53	1.29	102	1.27
4	1.29	54	1.28	103	1.28
5	1.29	55	1.29	104	1.28
6	1.30	56	1.31	105	1.28
7	1.30	57	1.31	106	1.29
8	1.30	58	1.31	107	1.29
9	1.29	59	~~1.31~~ 1.29	108	1.28
10	1.29	60	1.29	109	1.31
11	1.29	61	1.28	110	1.30
12	1.30	62	1.30	111	1.28
13	1.29	63	1.30	112	1.28
14	1.30	64	1.30	113	1.28
15	1.30	65	1.29	114	1.28
16	1.31	66	1.31	115	1.28
17	1.31	67	1.30	116	1.28
18	1.30	68	1.28	117	1.30
19	1.31	69	1.28	118	1.29
20	1.30	70	1.29	119	1.28
21	1.29	71	1.30	120	1.28
22	1.31	72	1.31	121	1.28
23	1.31	73	1.31	122	1.29
24	1.31	74	1.31	123	1.29
25	1.31	75	1.30	124	1.28
26	1.31	76	1.29	125	1.29
27	1.29	77	1.28	126	1.28
28	1.29	78	1.29	127	1.29
29	1.30	79	1.30	128	1.29
30	1.30	80	1.29	129	1.28
31	1.31	81	1.29	130	1.29
32	1.31	82	1.29	131	1.29
33	1.31	83	1.30	132	1.31
34	1.31	84	1.31	133	1.31
35	1.30	85	1.30	134	1.29
36	1.29	86	1.30	135	1.28
37	1.30	87	1.29	136	1.29
38	1.30	88	1.29	137	1.29
39	1.30	89	1.30	138	1.30
40	1.31	90	1.29	139	1.29
41	1.31	91	1.30	140	1.30
42	1.31	92	1.31	141	1.31
43	1.31	93	1.31	142	1.30
44	1.29	94	1.29	143	1.29
45	1.30	95	1.29	144	1.28
46	1.30	96	1.28	145	1.28
47	1.30	97	1.29	146	1.28
48	1.31	98	1.28	147	1.28
49	1.31	99	1.28	148	1.30
50	1.31			149	1.29

Slot Number		Slot Number	
150	1.30	200	1.31
151	1.30	201	1.29
152	1.29	202	1.29
153	1.28	203	1.28
154	1.28	204	1.29
155	1.27	205	1.29
156	1.28	206	1.30
157	1.30	207	1.31
158	1.27	208	1.31
159	1.31	209	1.30
160	1.31	210	1.28
161	1.30	211	1.28
162	1.28	212	1.28
163	1.28	213	1.28
164	1.30	214	1.29
165	1.30	215	1.30
166	1.30	216	1.30
167	1.31	217	1.29
168	1.30	218	1.29
169	1.29	219	1.28
170	1.29	220	1.30
171	1.28	221	1.29
172	1.29	222	1.31
173	1.30	223	1.23
174	1.30	224	0.75
175	1.31	225	
176	1.30		
177	1.29		
178	1.28		
179	1.28		
180	1.29		
181	1.30		
182	1.30		
183	1.31		
184	1.30		
185	1.29		
186	1.29		
187	1.28		
188	1.28		
189	1.30		
190	1.29		
191	1.30		
192	1.30		
193	1.29		
194	1.28		
195	1.27		
196	1.29		
197	1.30		
198	1.30		
199	1.30		

Isaac Vasserman
Emil Trachtenberg

#19

LOT13 magnets Serial # 5761-6240

Bottom Jaw

Slot Number	Serial No.	Main filed Orientation	x-axis orientation
1	5846	Upstream	Right
2	5814	Downstream	Left
3	5916	Upstream	Left
4	6134	Downstream	Left
5	5903	Upstream	Right
6	5768	Downstream	Right
7	6101	Upstream	Right
8	5971	Downstream	Left
9	6154	Upstream	Left
10	5845	Downstream	Right
11	5830	Upstream	Right
12	6175	Downstream	Right
13	6167	Upstream	Right
14	6004	Downstream	Right
15	6234	Upstream	Left
16	5901	Downstream	Right
17	5917	Upstream	Right
18	6237	Downstream	Left
19	6222	Upstream	Left
20	5998	Downstream	Right
21	5843	Upstream	Right
22	5765	Downstream	Left
23	6166	Upstream	Right
24	6093	Downstream	Right
25	5963	Upstream	Left
26	5844	Downstream	Right
27	5982	Upstream	Left
28	5823	Downstream	Right
29	5924	Upstream	Right
30	6230	Downstream	Right
31	6213	Upstream	Left
32	5905	Downstream	Right
33	5806	Upstream	Left
34	5777	Downstream	Right
35	5898	Upstream	Right
36	6139	Downstream	Left
37	5784	Upstream	Left
38	6017	Downstream	Right
39	6018	Upstream	Left
40	5967	Downstream	Right
41	6200	Upstream	Right
42	6107	Downstream	Left
43	5778	Upstream	Left
44	6228	Downstream	Left
45	6157	Upstream	Left
46	5935	Downstream	Right
47	6178	Upstream	Right

Top Jaw

Slot Number	Serial No.	Main filed Orientation	x-axis orientation
1	6035	Downstream	Right
2	6025	Upstream	Right
3	5981	Downstream	Left
4	5932	Upstream	Right
5	5989	Downstream	Left
6	5943	Upstream	Left
7	5958	Downstream	Right
8	6069	Upstream	Left
9	6180	Downstream	Right
10	5939	Upstream	Right
11	5851	Downstream	Right
12	6040	Upstream	Right
13	5886	Downstream	Right
14	5986	Upstream	Right
15	6146	Downstream	Right
16	6238	Upstream	Right
17	5828	Downstream	Right
18	5908	Upstream	Right
19	6082	Downstream	Left
20	6126	Upstream	Left
21	5951	Downstream	Left
22	6067	Upstream	Left
23	6221	Downstream	Right
24	5918	Upstream	Left
25	6229	Downstream	Right
26	6059	Upstream	Right
27	6133	Downstream	Left
28	5919	Upstream	Left
29	6075	Downstream	Left
30	6145	Upstream	Left
31	6041	Downstream	Right
32	5783	Upstream	Right
33	5911	Downstream	Left
34	6019	Upstream	Right
35	5879	Downstream	Right
36	5948	Upstream	Right
37	5881	Downstream	Right
38	6174	Upstream	Right
39	6038	Downstream	Right
40	5771	Upstream	Left
41	5922	Downstream	Left
42	5970	Upstream	Left
43	5955	Downstream	Left
44	5944	Upstream	Left
45	6226	Downstream	Right
46	5840	Upstream	Left
47	6152	Downstream	Left

48	6088	Downstream	Right
49	5945	Upstream	Left
50	5764	Downstream	Left
51	6003	Upstream	Right
52	5865	Downstream	Left
53	6111	Upstream	Right
54	6049	Downstream	Left
55	5936	Upstream	Right
56	6022	Downstream	Left
57	5950	Upstream	Right
58	5762	Downstream	Left
59	6218	Upstream	Right
60	6149	Downstream	Right
61	5804	Upstream	Left
62	6188	Downstream	Right
63	5841	Upstream	Right
64	5831	Downstream	Left
65	6095	Upstream	Right
66	5763	Downstream	Right
67	6108	Upstream	Left
68	6150	Downstream	Right
69	5808	Upstream	Left
70	5895	Downstream	Left
71	6064	Upstream	Left
72	5956	Downstream	Right
73	5949	Upstream	Right
74	6173	Downstream	Right
75	6163	Upstream	Left
76	5923	Downstream	Right
77	6176	Upstream	Right
78	5802	Downstream	Left
79	6235	Upstream	Right
80	6172	Downstream	Left
81	5889	Upstream	Left
82	6196	Downstream	Right
83	5859	Upstream	Right
84	6187	Downstream	Left
85	6002	Upstream	Left
86	6048	Downstream	Left
87	6006	Upstream	Left
88	6123	Downstream	Right
89	5933	Upstream	Right
90	5882	Downstream	Left
91	5766	Upstream	Right
92	5960	Downstream	Right
93	5855	Upstream	Left
94	6169	Downstream	Right
95	6164	Upstream	Right
96	6030	Downstream	Right
97	5832	Upstream	Left
98	6092	Downstream	Right
99	6081	Upstream	Right

48	6098	Upstream	Right
49	5835	Downstream	Left
50	5946	Upstream	Left
51	6036	Downstream	Left
52	5896	Upstream	Right
53	6216	Downstream	Left
54	6161	Upstream	Left
55	6052	Downstream	Right
56	5934	Upstream	Left
57	6224	Downstream	Left
58	5775	Upstream	Right
59	6083	Downstream	Left
60	6227	Upstream	Left
61	6137	Downstream	Left
62	5822	Upstream	Right
63	6001	Downstream	Left
64	6033	Upstream	Left
65	5847	Downstream	Right
66	5930	Upstream	Right
67	5854	Downstream	Left
68	5874	Upstream	Left
69	6135	Downstream	Right
70	6073	Upstream	Left
71	5991	Downstream	Left
72	5880	Upstream	Right
73	5915	Downstream	Right
74	5858	Upstream	Left
75	5800	Downstream	Left
76	5803	Upstream	Left
77	5937	Downstream	Right
78	5978	Upstream	Left
79	5987	Downstream	Right
80	6189	Upstream	Right
81	5995	Downstream	Right
82	6183	Upstream	Right
83	6212	Downstream	Right
84	5817	Upstream	Right
85	5789	Downstream	Left
86	6077	Upstream	Left
87	6199	Downstream	Right
88	5815	Upstream	Right
89	5926	Downstream	Left
90	6010	Upstream	Right
91	6128	Downstream	Right
92	5849	Upstream	Left
93	6124	Downstream	Left
94	5787	Upstream	Left
95	6190	Downstream	Right
96	6156	Upstream	Right
97	6202	Downstream	Left
98	5819	Upstream	Right
99	6179	Downstream	Right

100	5769	Downstream	Right
101	6058	Upstream	Right
102	6113	Downstream	Right
103	6215	Upstream	Right
104	5887	Downstream	Left
105	5913	Upstream	Left
106	6028	Downstream	Left
107	6090	Upstream	Right
108	6071	Downstream	Left
109	6063	Upstream	Left
110	5975	Downstream	Left
111	6141	Upstream	Right
112	6055	Downstream	Right
113	5773	Upstream	Right
114	5996	Downstream	Left
115	6168	Upstream	Right
116	6186	Downstream	Right
117	5810	Upstream	Left
118	5927	Downstream	Left
119	6008	Upstream	Right
120	5979	Downstream	Right
121	6223	Upstream	Right
122	6184	Downstream	Right
123	6074	Upstream	Right
124	6056	Downstream	Left
125	5893	Upstream	Right
126	6000	Downstream	Right
127	5864	Upstream	Right
128	5969	Downstream	Left
129	6129	Upstream	Right
130	6044	Downstream	Right
131	5867	Upstream	Left
132	5920	Downstream	Right
133	5788	Upstream	Left
134	6061	Downstream	Left
135	5798	Upstream	Right
136	6151	Downstream	Left
137	5974	Upstream	Left
138	5824	Downstream	Right
139	6240	Upstream	Left
140	5857	Downstream	Left
141	5984	Upstream	Left
142	6171	Downstream	Right
143	6105	Upstream	Right
144	6011	Downstream	Right
145	5962	Upstream	Right
146	5861	Downstream	Left
147	6089	Upstream	Right
148	5912	Downstream	Right
149	6191	Upstream	Left
150	5809	Downstream	Right
151	6217	Upstream	Right

100	6029	Upstream	Left
101	6070	Downstream	Left
102	5856	Upstream	Left
103	5888	Downstream	Right
104	6023	Upstream	Left
105	5942	Downstream	Right
106	5794	Upstream	Left
107	5904	Downstream	Left
108	6047	Upstream	Right
109	5852	Downstream	Right
110	6132	Upstream	Left
111	5947	Downstream	Left
112	5791	Upstream	Right
113	5869	Downstream	Right
114	6016	Upstream	Left
115	5928	Downstream	Right
116	6142	Upstream	Right
117	5796	Downstream	Right
118	6078	Upstream	Left
119	6122	Downstream	Right
120	6121	Upstream	Right
121	6210	Downstream	Right
122	5997	Upstream	Right
123	6165	Downstream	Left
124	6014	Upstream	Left
125	5829	Downstream	Left
126	6054	Upstream	Left
127	6204	Downstream	Right
128	6102	Upstream	Left
129	5772	Downstream	Right
130	5818	Upstream	Right
131	5853	Downstream	Right
132	5868	Upstream	Right
133	5988	Downstream	Left
134	5781	Upstream	Left
135	6087	Downstream	Right
136	5837	Upstream	Left
137	6085	Downstream	Left
138	6181	Upstream	Left
139	5836	Downstream	Right
140	5957	Upstream	Right
141	6197	Downstream	Right
142	5999	Upstream	Right
143	5860	Downstream	Left
144	5883	Upstream	Right
145	5871	Downstream	Left
146	6136	Upstream	Right
147	6117	Downstream	Left
148	5914	Upstream	Right
149	5953	Downstream	Right
150	6046	Upstream	Right
151	5827	Downstream	Left

152	6140	Downstream	Left
153	5892	Upstream	Right
154	6162	Downstream	Right
155	5799	Upstream	Right
156	5907	Downstream	Left
157	5968	Upstream	Right
158	5899	Downstream	Left
159	6037	Upstream	Left
160	6068	Downstream	Left
161	6057	Upstream	Right
162	6214	Downstream	Left
163	5925	Upstream	Right
164	6148	Downstream	Left
165	6009	Upstream	Left
166	5891	Downstream	Right
167	6192	Upstream	Right
168	5811	Downstream	Right
169	5902	Upstream	Right
170	6097	Downstream	Left
171	5897	Upstream	Left
172	5801	Downstream	Right
173	5767	Upstream	Right
174	6007	Downstream	Right
175	5964	Upstream	Right
176	6138	Downstream	Right
177	5965	Upstream	Right
178	6099	Downstream	Right
179	6206	Upstream	Left
180	5990	Downstream	Right
181	5938	Upstream	Right
182	5850	Downstream	Left
183	5780	Upstream	Left
184	5961	Downstream	Left
185	5972	Upstream	Right
186	5770	Downstream	Left
187	6110	Upstream	Left
188	6170	Downstream	Right
189	6080	Upstream	Right
190	6119	Downstream	Left
191	5792	Upstream	Left
192	6195	Downstream	Right
193	5877	Upstream	Left
194	6106	Downstream	Left
195	6109	Upstream	Right
196	5977	Downstream	Right
197	6021	Upstream	Right
198	5833	Downstream	Right
199	6062	Upstream	Right
200	5959	Downstream	Left
201	6131	Upstream	Right
202	5862	Downstream	Left
203	6086	Upstream	Left

152	6043	Upstream	Right
153	6015	Downstream	Right
154	6053	Upstream	Right
155	5761	Downstream	Left
156	5826	Upstream	Right
157	6050	Downstream	Left
158	5807	Upstream	Left
159	6020	Downstream	Right
160	6024	Upstream	Left
161	6065	Downstream	Right
162	5894	Upstream	Right
163	6120	Downstream	Right
164	5929	Upstream	Left
165	6115	Downstream	Right
166	5785	Upstream	Left
167	6104	Downstream	Left
168	5906	Upstream	Left
169	6032	Downstream	Left
170	5870	Upstream	Left
171	6072	Downstream	Left
172	5993	Upstream	Left
173	6207	Downstream	Left
174	5820	Upstream	Left
175	5885	Downstream	Left
176	6194	Upstream	Right
177	5795	Downstream	Right
178	5910	Upstream	Left
179	5825	Downstream	Left
180	6158	Upstream	Left
181	5976	Downstream	Left
182	6211	Upstream	Right
183	6091	Downstream	Left
184	5774	Upstream	Left
185	5878	Downstream	Right
186	6051	Upstream	Left
187	5872	Downstream	Left
188	5940	Upstream	Right
189	6155	Downstream	Right
190	6193	Upstream	Right
191	6125	Downstream	Right
192	6094	Upstream	Right
193	6026	Downstream	Right
194	6031	Upstream	Right
195	6232	Downstream	Right
196	6116	Upstream	Right
197	5842	Downstream	Right
198	5863	Upstream	Right
199	6005	Downstream	Left
200	5980	Upstream	Left
201	6225	Downstream	Left
202	5876	Upstream	Right
203	6209	Downstream	Right

204	5875	Downstream	Right
205	6045	Upstream	Left
206	6198	Downstream	Right
207	6201	Upstream	Right
208	5992	Downstream	Right
209	5866	Upstream	Left
210	5884	Downstream	Right
211	5790	Upstream	Right
212	6144	Downstream	Left
213	6076	Upstream	Right
214	6112	Downstream	Right
215	6013	Upstream	Right
216	6147	Downstream	Right
217	5954	Upstream	Right
218	6185	Downstream	Left
219	5921	Upstream	Right
220	5909	Downstream	Right
221	5838	Upstream	Left
222	6143	Downstream	Left
223	6208	Upstream	Left
224	5834	Downstream	Left
225	5786	Upstream	Left

204	6160	Upstream	Right
205	6233	Downstream	Right
206	6103	Upstream	Left
207	5873	Downstream	Left
208	6231	Upstream	Left
209	6130	Downstream	Right
210	6066	Upstream	Left
211	6220	Downstream	Left
212	6236	Upstream	Left
213	5779	Downstream	Left
214	5931	Upstream	Right
215	5973	Downstream	Right
216	6153	Upstream	Left
217	6096	Downstream	Left
218	6084	Upstream	Left
219	6182	Downstream	Right
220	5797	Upstream	Right
221	6060	Downstream	Left
222	6027	Upstream	Left
223	5900	Downstream	Left
224	6079	Upstream	Left
225	5813	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.

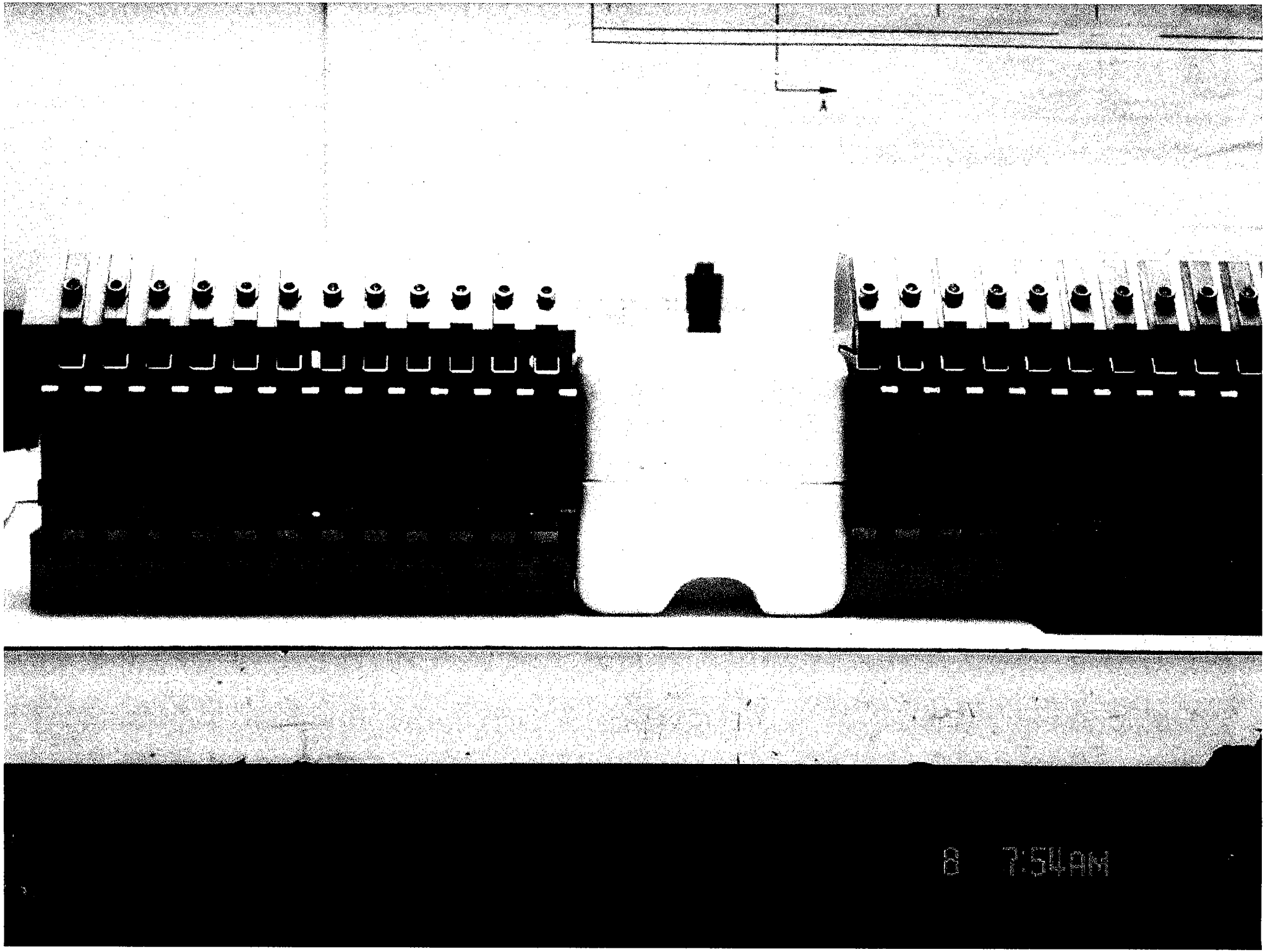
Spare magnets

serial No.	Reduced Magnetization
5805	33%
5776	80%
5779	TopJ213 rep. 5816
5941	
5839	
6034	
5793	
6203	
5821	
5848	
6177	
5983	

Sample magnets

serial No.	
5782	
5812	
5966	
6039	
6205	

6239
6219
6127
6100
5985
5890
6012
5994
6118
6159
6114
5952
6042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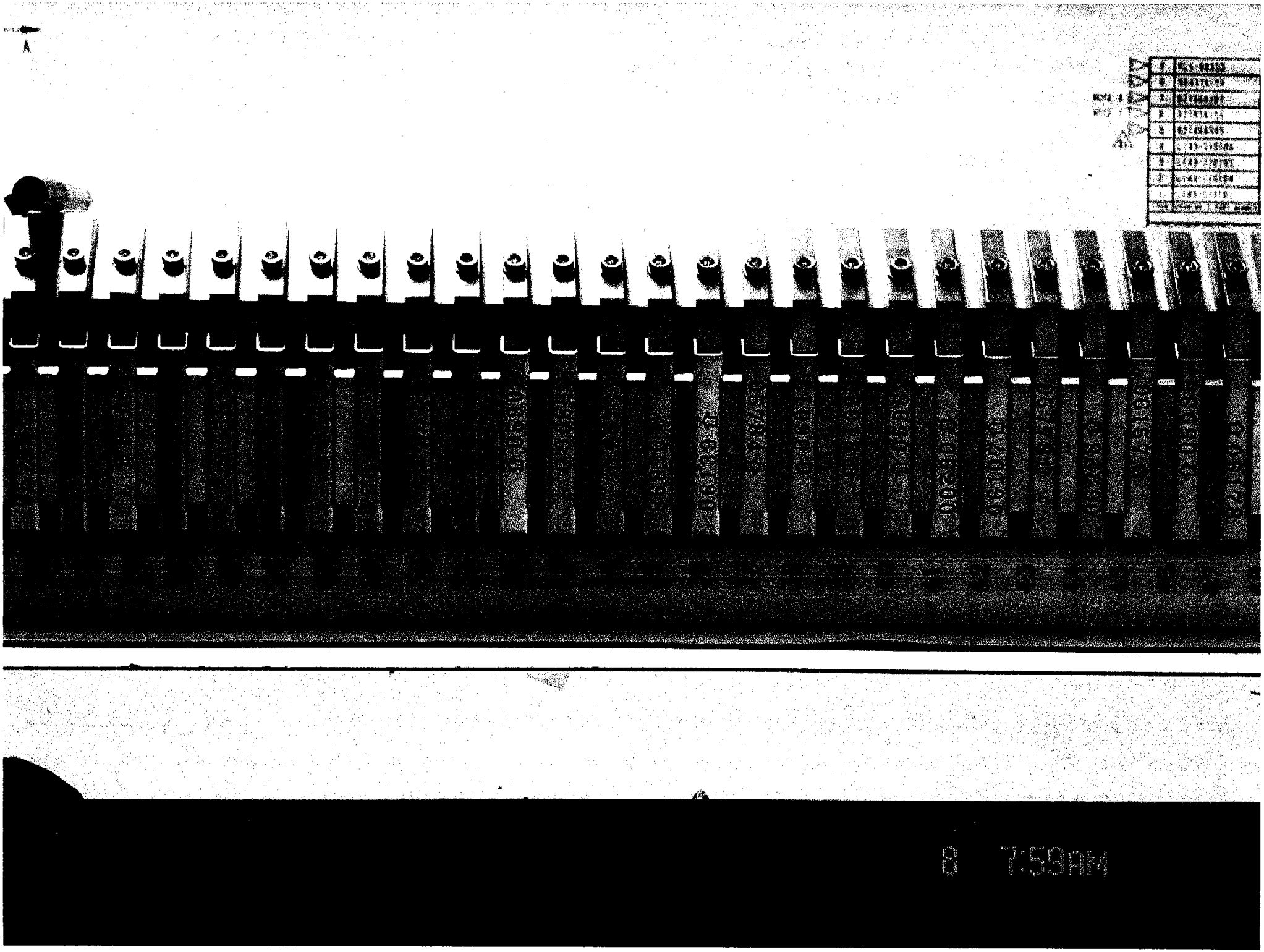
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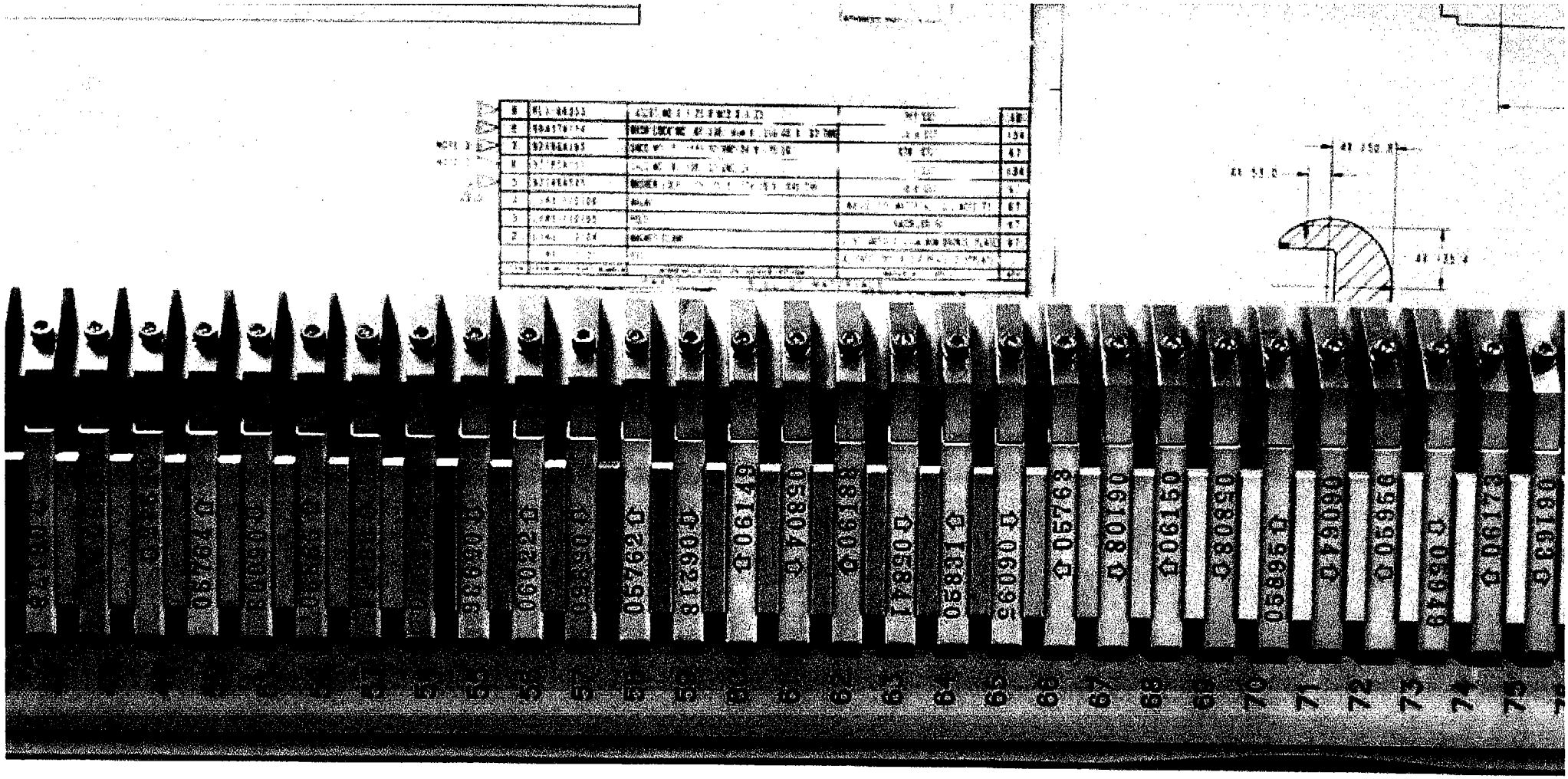

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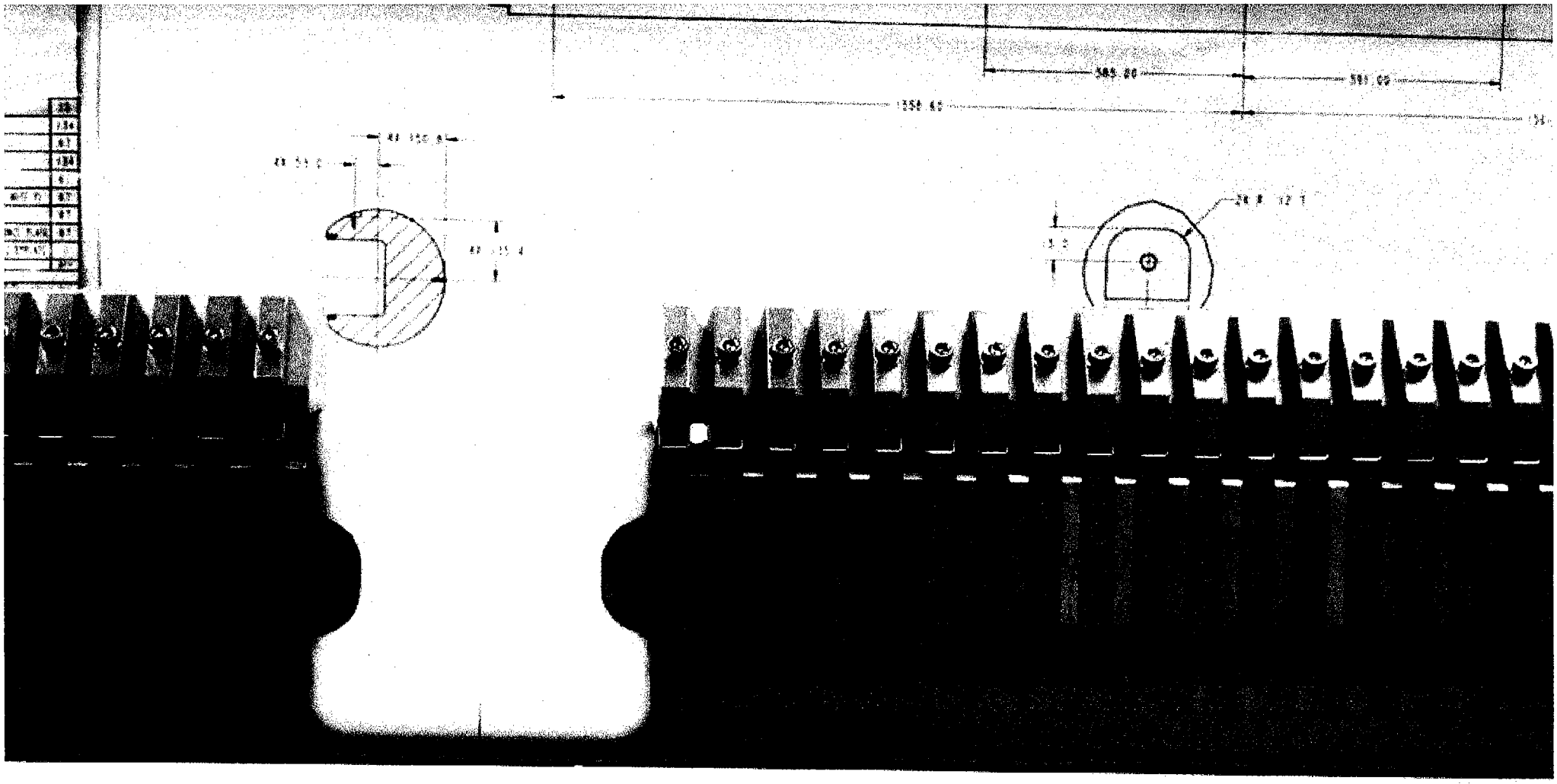

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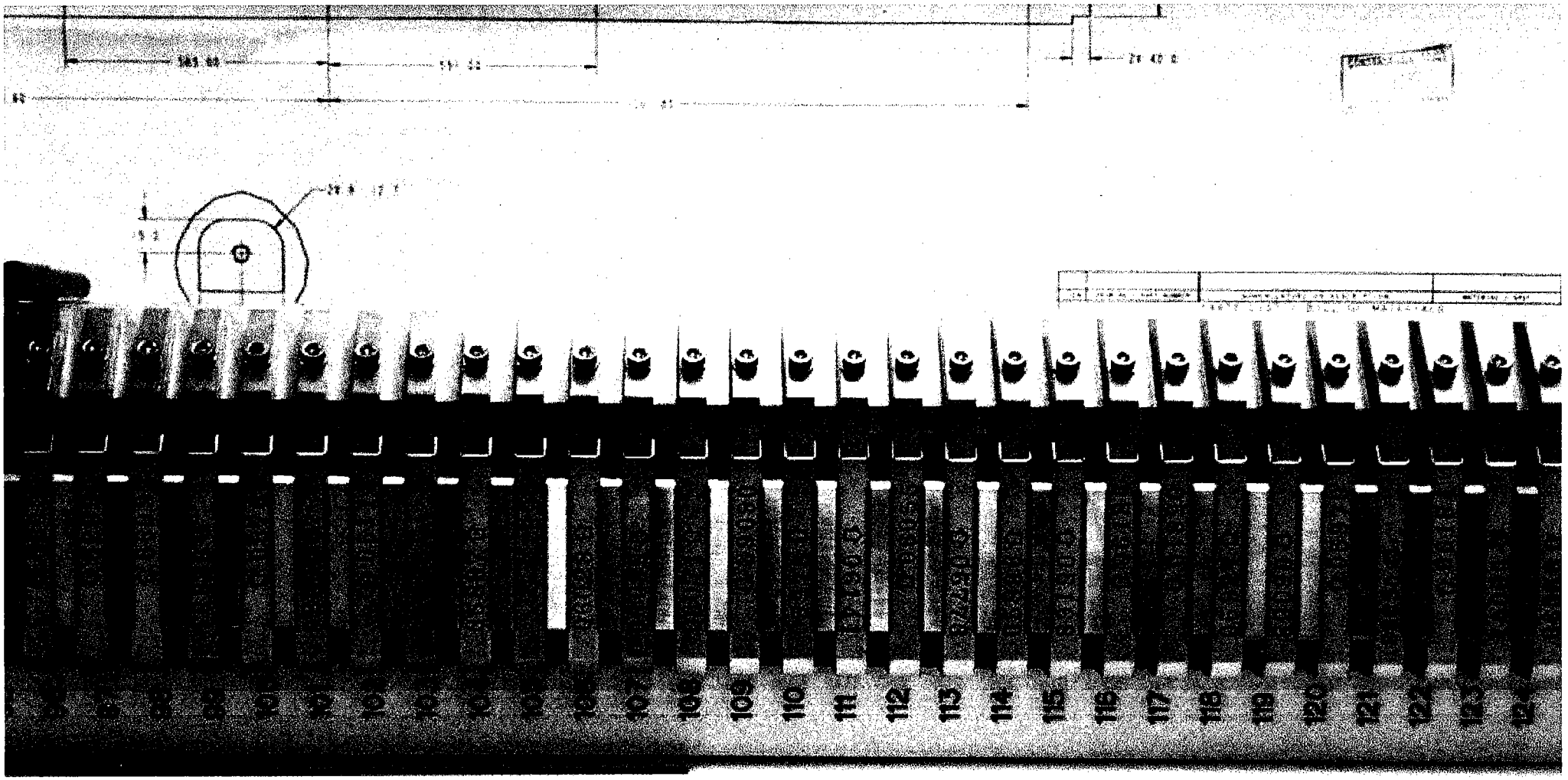

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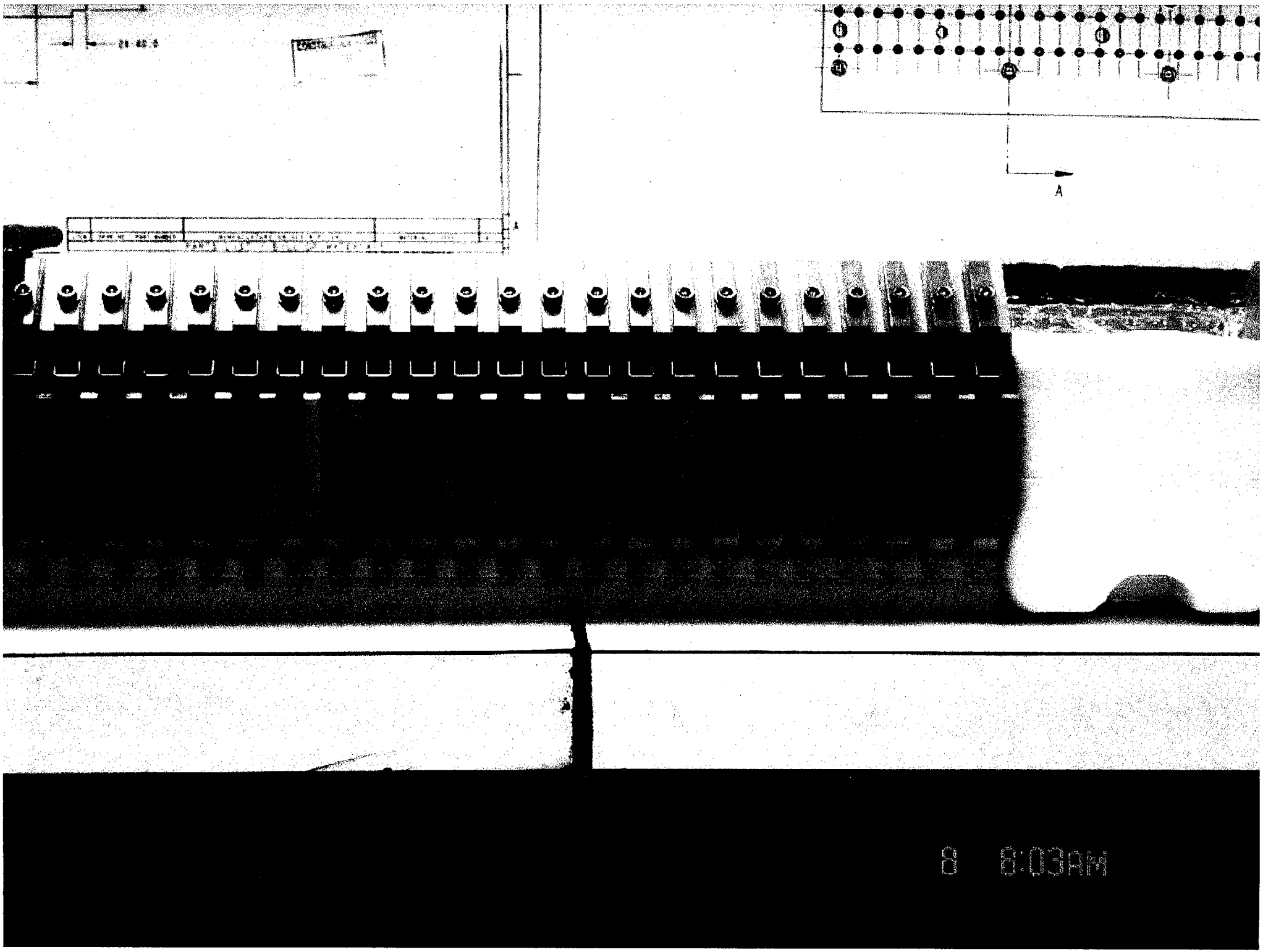
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8 8:03AM

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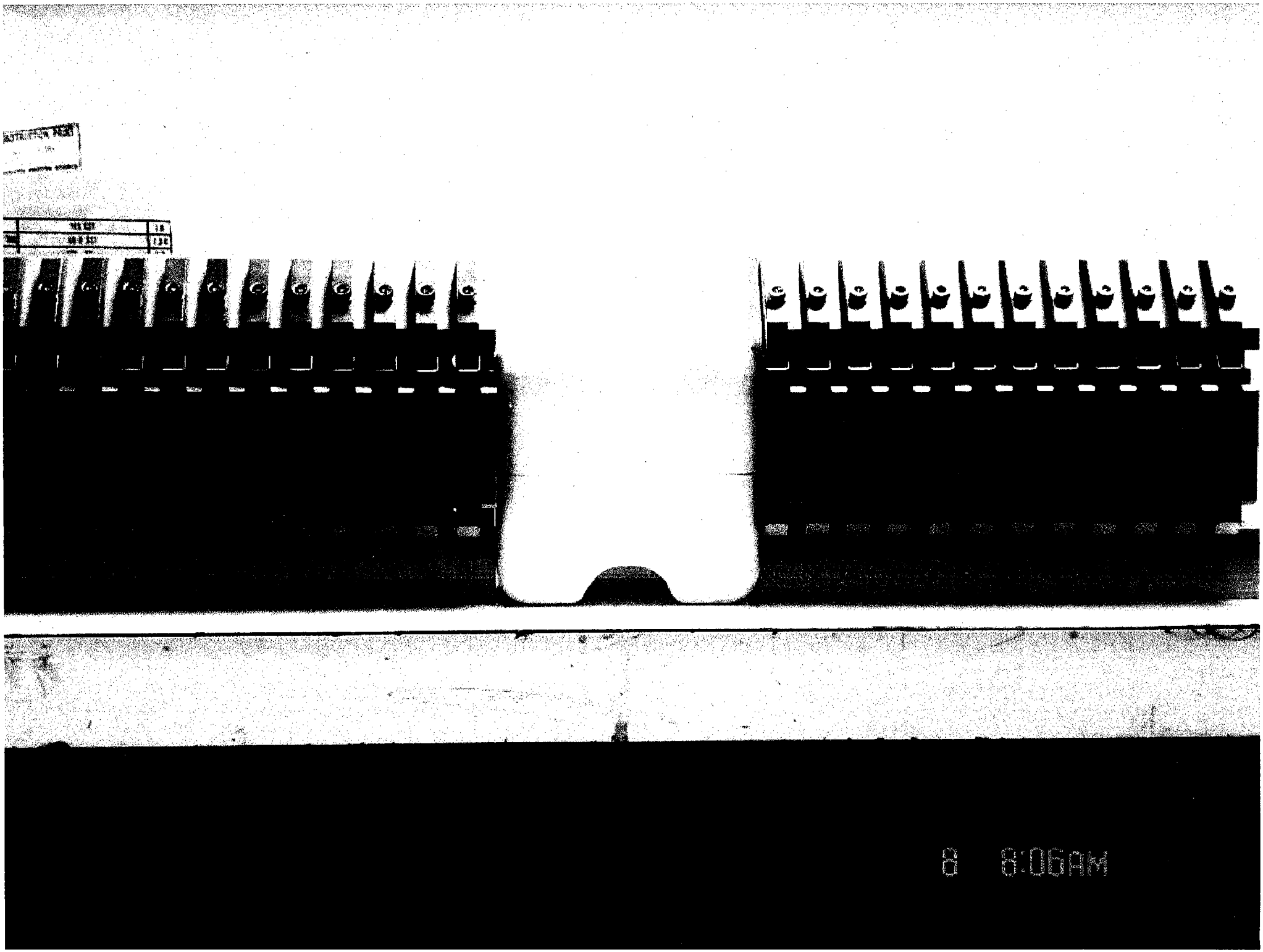
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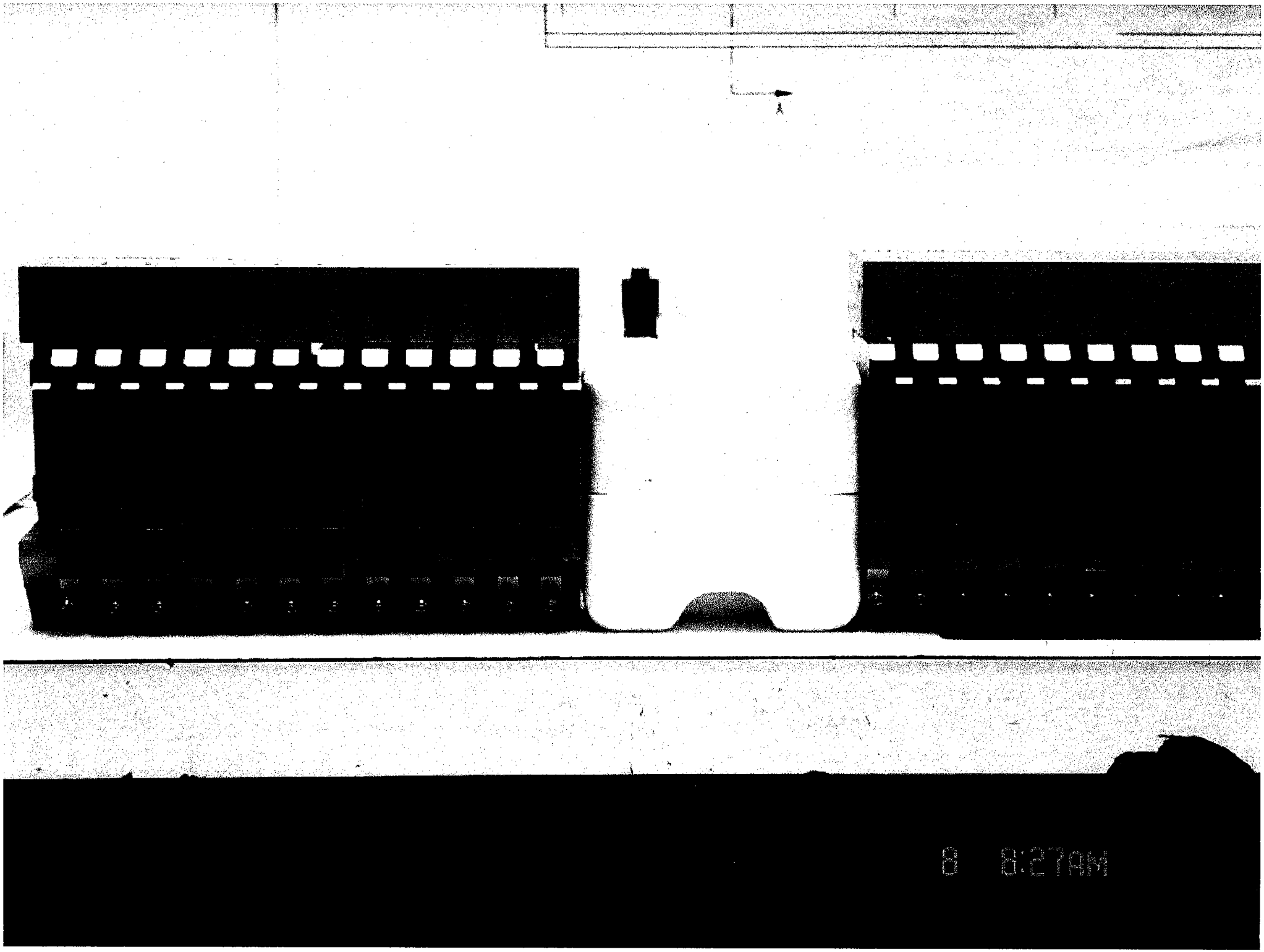
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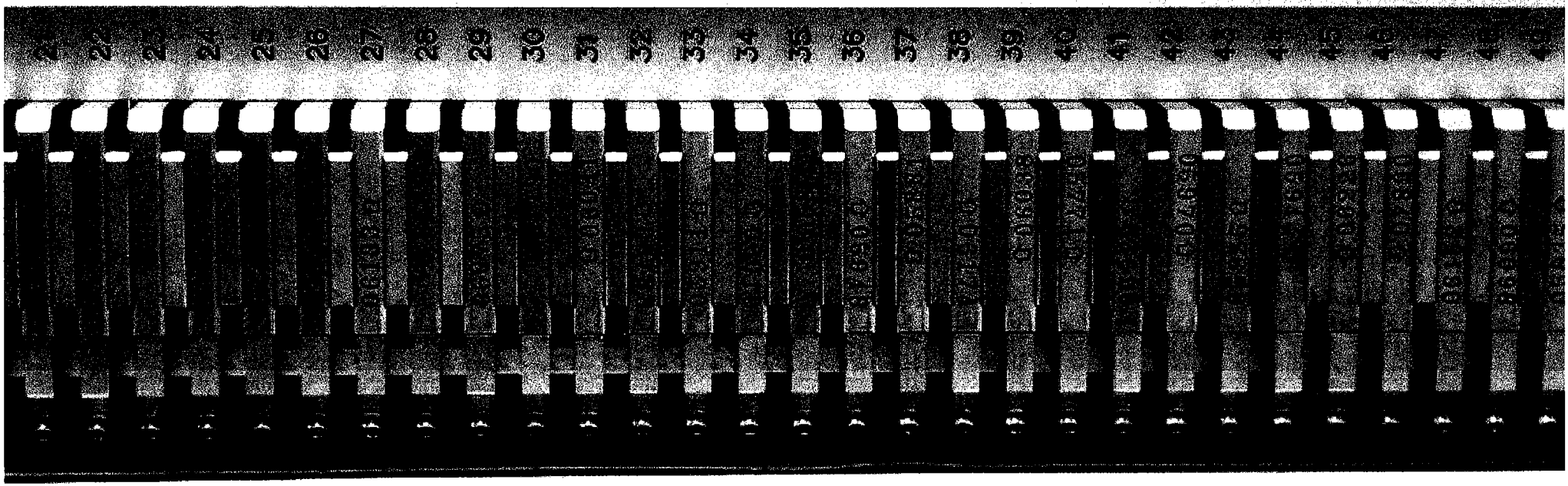

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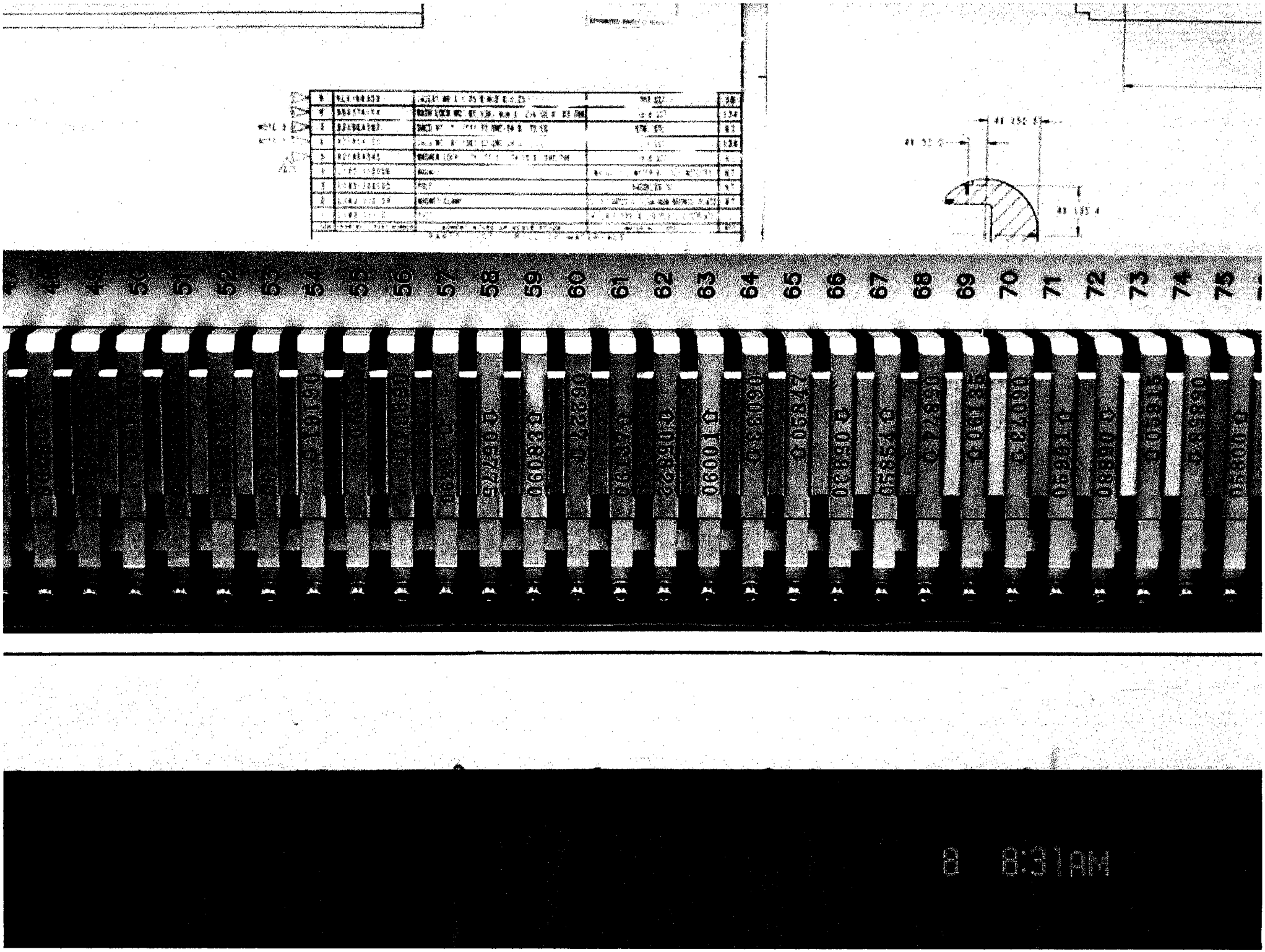
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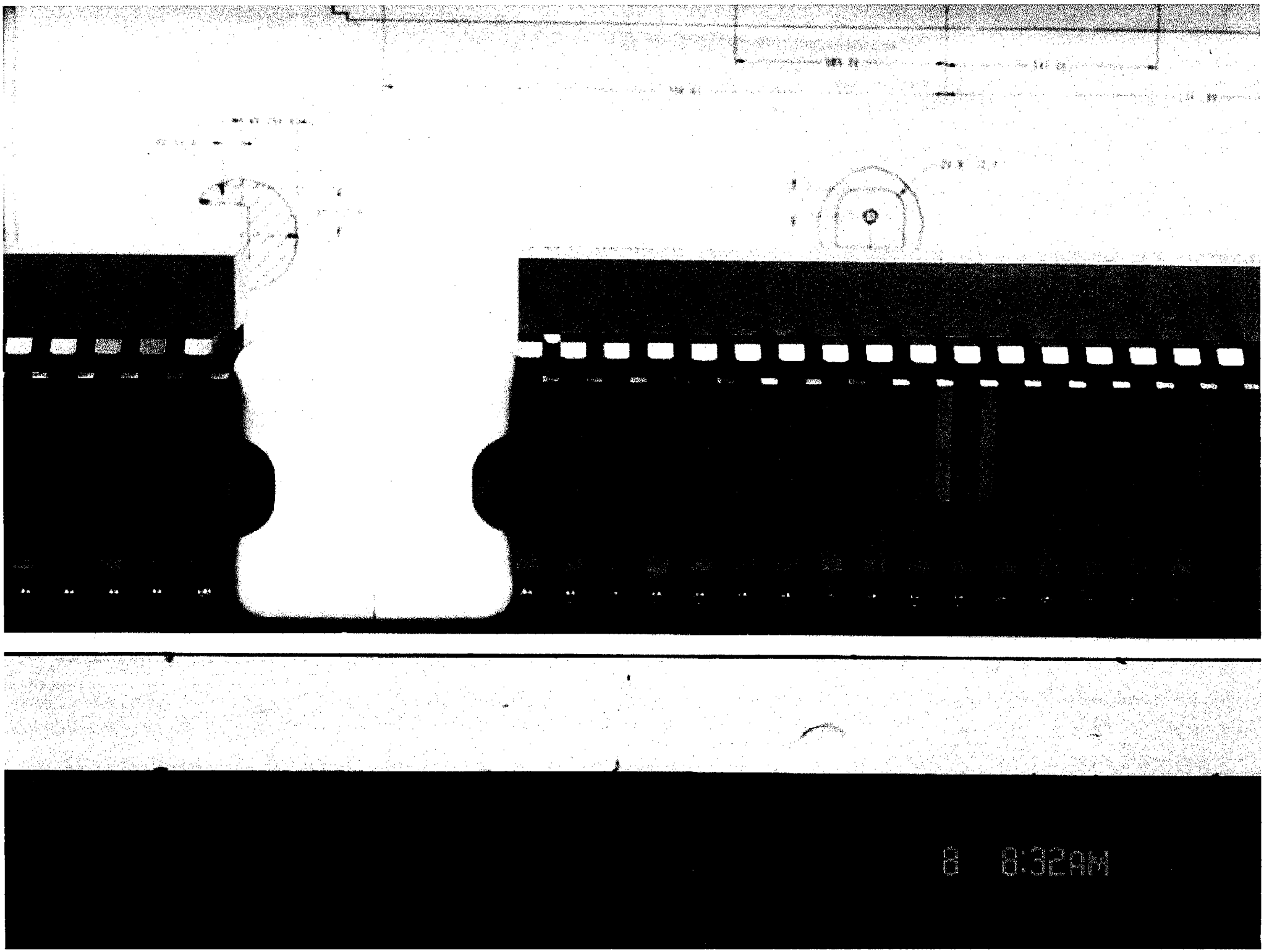
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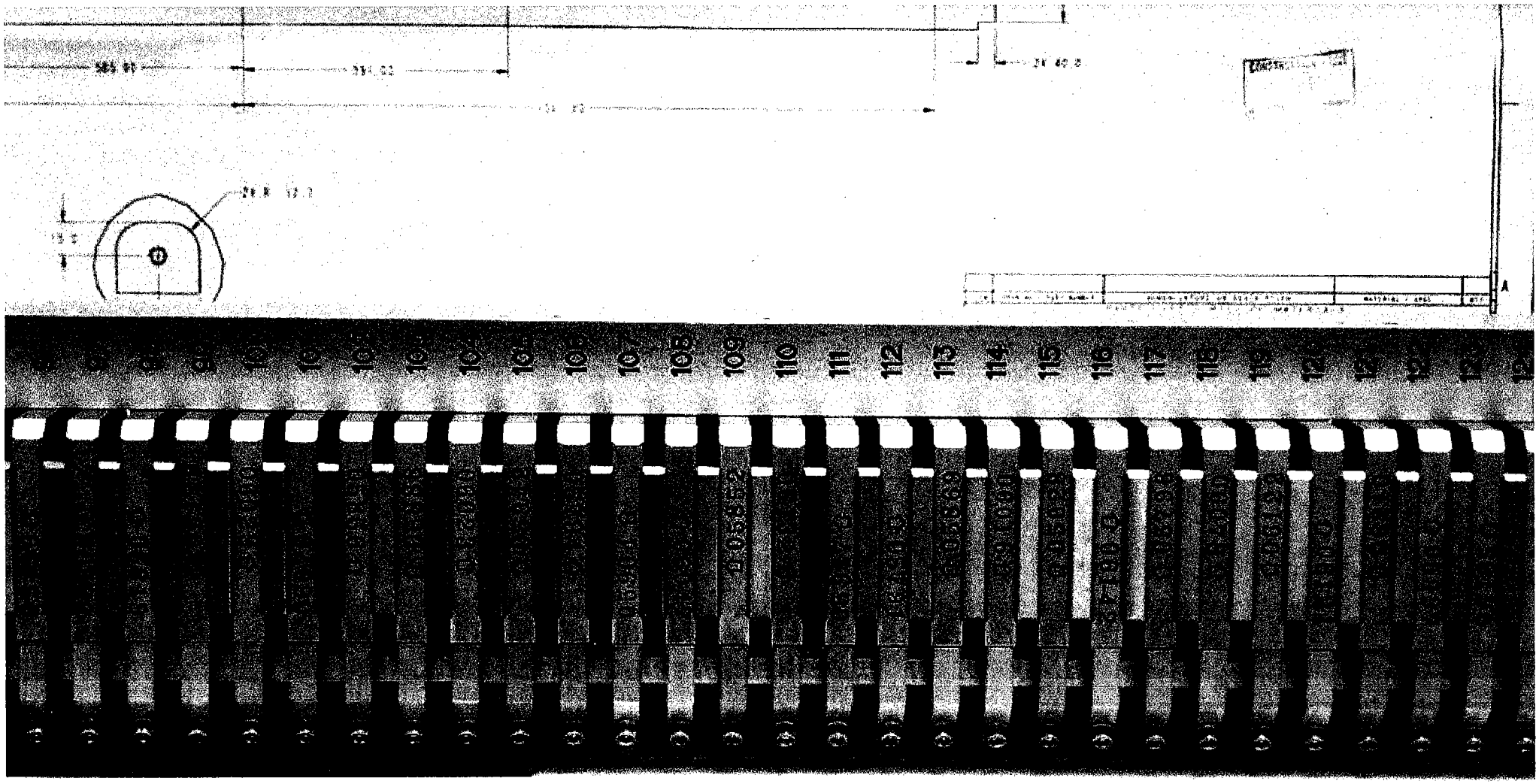

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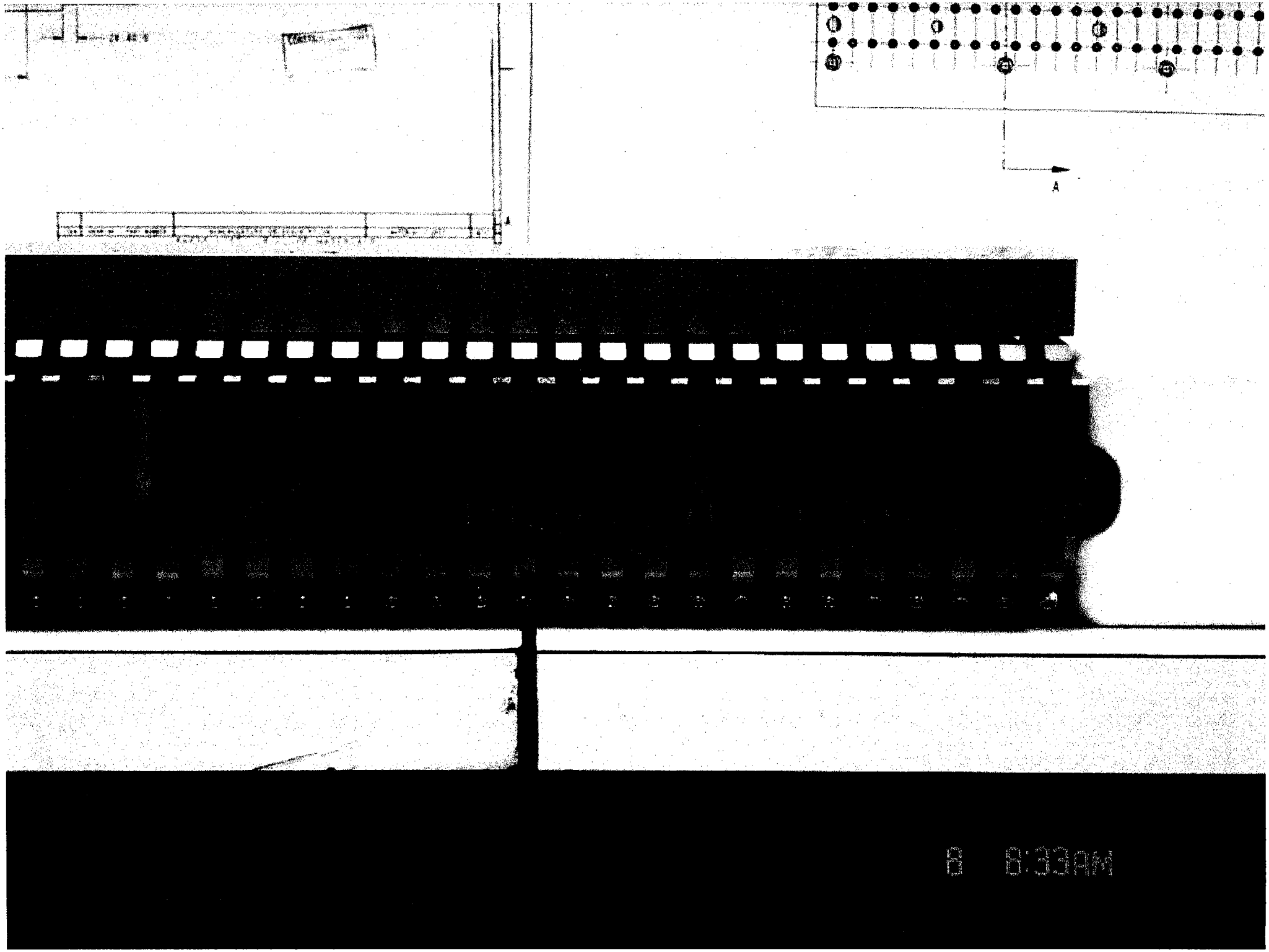
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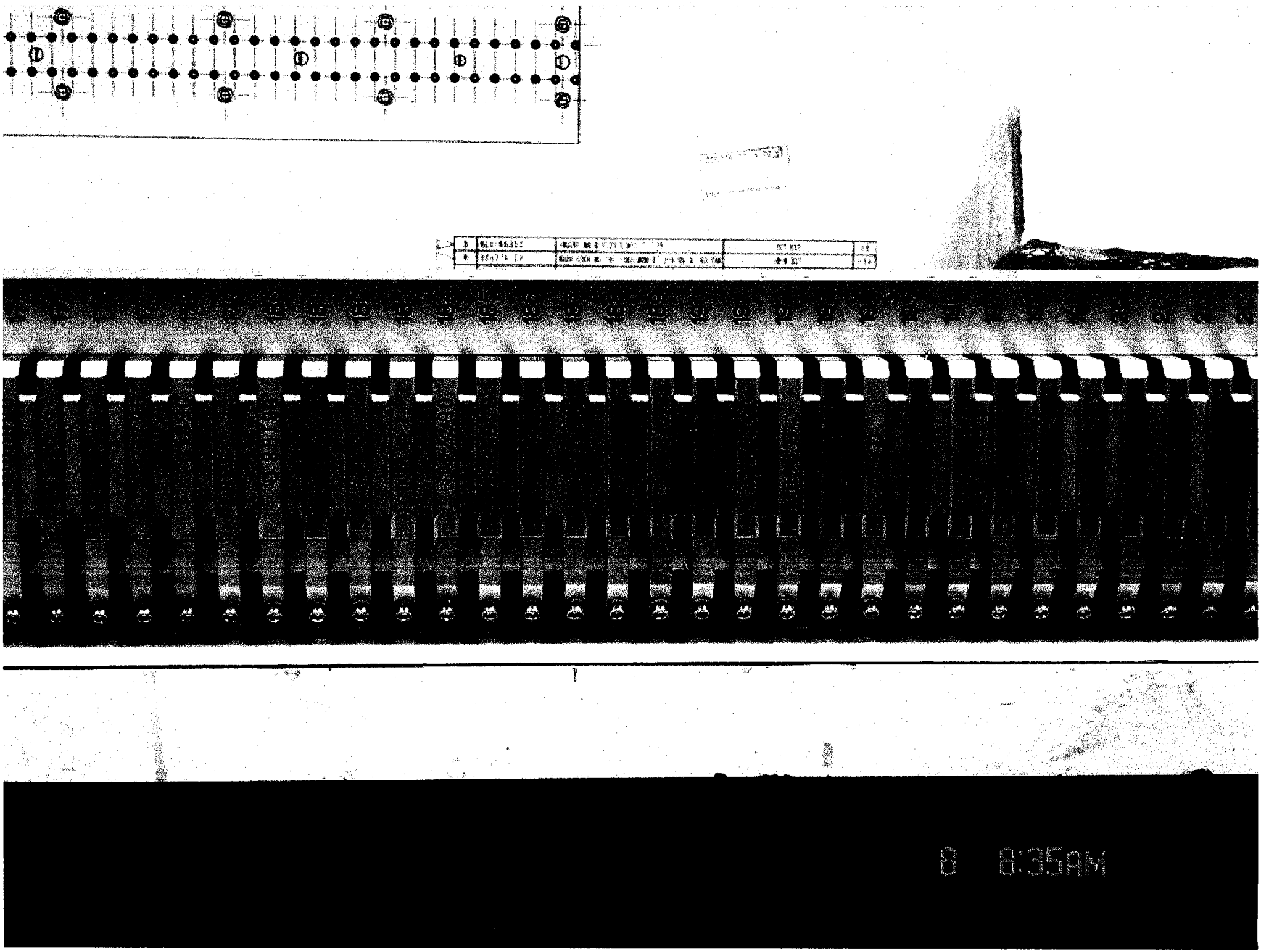
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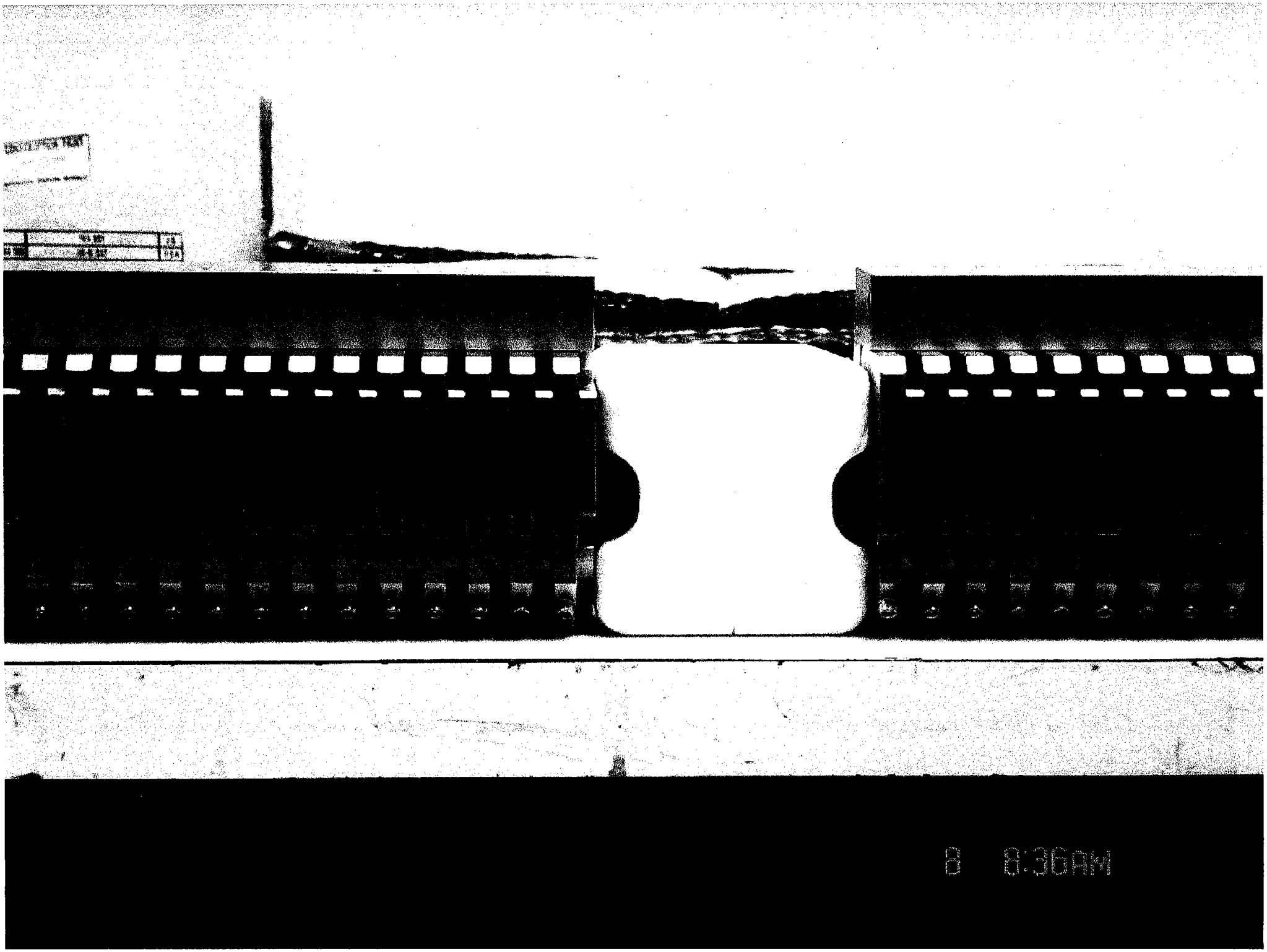
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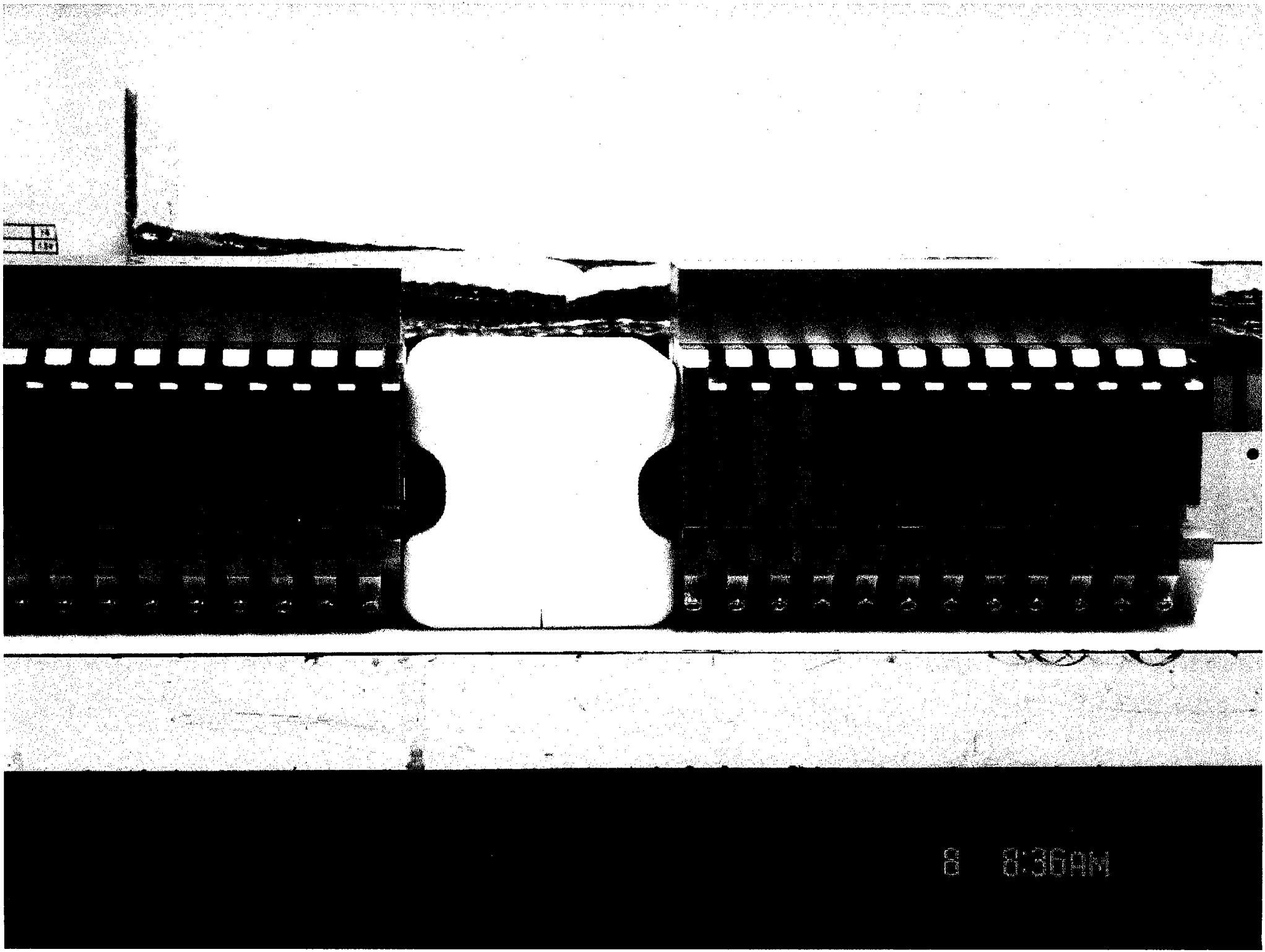
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INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR: **Dial Machine, Inc.**

PART NAME: **LCLS Strongback**

DRAWING #: **L143-110700**

SERIAL #: 19

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

DATE: 08/09/06

#	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	8/09/06
2	Check Strongback is marked with serial number & part no.'s (ANL & SLAC) per SOW Section 4.1.3?	H.T.	SIMON	8/09/06
3	Check all accompanying Certifications have correct part serial number	H.T.	SIMON	8/09/06
4	Check Material Certification for compliance with ASTM B381-03, Grade F2	H.T.	SIMON	8/09/06
5	Check Forging Annealing Certification for annealing conformance to AMS-H-81200A, Table V, commercial Pure, Bars & Forgings, including Note 8	H.T.	SIMON	8/09/06
6	Check Rough Machining Anneal Certification for annealing conformance to AMS-2801B section 3.2.9	H.T.	SIMON	8/09/06
7	Check the Strongback contractor's reported dimensional measurements against the part drawing	H.T.	SIMON	8/09/06
8	Verify the Strongback critical dimensions as listed in the SOW section 4.5.2 are in compliance with the print	H.T.	SIMON	8/09/06

INSPECTOR: SIMON

QA Supervisor: Muelaze

TEST EQUIPMENT USED: VISUAL

COMMENTS:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR AS-BUILT DRAWINGS

VENDOR:

PART NAME: LCLS Strongback

DRAWING #: L143-110700

SERIAL #: 19

P.O. #: SA-13624

DATE: 08-08-06

ACCEPTANCE CRITERIA

1. Visually inspect for shipping damage.	Accept/Reject

CRITICAL DIMENSIONS (mm)

FEATURE	TARGET	TOLERANCE	MEASURED VALUE	
Overall length	3400.00	+0 / -.04	3399.97	Accept/Reject
Gap height	167.00	+0.05 / -.0	167.03	Accept/Reject
Gap flatness (top and bottom)	</= .05	N/A	< /= .03	Accept/Reject
Gap depth	130.00	+/- .08	130.02	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	< /= .03 < /= .03	Accept/Reject

INSPECTOR: SIMON

QA Supervisor: [illegible]

TEST EQUIPMENT USED: SQUAR PRECISION DIAL CALIPER DROP INDICATOR

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 #: 19

P.O.#: 5A-13624

DATE: 08/09/06

FEATURE: Gap Flatness

#	Distance (mm)	Measured A	Measured B	Comments
1	50	-.0007	-.0004	OK
2	350	.0000	-.0008	OK
3	650	.0003	.0000	OK
4	950	.0007	.0005	OK
5	1250	.0001	.0006	OK
6	1550	.0002	.0007	OK
7	1850	-.0000	.0007	OK
8	2150	.0002	.0007	OK
9	2450	.0000	.0002	OK
10	2750	-.0011	-.0001	OK
11	3050	-.0011	-.0007	OK
12	3350	-.0012	-.0012	OK

INSPECTOR: SIMON

QA Supervisor: Muelaz

TEST EQUIPMENT USED: CUBIC PRECISION MODEL: 711010

S/N - 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. 23683

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	07/21/2006
Your Order	5A-04889
FOB	ROCKFORD
Ship Via	BEST WAY
Terms	NET 30
Our Order	21279

Order Qty	Ship Qty	Part ID/Description	Rev	U/M
1	1	SA-381-000-86 TITANIUM STRONG BACK INSPECTION REPORT ENCLOSED MACHINED COMPLETE PER PRINT SERIAL #19		EA

Received 1 PC
07-21-2006
R. Juarez

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

Serial Number	#	19	Inspector	Floyd
Date		7/11/06		

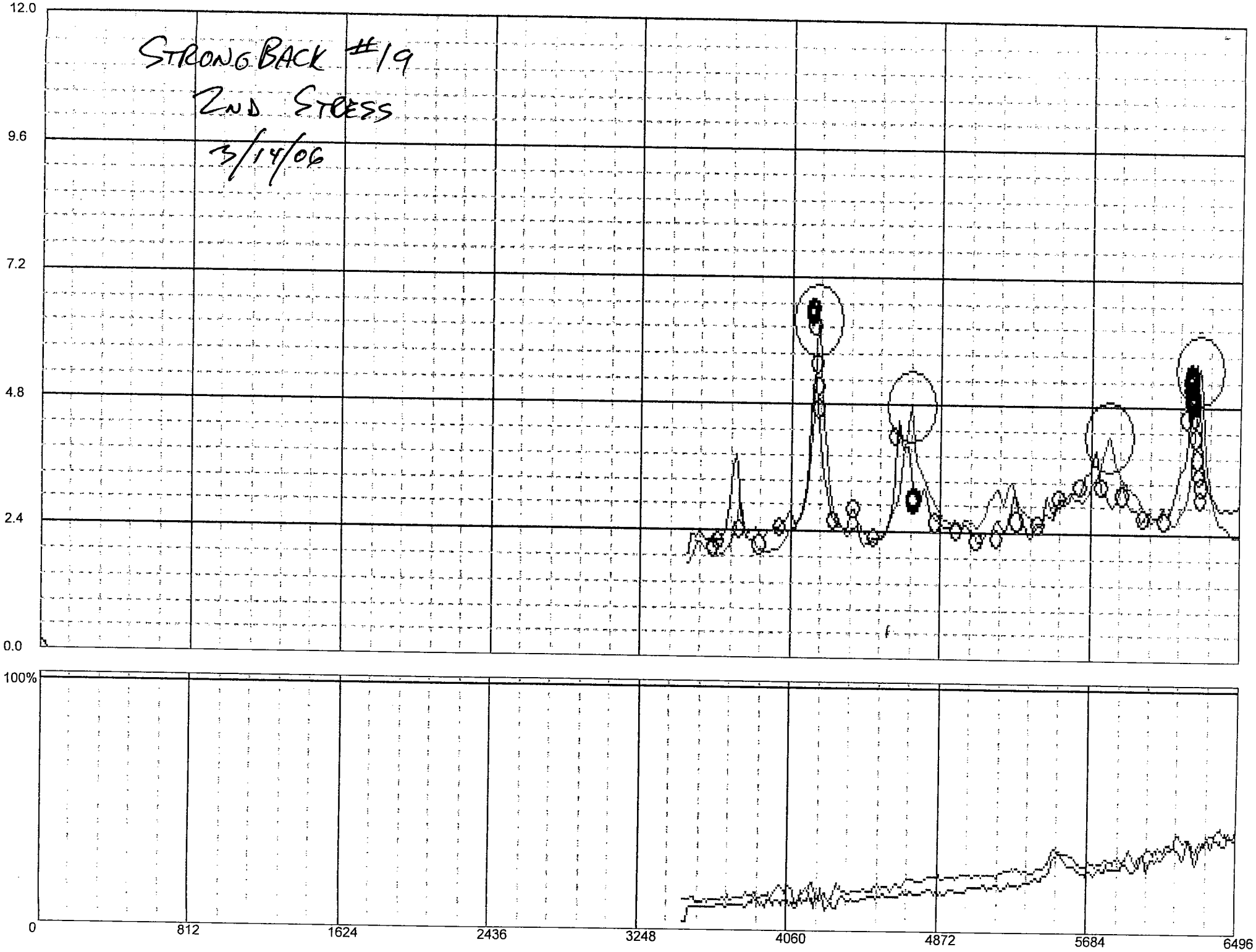
CMM Critical Feature Results	*Req*	*Tolr*	*Actual*	
flatness - plane -A-		.050	.022	
side opposite -A- flatness		.050	.013	
surface finish -A-	1.6		.8	
surface finish side opposite -A-	1.6		.9	
-B- surface flatness		.050	.040	
-B- surface perp to -A-		.100	.031	
Pads				
RH Mounting Pad parallel to -A-		.050	.005	
LH Mounting Pad parallel to -A-		.050	.014	
Overall Length	3400.00	+.000/-.200	3399.947	-.053
LH end to 1700mm holes right	1700.00	+.000/-.100	1699.982	-.018
LH end to 1700mm holes left	1700.00	+.000/-.100	1699.968	-.034
side opposite -A- 167.00 dim	167.00	+.050/-.000	167.032	plane to plane
Individual Gaps	167.00		167.025 / 167.040 rg	direct gaps
side -A- to Centerline 83.5	83.50	+/- .080	83.516	

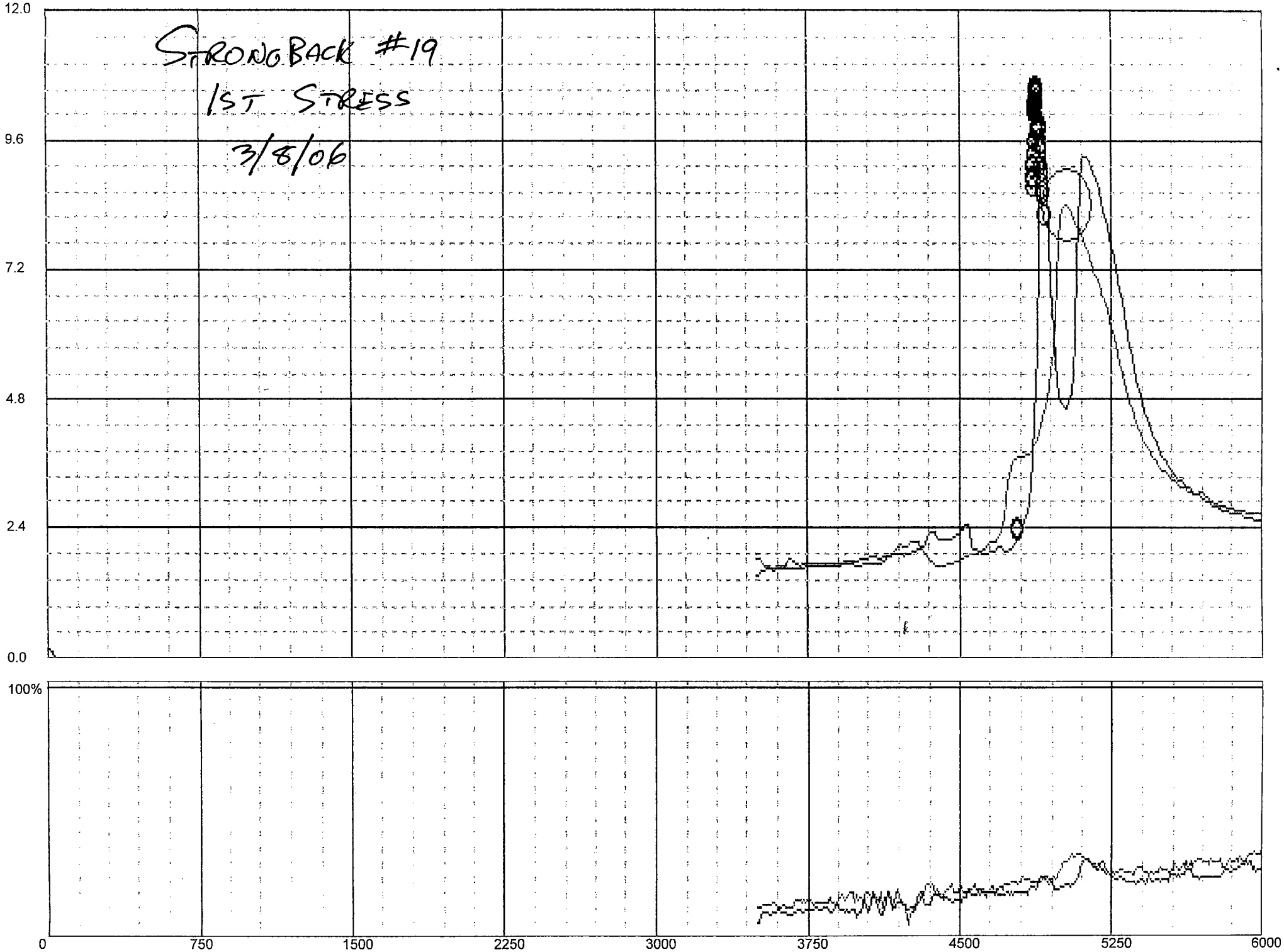
Other Dimensions		*Date*	*Reviewer*	
		7/12/06	skl	SDR 19-07-12, SDR 19-07-013 CORRECTED

Material and Certifications		*Date*	*Reviewer*	
Material Certs		7/12/06	skl	on file with Serial #17
Heat Treat Certs		7/12/06	skl	on file with Serial #17
Visual inspection of Material		7/12/06	skl	

Approvals	
.	
.	

Temps	
21.5	Start
22.4	Finish


STRONG BACK #19
2ND STRESS
3/14/06
12.0
9.6
7.2
4.8
2.4
0.0
100%
0
812
1624
2436
3248
4060
4872
5684
6496


STRONGBACK #19
1ST STRESS
3/8/06
12.0
9.6
7.2
4.8
2.4
0.0
100%
0
750
1500
2250
3000
3750
4500
5250
6000

#13-19

РВА/063777

Международная компания «ANTARES»

СЕРТИФИКАТ КАЧЕСТВА № 225

Вид продукции — заготовка литая цилиндрической формы — ТУ У 27.4-20056770-001-20

Заказчик — "M-Solutions-LLC" — КОНТРАКТ №. 28/12-04 от 28.12.2004

Материал — титановый сплав Grade 2 — ASTM B 348-00 — Дата выдачи: 14.04.

Размер, мм диаметр х длина	Масса, кг	№ плавки	Место отбора пробы	Химический состав, %								Ультразвуковой контроль	С по
				Ti	Fe	O	N	H	C	Остаток (каждого) max	Остаток (всего) max		
810 X 3601	8386	064-1	голова	Осн.	0.05	0.04	0.018	0.002	0.01	≤ 0,1	≤ 0,4	Удовлетворительн.	
			дно		0.05	0.04	0.020	0.002	0.01	≤ 0,1	≤ 0,4		

Главный технолог — Дереча А.Я.

Начальник ОТК — Кривошльков Ю.М

"ANTARES" свідоцтво № 20056770

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

06/16/06 — TECHNICAL REPRESENTATIVE – DATE

6/19/06 — 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.** 19-7-13

3. **SDR Date** 07/12/2006

4. **Supplier Name, Address, Telephone, Fax**

Dial Machine, Inc
2902 Eastrock Dr.
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
1	Strongback #19 Hole pattern shift. Dowels and tap holes in end of part is shifted to the A and B surface datum lines. Hole pattern within itself is good. Left End - shifted .095mm Right End - shifted .163mm		Operator error. CORRECTED 7/18/06 GKL

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: 7-12-06

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)

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

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

SERIAL #: 06058

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

DATE: 07-19-06

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: 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 #: 05766

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

DATE: 07-19-06

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	65.99	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 #: 05889

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

DATE: 07-19-06

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	66.01	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.97	Accept/Reject

INSPECTOR: S. Sa[illegible]

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 #: 06064

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

DATE: 07-19-06

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	8.97	Accept/Reject

INSPECTOR: S. Sa

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 #: 05804

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

DATE: 07-19-06

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	8.95	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 #: 06003

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

DATE: 07-19-06

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	8.97	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 #: 06200

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

DATE: 07-19-06

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: Simar

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 #: 06213

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

DATE: 07-19-06

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	66.03	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.96	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 #: 05843

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

DATE: 07-19-06

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: Simods

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 #: 05830

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

DATE: 07-19-06

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: 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 #: 05846

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

DATE: 07-19-06

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	66.00	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 #: 05790

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

DATE: 07-19-06

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: Murlaza

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 #: 05938

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

DATE: 07-19-06

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	8.96	Accept/Reject

INSPECTOR: Simons

QA Supervisor: Murlage

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 #: 06217

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

DATE: 07-19-06

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	8.97	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 #: 06223

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

DATE: 07-19-06

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: Nuelage

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 #: 05838

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

DATE: 07-19-06

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:

INSPECTION / ACCEPTANCE REPORT OF COMPONENTS FOR LCLS MAGNET ASSEMBLIES

VENDOR: **Shin-Etsu**

PART NAME: **LCLS Magnet**

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

SERIAL #: 05792

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

DATE: 07-19-06

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: [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 #: 06057

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

DATE: 07-19-06

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: 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 #: 05867

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

DATE: 07-19-06

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: Murlaza

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 #: 05984

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

DATE: 07-19-06

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

INSPECTOR: Simon

QA Supervisor: Murlaza

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 #: 06131

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

DATE: 07-19-06

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: 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 #: 05897

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

DATE: 07-19-06

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	66.01	(Accept)/Reject
Magnet thickness	9.00	+0 / -.10	8.97	(Accept)/Reject

INSPECTOR: Simon

QA Supervisor: Murlaza

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 #: 05947

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

DATE: 07-19-06

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	66.01	Accept/Reject
Magnet thickness	9.00	+0 / -.10	8.98	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 #: 06070

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

DATE: 07-19-06

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	8.97	(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 #: 06128

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

DATE: 07-19-06

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: Mwatage

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 #: 05995

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

DATE: 07-19-06

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

INSPECTOR: Simon

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 #: 05991

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

DATE: 07-19-06

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: Hurtage

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 #: D6137

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

DATE: 07-19-06

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: 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 #: 06036

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

DATE: 07-19-06

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: Muller

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 #: 05922

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

DATE: 07-19-06

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: 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 #: 06041

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

DATE: 07-19-06

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: Murlage

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 #: 05951

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

DATE: 07-19-06

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: 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 #: 05851

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

DATE: 07-19-06

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	8.97	(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 #: 06035

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

DATE: 07-19-06

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	66.01	(Accept)/Reject
Magnet thickness	9.00	+0 / -.10	8.96	(Accept)/Reject

INSPECTOR: Simon

QA Supervisor: Mustafa

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 #: 06060

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

DATE: 07-19-06

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: Murlage

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 #: 06220

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

DATE: 07-19-06

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	8.97	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 #: 06225

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

DATE: 07-19-06

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: [signature]

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 #: 06125

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

DATE: 07-19-06

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: 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 #: 05976

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

DATE: 07-19-06

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

INSPECTOR: Simon

QA Supervisor: Mustafa

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 #: 06072

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

DATE: 07-19-06

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: 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 #: 06065

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

DATE: 07-19-06

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	8.97	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 #: 05827

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

DATE: 07-19-06

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: 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 #: 06197

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

DATE: 07-19-06

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: Smoot

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 #: 05853

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

DATE: 07-19-06

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: Murlazo

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 #: 06210

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

DATE: 07-19-06

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: Mulaze

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 #: Ll43-111200-19

P.O. #: 5A13624 DATE: 07-28-06

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 30.00/29.990	Accept/Reject
Bottom surface flatness	<= .04	N/A	0.02	Accept/Reject
Overall length	189	+0 / -.1	188.980	Accept/Reject
Overall width	128	+0 / -.1	127.97	Accept/Reject

INSPECTOR: Muelaga QA Supervisor: Muelaga

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 #: L143-111300-19

P.O. #: 5A13624

DATE: 07-28-06

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 30.00/29.980	Accept/Reject
Bottom surface flatness	</= .04	N/A	0.015	Accept/Reject
Overall length	189	+0 / -.1	188.98	Accept/Reject
Overall width	128	+0 / -.1	127.98	Accept/Reject

INSPECTOR: Muelaza

QA Supervisor: Muelaza

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 #: L143-110900-19

P.O. #: 5A13624

DATE: 07-28-06

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 30.00/29.990	Accept/Reject
Bottom surface flatness	<= .04	N/A	.015	Accept/Reject
Overall length	195	+0 / -.1	194.997	Accept/Reject
Overall width	128	+0 / -.1	127.976	Accept/Reject

INSPECTOR: Muelaza

QA Supervisor: Muelaza

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 #: L143-110800-19

P.O. #: 5A13624

DATE: 07-28-06

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 30.00/29.99	Accept/Reject
Bottom surface flatness	<= .04	N/A	0.012	Accept/Reject
Overall length	195	+0 / -.1	194.997	Accept/Reject
Overall width	128	+0 / -.1	127.97	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 #: L143-111000-1-19

P.O. #: 5A13624

DATE: 06-26-06

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 29.980/29.970	Accept/Reject
Bottom surface flatness	<= .04	N/A	.030	Accept/Reject
Overall length	1005.0	+0 / -.1	1004.95	Accept/Reject
Overall width	128	+0 / -.1	127.93	Accept/Reject

INSPECTOR: Muelaza

QA Supervisor: Muelaza

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: Upper Middle Magnet Structure Base

DRAWING #: L143-111001-01

SERIAL #: L143-111000-2-19

P.O. #: 5A13624

DATE: 06-26-06

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 29.985/29.972	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	127.94	Accept/Reject

INSPECTOR: Murtaza

QA Supervisor: Murtaza

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: Upper Middle Magnet Structure Base

DRAWING #: L143-111001-01

SERIAL #: L143-111000-3-19

P.O. #: 5A13624

DATE: 06-26-06

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 29.990/29.970	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	127.93	Accept/Reject

INSPECTOR: Murlage

QA Supervisor: Murlage

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 #: L143-111100-1-19

P.O. #:5A13624

DATE: 06-26-06

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 29.990/29.970	Accept/Reject
Bottom surface flatness	<= .04	N/A	.025	Accept/Reject
Overall length	1005	+0 / -.1	1004.92	Accept/Reject
Overall width	128	+0 / -.1	127.950	Accept/Reject

INSPECTOR: Muelaz

QA Supervisor: Muelaz

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 #: L143-111100-2-19

P.O. #:5A13624

DATE: 06-26-06

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 29.990/29.970	Accept/Reject
Bottom surface flatness	<= .04	N/A	.030	Accept/Reject
Overall length	1005	+0 / -.1	1004.91	Accept/Reject
Overall width	128	+0 / -.1	127.955	Accept/Reject

INSPECTOR: Muñoz

QA Supervisor: Muñoz

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 #: L143-111100-3-19

P.O. #:5A13624

DATE: 06-26-06

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 29.995/29.970	Accept/Reject
Bottom surface flatness	</= .04	N/A	.040	Accept/Reject
Overall length	1005	+0 / -.1	1004.91	Accept/Reject
Overall width	128	+0 / -.1	127.93	Accept/Reject

INSPECTOR: Mullaze

QA Supervisor: Mullaze

TEST EQUIPMENT USED: CMM & Micrometer.

COMMENTS: