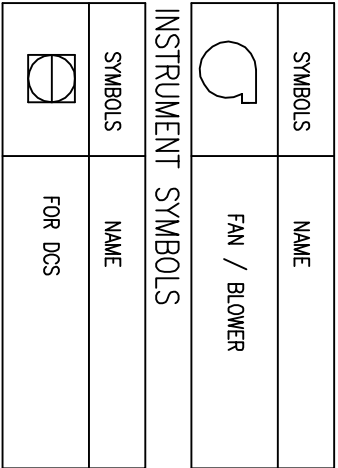




SERVICE CLASS	MATERIAL	FLUID SYMBOL
CA01 CC01	CARBON STEEL GENERAL PIPING CARBON STEEL PRESSURE PIPING	AS, AO, AC, AF, LD WP, WR, WCS, WCR, VG, AA

EXPRESSION OF PIPING LINE

UNIT CODE	NOMINAL PIPE SIZE (mm)
1	15
2	20
3	25
4	32
5	40
6	50
7	63
8	80
9	100
10	125
11	160
12	200
13	250
14	315
15	400
16	500
17	630
18	800
19	1000
20	1250
21	1600
22	2000
23	2500
24	3150
25	4000
26	5000
27	6300
28	8000
29	10000
30	12500
31	16000
32	20000
33	25000
34	31500
35	40000
36	50000
37	63000
38	80000
39	100000
40	125000
41	160000
42	200000
43	250000
44	315000
45	400000
46	500000
47	630000
48	800000
49	1000000
50	1250000
51	1600000
52	2000000
53	2500000
54	3150000
55	4000000
56	5000000
57	6300000
58	8000000
59	10000000
60	12500000
61	16000000
62	20000000
63	25000000
64	31500000
65	40000000
66	50000000
67	63000000
68	80000000
69	100000000
70	125000000
71	160000000
72	200000000
73	250000000
74	315000000
75	400000000
76	500000000
77	630000000
78	800000000
79	1000000000
80	1250000000
81	1600000000
82	2000000000
83	2500000000
84	3150000000
85	4000000000
86	5000000000
87	6300000000
88	8000000000
89	10000000000
90	12500000000
91	16000000000
92	20000000000
93	25000000000
94	31500000000
95	40000000000
96	50000000000
97	63000000000
98	80000000000
99	100000000000
100	125000000000
101	160000000000
102	200000000000
103	250000000000
104	315000000000
105	400000000000
106	500000000000
107	630000000000
108	800000000000
109	1000000000000
110	1250000000000
111	1600000000000
112	2000000000000
113	2500000000000
114	3150000000000
115	4000000000000
116	5000000000000
117	6300000000000
118	8000000000000
119	10000000000000
120	12500000000000
121	16000000000000
122	20000000000000
123	25000000000000
124	31500000000000
125	40000000000000
126	50000000000000
127	63000000000000
128	80000000000000
129	100000000000000
130	125000000000000
131	160000000000000
132	200000000000000
133	250000000000000
134	315000000000000
135	400000000000000
136	500000000000000
137	

FLUID SYMBOL	SUFFIX NUMBER	INSULATION CLASS
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SYSTEM NUMBER	PIPING SERVICE CLASS
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
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93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

SERVICE CLASS

SYMBOLS FOR PIPING PARTS & INSTRUMENT PARTS

SYMBOLS	NAME
	SILENCER
	FILTER
	EXPANSION JOINT
	MAGNETIC FLOW METER
	SIGHT GLASS
	REDUCER
	FLEXIBLE HOSE
	BLIND FLANGE

PIPING VALVE SYMBOLS

SYMBOLS	NAME
	GATE VALVE (NOR.CLOSED)
	GLOBE VALVE (NOR.CLOSED)
	BUTTERFLY VALVE (NOR.CLOSED)
	CHECK VALVE
	PRESSURE RELIEF VALVE

INSTRUMENT VALVE SYMBOLS

SYMBOLS	NAME
	ACTUATED BY MOTOR

NOTE 1
IN CASE THAT OXIDATION AIR TEMPERATURE IS MORE THAN 120 DEGREE CELCIUS
HEAT-RESISTANT GASKET (WITH EXFOLATED GRAPHITE OR TETLON) IS REQUIRED.

NOTE 2
VIBRATION MONITOR (REQUIRED BY END-USER) AND TEMPERATURE MONITOR (IF REQUIRED FOR MOTOR ARE NOT SHOWN IN THIS P&ID.
BHEL SHALL FINALIZE THE OPERATION PHILOSOPHY FOR OXIDATION AIR BLOWER AND REFLECT IT TO P&ID AND OTHER DRAWINGS SUCH AS INTERLOCK LOGIC DIAGRAM.

CUSTOMER NOS: G601,G602,G603

PROJECT:

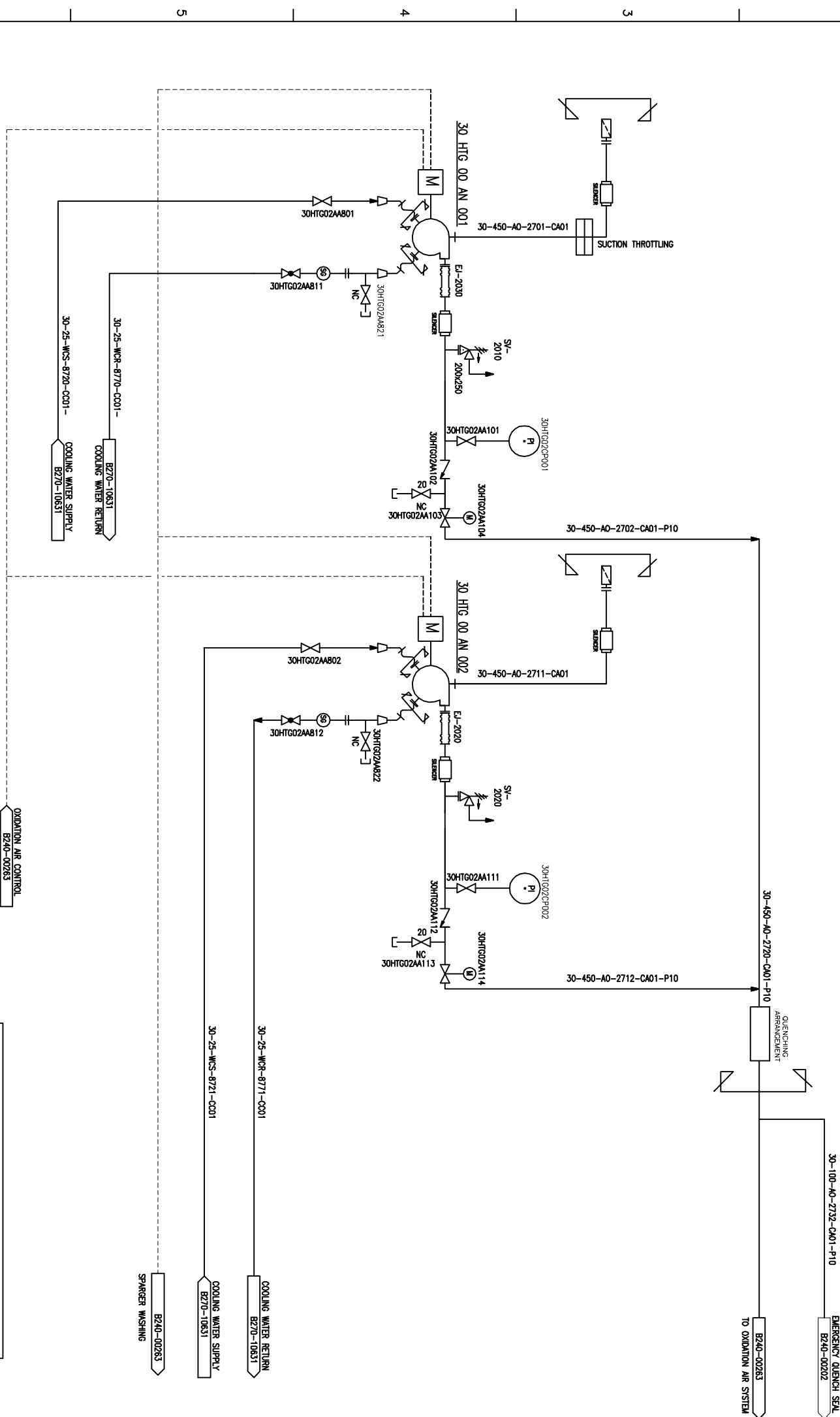
KARANPURA (3X660)

DEPT	NAME	SSN	DATE
CODE	ORN		
CHD			
M			

BHAKAT HEAVY ELECTRICALS LIMITED,
 UNIT- BOLLER ALUMINIUM PLANT,
 BHARTIGUDA, 404,
 BHARTIGUDA, 404,

OXIDATION AIR BLOWER SYSTEM
ALONG WITH W/RITEUP

CAUTION: THE DRAWING IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LTD. AND IS NOT TO BE REPRODUCED OR USED TO FURNISH ANY INFORMATION FOR MAKING OF DRAWINGS OF APPARATUS EXCEPT WHERE PROVIDED FOR AGREEMENT WITH SAID COMPANY.



NOTE

1. PIPE SIZING ARE INDICATIVE
2. QUENCHING ARRANGEMENT TO BE PROVIDED IS DISCHARGE TEMP>100 c
3. This P&ID is typical for unit-1 the same is applicable for unit-2, unit-3

