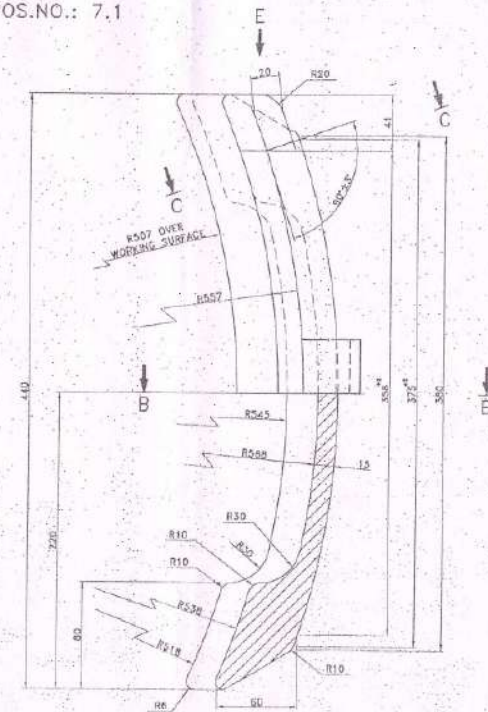


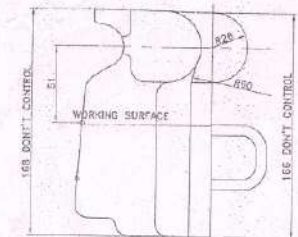
Technical Specification					
S. No.	Material Code	Short Description	Long Description	UOM	Required Quantity
1	1700175050	LINER PLATE METALLIC CASTSS 1100 55&84PN	LINER PLATE METALLIC MATERIAL:CASTSS TEMPERATURE RESISTANCE:1100 DEG CENT SHAPE:55&84PN SURFACE FINISH:CAST FINISH ADDITIONAL INFORMATION:CAST STEEL LINER PLATE POSITION NO. 55 & 84 AS PER DRAWING NO.NMDC/BEC/02/13/01/DE/6625 FOR COKE BUCKETS.	NO	12
2	1700175049	LINER PLATE METALLIC CASTSS 1100 56&85PN	LINER PLATE METALLIC MATERIAL:CASTSS TEMPERATURE RESISTANCE:1100 DEG CENT SHAPE:56&85PN SURFACE FINISH:CAST FINISH ADDITIONAL INFORMATION:CAST STEEL LINER PLATE POSITION NO. 56 & 85 AS PER DRAWING NO.NMDC/BEC/02/13/01/DE/6625 FOR COKE BUCKETS.	NO	72
3	1700175048	LINER PLATE METALLIC CASTSS 1100 57&86PN	LINER PLATE METALLIC MATERIAL:CASTSS TEMPERATURE RESISTANCE:1100 DEG CENT SHAPE:57&86PN SURFACE FINISH:CAST FINISH ADDITIONAL INFORMATION:CAST STEEL LINER PLATE POSITION NO. 57 & 86 AS PER DRAWING NO.NMDC/BEC/02/13/01/DE/6625 FOR COKE BUCKETS.	NO	36
4	1700175047	LINER PLATE METALLIC CASTSS 1100 58&87PN	LINER PLATE METALLIC MATERIAL:CASTSS TEMPERATURE RESISTANCE:1100 DEG CENT SHAPE:58&87PN SURFACE FINISH:CAST FINISH ADDITIONAL INFORMATION:CAST STEEL LINER PLATE POSITION NO. 58 & 87 AS PER DRAWING NO.NMDC/BEC/02/13/01/DE/6625 FOR COKE BUCKETS.	NO	12
5	1700175019	LINER PLATE METALLIC CASTSS 1100 5&30 PN	LINER PLATE METALLIC MATERIAL:CASTSS TEMPERATURE RESISTANCE:1100 DEG CENT SHAPE:5&30 PN SURFACE FINISH:CAST FINISH ADDITIONAL INFORMATION:CAST STEEL LINER PLATE POSITION NO. 5 & 30 AS PER DRAWING NO.NMDC/BEC/02/13/01/DE/6625 FOR COKE BUCKETS.	NO	12
6	1700175018	LINER PLATE METALLIC CASTSS 1100 6&31 PN	LINER PLATE METALLIC MATERIAL:CASTSS TEMPERATURE RESISTANCE:1100 DEG CENT SHAPE:6&31 PN SURFACE FINISH:CAST FINISH ADDITIONAL INFORMATION:CAST STEEL LINER PLATE POSITION NO. 6 & 31 AS PER DRAWING NO.NMDC/BEC/02/13/01/DE/6625 FOR COKE BUCKETS.	NO	36
7	1700175017	LINER PLATE METALLIC CASTSS 1100 7&32 PN	LINER PLATE METALLIC MATERIAL:CASTSS TEMPERATURE RESISTANCE:1100 DEG CENT SHAPE:7&32 PN SURFACE FINISH:CAST FINISH ADDITIONAL INFORMATION:CAST STEEL LINER PLATE POSITION NO. 7 & 32 AS PER DRAWING NO.NMDC/BEC/02/13/01/DE/6625 FOR COKE BUCKETS.	NO	12
8	1700175016	LINER PLATE METALLIC CASTSS 1100 111P.N.	LINER PLATE METALLIC MATERIAL:CASTSS TEMPERATURE RESISTANCE:1100 DEG CENT SHAPE:111P.N. SURFACE FINISH:CAST FINISH ADDITIONAL INFORMATION:CAST STEEL LINER PLATE POSITION NO. 111 AS PER DRAWING NO.NMDC/BEC/02/13/01/DE/6625 FOR COKE BUCKETS.	NO	24
9	1700175015	LINER PLATE METALLIC CASTSS 1100 112P.N.	LINER PLATE METALLIC MATERIAL:CASTSS TEMPERATURE RESISTANCE:1100 DEG CENT SHAPE:112P.N. SURFACE FINISH:CAST FINISH ADDITIONAL INFORMATION:CAST STEEL LINER PLATE POSITION NO. 112 AS PER DRAWING NO.NMDC/BEC/02/13/01/DE/6625 FOR COKE BUCKETS.	NO	54
10	1700360553	LINER PLATE METALLIC FG200 7.1 P.N	LINER PLATE METALLIC MATERIAL:FG200 (IS 210:2009) SHAPE:7.1 P.N. SURFACE FINISH:CAST FINISH ADDITIONAL INFORMATION:BRAKE SHOES LINER PLATES POSITION NO. 7.1 AS PER DRAWING NO. NMDC/CO/CDCP/022-01 FOR ELECTRIC LOCO	NO	24

Note:

1	Inspection Plan: Physical Inspection will be done at NSL store alongwith Test Certificate supplied by the manufacturer.
2	Sample Required/ Not Required: Not required.
3	Warranty Certificate: The manufacturer is required to submit a warranty certificate for the supplied items.
4	Delivery Details: Within 90 days.
5	Packing Details: The supplied items should be packaged suitably to prevent physical damage and ensure ease of handling. Additionally, proper details should be clearly mentioned on each individual item for identification.
6	PDI/TPI: NA



VIEW AT E



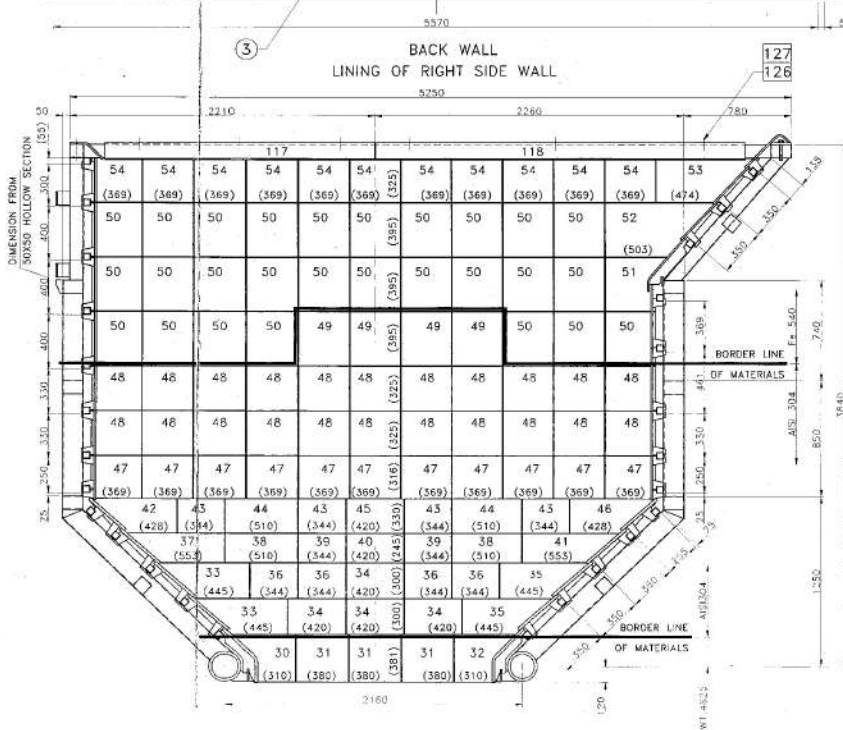
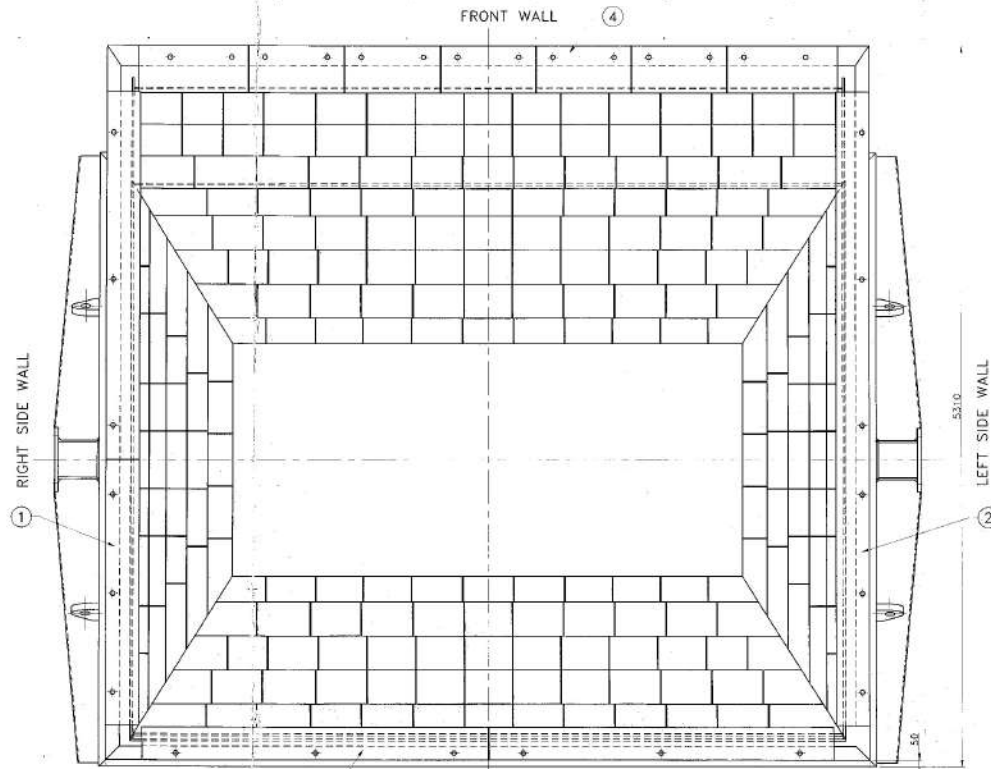
TECHNICAL REQUIREMENT

1. AS CAST DIMENSIONAL TOLERANCE WHERE EVER NOT SPECIFIED TO BE AS PER IS: 9319 CLASS 3rd.
2. ALL NOT MENTIONED FOUNDRY RABD SHOULD BE MADE IN.
3. ALL FOUNDRY GRADIENTS ARE MADE NOT OVER 3°.
4. THE PART SHOULD BE THOROUGHLY CLEANED FROM SAND.
5. THE CLEARANCE BETWEEN THE PATTERN MADE BY NOMINAL DIMENSION & OPERATING SURFACE R = 507 NM. OF THE SHOE SHOULD BE IN THE MIDDLE PART 2 MM. & ON THE EDGES UP TO 3MM.
6. TEST THE BRAKE SHOE TO BE KEPT WITH SHOE, THE SHOE SHOULD BE TIGHTLY FITTED TO THE FRAME WORK THE LOCAL GAPS AT THREE POINT SHOULD NOT BE OVER 1 MM.
7. THE PART MATERIAL GRAY CAST IRON FG. 200 FG IS 210.

SHOE AND BRAKE BLOCK DETAIL

BRAKE SHOES LINER PLATE

NMDC/CO/CDCP/022-01



NO. POS	DESCRIPTION	QTY	WT IN KG.	MATERIAL	REMARKS
66	LINING PLATE	1	24.8	24.8	XX
67	LINING PLATE	1	24.8	24.8	XX
68	LINING PLATE	1	27.7	27.7	XX
69	LINING PLATE	10	20.8	208	XX
70	LINING PLATE	1	19.8	19.8	XX
71	LINING PLATE	1	27.7	27.7	XX
72	LINING PLATE	6	13.4	80.4	XX
73	LINING PLATE	4	15.7	62.8	XX
74	LINING PLATE	5	14.9	74.5	XX
75	LINING PLATE	12	13.3	159.6	XX
76	LINING PLATE	8	15.7	125.6	XX
77	LINING PLATE	10	14.9	149	XX
78	LINING PLATE	18	10.3	185.4	XXX
79	LINING PLATE	8	12.1	96.8	XXX
80	LINING PLATE	5	11.4	57	XXX
81	LINING PLATE	6	8.6	51.6	XXX
82	LINING PLATE	4	10	40	XXX
83	LINING PLATE	5	9.5	47.5	XXX
84	LINING PLATE	1	35	35	X
85	LINING PLATE	6	35	198	X
86	LINING PLATE	3	40	120	X
87	LINING PLATE	1	33	33	X
88	LINING PLATE	14	22.8	319.2	XX
89	LINING PLATE	15	21.7	325.5	XX
90	LINING PLATE	1	28.3	28.3	XX
91	LINING PLATE	1	28.3	28.3	XX
92	LINING PLATE	1	23	23	XX
93	LINING PLATE	1	18.4	18.4	XX
94	LINING PLATE	1	23	23	XX
95	LINING PLATE	1	24.8	24.8	XX
96	LINING PLATE	1	24.8	24.8	XX
97	LINING PLATE	1	27.7	27.7	XX
98	LINING PLATE	10	20.8	208	XX
99	LINING PLATE	1	19.8	19.8	XX
100	LINING PLATE	1	27.7	27.7	XX
101	LINING PLATE	6	10.2	61.2	XX
102	LINING PLATE	4	12	48	XX
103	LINING PLATE	5	11.3	56.5	XX
104	LINING PLATE	6	10.2	61.2	XX
105	LINING PLATE	4	11.9	47.6	XX
106	LINING PLATE	5	11.3	56.5	XX
107	LINING PLATE	12	14	168	XX
108	LINING PLATE	8	16.5	132	XX
109	LINING PLATE	10	15.6	156	XXXX
110	LINING PLATE	10	21.7	217	XXXX
111	LINING PLATE	4	35	140	X
112	LINING PLATE	9	38.5	346.5	X
113	LINING PLATE	1	18.4	18.4	XX
114	LINING PLATE	6	11.4	68.4	XXX
115	LINING PLATE	4	13.3	53.2	XXX
116	LINING PLATE	2	14	28	XXX
117	LINING PLATE	1	52.2	52.2	XXX
118	LINING PLATE	1	72.5	72.5	XXX
119	LINING PLATE	1	52.2	52.2	XXX
120	LINING PLATE	1	72.5	72.5	XXX
121	LINING PLATE	2	67.3	134.6	XXX
122	LINING PLATE	1	36.3	36.3	XXX
123	LINING PLATE	2	32.1	64.2	XXX
124	LINING PLATE	3	32.1	96.3	XXXX
125	LINING PLATE	1	36.3	36.3	XXX
126	HEX. NUT	32	-	1.9	
127	HEX. SCREW	18	-	7.7	
128	LINING PLATE	4	14.4	57.6	XX
129	LINING PLATE	10	13.6	136	XX

NO. POS	DESCRIPTION	QTY	WT IN KG.	MATERIAL	REMARKS
1	HOLDER OF LINING - RIGHT	1	320	331	ASSEMBLY
2	HOLDER OF LINING - LEFT	1	320	331	ASSEMBLY
3	HOLDER OF LINING - FRONT WALL	1	514	525	ASSEMBLY
4	HOLDER OF LINING - BACK WALL	1	429	446	ASSEMBLY
5	LINING PLATE	1	30	30	X
6	LINING PLATE	3	33	99	X
7	LINING PLATE	1	30	30	X
8	LINING PLATE	2	28	56	XX
9	LINING PLATE	4	20.4	81.6	XX
10	LINING PLATE	2	28	56	XX
11	LINING PLATE	4	16.8	67.2	XX
12	LINING PLATE	1	26.1	26.1	XX
13	LINING PLATE	2	20.2	40.4	XX
14	LINING PLATE	2	13.8	27.6	XX
15	LINING PLATE	1	15.8	15.8	XX
16	LINING PLATE	1	25.1	25.1	XX
17	LINING PLATE	1	29.2	29.2	XX
18	LINING PLATE	4	18.4	73.6	XX
19	LINING PLATE	2	27	54	XX
20	LINING PLATE	1	22.4	22.4	XX
21	LINING PLATE	1	29.1	29.1	XX
22	LINING PLATE	11	15.2	167.2	XX
23	LINING PLATE	22	15.6	343.2	XX
24	LINING PLATE	4	18.9	75.6	XX
25	LINING PLATE	27	12	324	XXX
26	LINING PLATE	1	15.3	15.3	XXX
27	LINING PLATE	1	25.6	25.6	XXX
28	LINING PLATE	1	19.4	19.4	XXX
29	LINING PLATE	11	10	110	XXX
30	LINING PLATE	1	30	30	X
31	LINING PLATE	3	33	99	X
32	LINING PLATE	1	30	30	X
33	LINING PLATE	2	28	56	XX
34	LINING PLATE	4	20.4	81.6	XX
35	LINING PLATE	2	28	56	XX
36	LINING PLATE	4	16.8	67.2	XX
37	LINING PLATE	1	26.1	26.1	XX
38	LINING PLATE	2	20.2	40.4	XX
39	LINING PLATE	2	13.8	27.6	XX
40	LINING PLATE	1	16.8	16.8	XX
41	LINING PLATE	1	26.1	26.1	XX
42	LINING PLATE	1	29.1	29.1	XX
43	LINING PLATE	4	18.4	73.6	XX
44	LINING PLATE	2	27	54	XX
45	LINING PLATE	1	22.4	22.4	XX
46	LINING PLATE	1	29.1	29.1	XX
47	LINING PLATE	11	15.2	167.2	XX
48	LINING PLATE	22	15.6	343.2	XX
49	LINING PLATE	4	18.9	75.6	XX
50	LINING PLATE	27	12	324	XXX
51	LINING PLATE	1	15.3	15.3	XXX
52	LINING PLATE	1	25.6	25.6	XXX
53	LINING PLATE	1	19.4	19.4	XXX
54	LINING PLATE	11	10	110	XXX
55	LINING PLATE	1	33	33	X
56	LINING PLATE	8	35	210	X
57	LINING PLATE	3	40	120	X
58	LINING PLATE	1	33	33	X
59	LINING PLATE	14	21.7	303.8	XX
60	LINING PLATE	15	22.8	342	XX
61	LINING PLATE	1	28.3	28.3	XX
62	LINING PLATE	1	28.3	28.3	XX
63	LINING PLATE	1	23	23	XX
64	LINING PLATE	2	18.4	36.8	XX
65	LINING PLATE	1	23	23	XX

TOTAL WEIGHT: 12090kgs (APPX.)

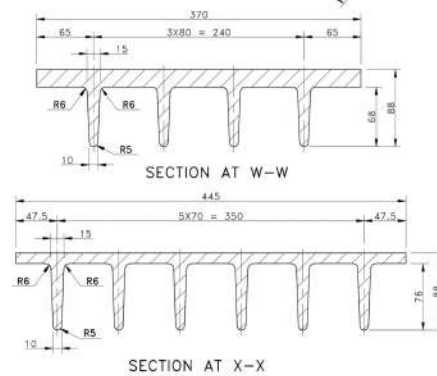
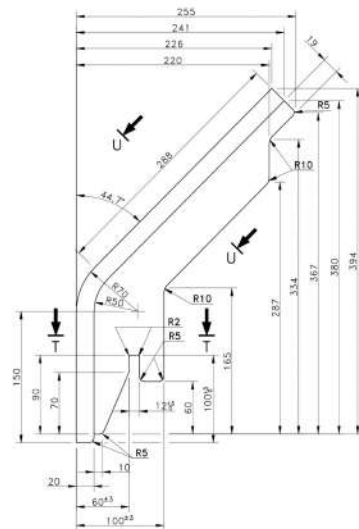
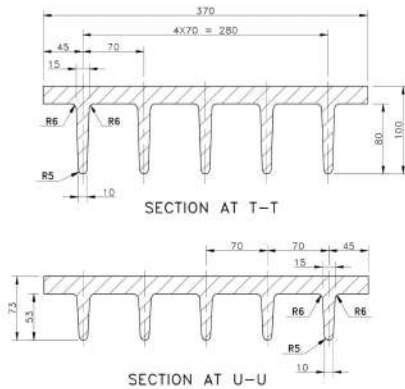
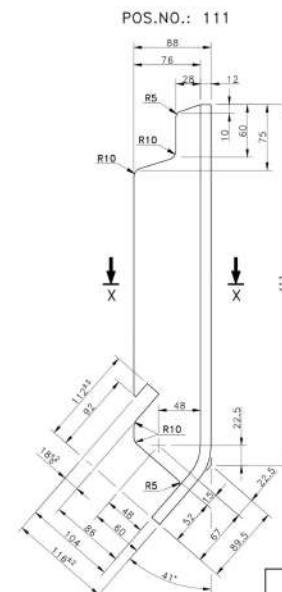
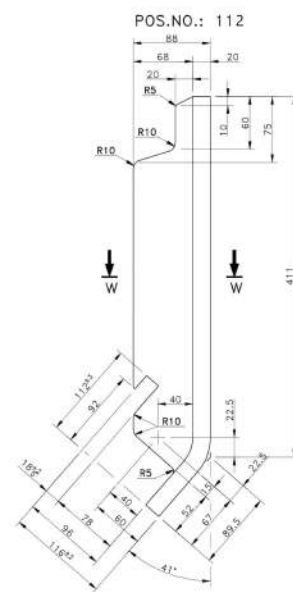
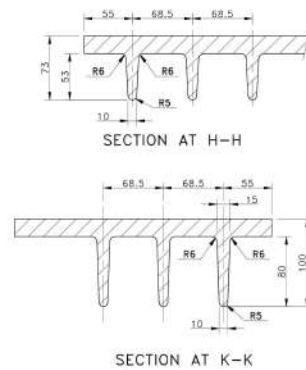
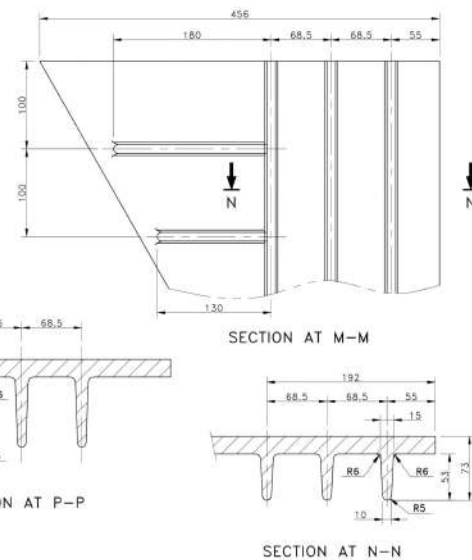
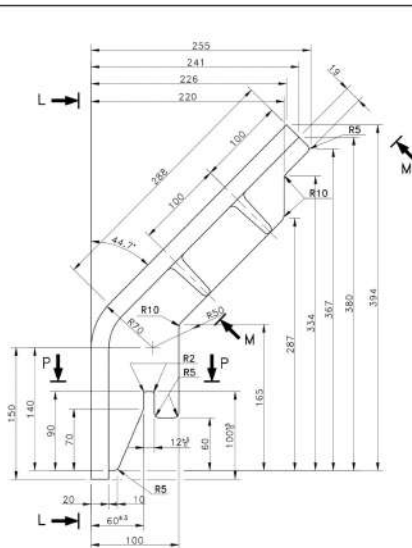
DIMENSIONS IN BRACKETS ARE SIDE LENGTHS OF LINING PLATES. TYPICAL GAP BETWEEN LINING PLATES IS 4mm.

LINING MATERIALS (OR EQUIVALENT AVAILABLE IN INDIA)
 X : W 1.4825 (GX25CNISI 18-9)
 XX : AISI 304
 XXX : Fe 540 IS : 2062
 XXXX : W 1.4825 (X15CNISI20-12)

REF. DRG NO.-NMDC/BEC/02/13/01/DE/6625

COKE BUCKET LINER PLATES

NMDC/CO/CDCP/021-01



NMDC/CO/CDCP/021-03

Technical drawing of a straight section of a double-track railway track. The drawing shows two parallel tracks with a center-to-center distance of 802. Each track has a 450mm gauge. The distance from the centerline to the outer edge of the track is labeled 'A', and the distance from the centerline to the inner edge of the track is labeled 'B'. The total width of the track bed is 1365. The drawing includes a cross-section of the track bed and a side view of the track. Callouts 1 and 2 point to the track bed and the track respectively.

Technical drawing showing the layout of two square panels (Pos. 128 & 129) arranged in a 2x2 grid. The overall dimensions are 895 mm wide and 365 mm high. The distance between the centers of the panels is 450 mm (horizontal) and 122.5 mm (vertical). The drawing includes a callout (2) pointing to the panel assembly.

POS.NO.: 2

The technical drawings show the bridge deck's geometry. The cross-section (SECTION AT E-E) is a T-beam with a total width of 5865 mm (325 mm overhangs on each side of the 5215 mm roadway). The deck thickness is 80 mm, and the web height is 60 mm. The top flange has a width of 575 mm and a thickness of 19 mm. The web has a radius of R6 at the top and R5 at the bottom. The bottom flange has a width of 10 mm. The plan view (SECTION AT D-D) shows a deck width of 498 mm and a depth of 221 mm. The bottom flange has a radius of R20. The bottom flange is 310 mm wide. The bottom flange is 310 mm wide. The bottom flange is 310 mm wide.

Technical drawing of a mechanical part, likely a bracket or support, showing dimensions and tolerances. The part has a total width of 380 and a central section with a width of $4 \times 70 \pm 280$. The height is 80. The drawing includes fillet radii R6 and R5, and a chamfer of 10. The part is shown in a cross-sectional view with hatching.

Technical drawing of a mechanical part (Fig. 1.10) showing dimensions: 345, 45, 15, R5, R6, 3xR5 = 255, and 68.

Technical drawings of the bridge deck cross-section and longitudinal section.

Cross-section (SECTION AT B-B): Shows a T-beam cross-section with a total width of 5x65 = 325. The top flange has a thickness of 15. The web has a height of 60. The bottom flange has a thickness of 10. The section is symmetrical about a central vertical axis. The top flange has rounded corners with radii R6 and R5. The bottom flange has rounded corners with radii R6 and R5. The section is labeled "SECTION AT B-B".

Longitudinal section (SECTION AT A-A): Shows the longitudinal profile of the bridge deck. The total length is 498. The section is divided into segments by vertical lines. The bottom flange has a thickness of 10. The section is labeled "SECTION AT A-A".

NMDC/CO/CDCP/021-04