



**CONTROLS & INSTRUMENTATION (FB)
PRE-QUALIFICATION REQUIREMENT (PQR)**

**CI:PE:PQR:PI
Rev. No: 00
Dt. : 27-05-2023**

Pressure Gauges

Sl. No.	Description	Bid Requirements	Vendor Compliance
1	Vendor Capability	The bidder should be an original Equipment manufacturer/ authorized distributor/ channel partner of Pressure Gauges. For authorized distributors/channel partner, the authorization letter from OEM to be submitted.	Yes/No File Name: Page Nos :
2	Proven Track record	The offered Pressure Gauges models, should be of proven design, already supplied to power plants/process Industries in India and the same shall be working satisfactorily for a period of minimum 2 years as on the date of techno-commercial bid opening.	Yes/No File Name: Page Nos :
3	Past experience /Reference Projects	<ul style="list-style-type: none">• Vendor to submit signed copy of the reference list of projects, where the Pressure Gauges models were supplied. The reference list should contain the following details, Name of the projects, Customer, Capacity of the plant, location, model number, application, year of commissioning and contact details along with relevant PO copies.• Vendor shall submit the performance Certificates from End User/ Principal Contractor (if the supplies were through agencies other than BHEL).	Yes/No File Name: Page Nos :
4	Service & Spares support	Spares & service support shall be available in India.	Yes/No

General Notes:

1. On meeting the PQR requirements, Bidder to provide their confirmation, against each clause in the Bidder compliance column and shall submit sealed & signed copy of valid supporting documents.
2. Before submission, Bidder to ensure the correctness/veracity of the documents. If any discrepancy is noted, the offer is liable for rejection.
3. Notwithstanding anything stated above, BHEL reserves the right to assess the capabilities and capacity of the bidder to perform the contract, should the circumstances warrant such assessment in the overall interest of BHEL.

Bidder Sign & Seal:



**CONTROLS & INSTRUMENTATION (FB)
PRE-QUALIFICATION REQUIREMENT (PQR)**

**CI:PE:PQR:DPI
Rev. No: 00
Dt. : 22-06-2023**

Differential Pressure (DP) Gauges

Sl. No.	Description	Bid Requirements	Vendor Compliance
1	Vendor Capability	The bidder should be an original Equipment manufacturer/ authorized distributor/ channel partner of DP Gauges. For authorized distributors/channel partner, the authorization letter from OEM to be submitted.	Yes/No File Name: Page Nos :
2	Proven Track record	The offered DP Gauges models, should be of proven design, already supplied to power plants/process Industries in India and the same shall be working satisfactorily for a period of minimum 2 years as on the date of techno-commercial bid opening.	Yes/No File Name: Page Nos :
3	Past experience /Reference Projects	<ul style="list-style-type: none">• Vendor to submit signed copy of the reference list of projects, where the Pressure Gauges models were supplied. The reference list should contain the following details, Name of the projects, Customer, Capacity of the plant, location, model number, application, year of commissioning and contact details along with relevant PO copies.• Vendor shall submit the performance Certificates from End User/ Principal Contractor (if the supplies were through agencies other than BHEL).	Yes/No File Name: Page Nos :
4	Service & Spares support	Spares & service support shall be available in India.	Yes/No

General Notes:

1. On meeting the PQR requirements, Bidder to provide their confirmation, against each clause in the Bidder compliance column and shall submit sealed & signed copy of valid supporting documents.
2. Before submission, Bidder to ensure the correctness/veracity of the documents. If any discrepancy is noted, the offer is liable for rejection.
3. Notwithstanding anything stated above, BHEL reserves the right to assess the capabilities and capacity of the bidder to perform the contract, should the circumstances warrant such assessment in the overall interest of BHEL.

Bidder Sign & Seal:

Annexure AA - LIST OF LOTS

Project	S No	Material Code	Description	Quantity	Unit	LOT Number	Dispatch to	Delivery Period	
PATRATU PHASE I 3X800 MW UNIT 2 AND UNIT 3	1	L738218141101001	PG 0-10 KG/SQ.CM	3	No's	1	NTPC PATRATU PHASE I 3X800 MW, RAMGARH, JHARKHAND	90 Days *	
	2	L738218141101002	PG 0-2.5 KG/SQ.CM	1	No's				
	3	L738218141101003	PG 0-16 KG/SQ.CM	5	No's				
	4	L738218141101004	PG 0-25 KG/SQ.CM	10	No's				
	5	L738218141101005	PG 0-6 KG/SQ.CM	3	No's				
	6	L738218141101006	PG 0-16 KG/SQ.CM	3	No's				
	7	L738218141101007	PG 0-16 KG/SQ.CM	118	No's				
	8	L738318141101001	PG 0-10 KG/SQ.CM	3	No's	2		90 Days *	
	9	L738318141101002	PG 0-2.5 KG/SQ.CM	1	No's				
	10	L738318141101003	PG 0-16 KG/SQ.CM	5	No's				
	11	L738318141101004	PG 0-25 KG/SQ.CM	10	No's				
	12	L738318141101005	PG 0-6 KG/SQ.CM	3	No's				
	13	L738318141101006	PG 0-16 KG/SQ.CM	3	No's				
	14	L738318141101007	PG 0-16 KG/SQ.CM	118	No's				
TSGENCO YADADRI 5X800MW	15	L729818141101009	PG 0-10 KG/SQ.CM	3	No's	3	TSGENCO YADADRI 5X800MW, DAMARACHERLA, NALGONDA, TELANGANA	90 Days *	
	16	L729918141101001	PG 0-2.5 KG/SQ.CM	1	No's				
	17	L729918141101002	PG 0-10 KG/SQ.CM	4	No's				
	18	L729918141101003	PG 0-10 KG/SQ.CM	4	No's				
	19	L729918141101004	PG 0-16 KG/SQ.CM	17	No's				
	20	L729918141101005	PG 0-10 KG/SQ.CM	5	No's				
	21	L729918141101006	PG 0-10 KG/SQ.CM	3	No's				
	22	L729918141101007	PG 0-250 KG/SQ.CM	2	No's	4		WARD 26, BHEL TRICHY	180 Days *
	23	L729918141101008	PG 0-25 KG/SQ.CM	11	No's				
	24	L729918141101009	PG 0-10 KG/SQ.CM	3	No's				
	25	L7306S8141101001	PG 0-2.5 KG/SQ.CM	2	No's				
	26	L7306S8141101002	PG 0-10 KG/SQ.CM	4	No's				
	27	L7306S8141101003	PG 0-10 KG/SQ.CM	4	No's				
	28	L7306S8141101004	PG 0-16 KG/SQ.CM	7	No's				
29	L7306S8141101005	PG 0-10 KG/SQ.CM	5	No's	5	UDANGUDI TPS 2X660MW, UDANGUDI, TAMIL NADU	90 Days *		
30	L7306S8141101006	PG 0-10 KG/SQ.CM	3	No's					
31	L7306S8141101007	PG 0-250 KG/SQ.CM	2	No's					
32	L7306S8141101008	PG 0-25 KG/SQ.CM	11	No's					
33	L7306S8141101009	PG 0-10 KG/SQ.CM	3	No's					
34	L736618141101001	PG 0-2.5 KG/SQ.CM	2	No's				6	90 Days *
35	L736618141101002	PG 0-10 KG/SQ.CM	7	No's					
36	L736618141101003	PG 0-10 KG/SQ.CM	3	No's					
37	L736618141101004	PG 0-10 KG/SQ.CM	3	No's					
38	L736618141101005	PG 0-16 KG/SQ.CM	104	No's					
39	L736618141101006	PG 0-16 KG/SQ.CM	21	No's					
40	L736618141101007	PG 0-16 KG/SQ.CM	3	No's					
41	L736618141101008	PG 0-25 KG/SQ.CM	12	No's	6		90 Days *		
42	L736618141101009	PG 0-250 KG/SQ.CM	2	No's					
43	L736718141101001	PG 0-2.5 KG/SQ.CM	2	No's					
44	L736718141101002	PG 0-10 KG/SQ.CM	7	No's					
45	L736718141101003	PG 0-10 KG/SQ.CM	3	No's					
46	L736718141101004	PG 0-10 KG/SQ.CM	3	No's					
47	L736718141101005	PG 0-16 KG/SQ.CM	104	No's					
48	L736718141101006	PG 0-16 KG/SQ.CM	21	No's	7	NTPC PATRATU PHASE I 3X800 MW, RAMGARH, JHARKHAND	30 Days*		
49	L736718141101007	PG 0-16 KG/SQ.CM	3	No's					
50	L736718141101008	PG 0-25 KG/SQ.CM	12	No's					
51	L736718141101009	PG 0-250 KG/SQ.CM	2	No's					
52	L182819728401021	PI BOURDON RANGE: (-)1 - 1 KG/CM ²	4	No's				8	30 Days*
53	L182819728401022	PI BOURDON RANGE: 0 - 6 KG/CM ²	1	No's					
54	L182819728401023	PI BOURDON RANGE: 0 - 10 KG/CM ²	24	No's					
55	L182819728401024	PI BOURDON RANGE: 0 - 16 KG/CM ²	3	No's					
56	L182819728401025	PI BOURDON RANGE: 0 - 25 KG/CM ²	5	No's					
57	L182819728401026	PI BOURDON RANGE: 0 - 40 KG/CM ²	6	No's					
58	L182819728401027	PI BOURDON RANGE: 0 - 40 KG/CM ² WITH PD	3	No's					
59	L182819728401028	PI BOURDON RANGE: 0 - 60 KG/CM ²	10	No's	9		30 Days*		
60	L182819728401029	PI BOURDON RANGE: 0 - 100 KG/CM ²	1	No's					
61	L182819728401030	PI BOURDON RANGE: 0 - 160 KG/CM ²	2	No's					
62	L182819728401031	PI BOURDON RANGE: 0 - 400 KG/CM ²	6	No's					
63	L182819728401032	PI BOURDON RANGE: 0 - 600 KG/CM ²	3	No's					
64	L182819728401033	PI DRAFT RANGE: (-)1000 - 0 MMWC	2	No's					
65	L182819728401034	PI DRAFT RANGE: (-)250 - 250 MMWC	1	No's					
66	L182819728401035	PI DRAFT RANGE: 0 - 600 MMWC	4	No's	9	30 Days*			
67	L182819728401036	PI DRAFT RANGE: 0 - 1000 MMWC	1	No's					
68	L182819728401037	PI DRAFT RANGE: 0 - 2000 MMWC	3	No's					
69	L182819728401038	PI DRAFT RANGE: (-)250 - 250 MMWC (FMG)	2	No's					
70	L182819728401039	PI DRAFT RANGE: 0 - 160 MMWC (FMG)	2	No's					
71	L182819728401040	PI DIAPHRAGM RANGE: (-)1 - 1 KG/CM ²	6	No's					

PATRATU STPS 3x800MW

72	L182819728401041	PI DIAPHRAGM RANGE: 0 - 6 KG/CM ²	2	No's	10	WARD 26, BHEL TRICHY	30 Days*
73	L182819728401042	PI DIAPHRAGM RANGE: 0 - 16 KG/CM ²	21	No's			
74	L182819728401043	PI DIAPHRAGM RANGE: 0 - 25 KG/CM ²	3	No's			
75	L182819728401044	PI DIAPHRAGM RANGE: 0 - 40 KG/CM ²	7	No's	11	WARD 26, BHEL TRICHY	180 Days *
76	L1828S9728401001	PI BOURDON RANGE: (-)1 - 1 KG/CM ²	1	No's			
77	L1828S9728401002	PI BOURDON RANGE: 0 - 6 KG/CM ²	1	No's			
78	L1828S9728401003	PI BOURDON RANGE: 0 - 10 KG/CM ²	4	No's			
79	L1828S9728401004	PI BOURDON RANGE: 0 - 16 KG/CM ²	1	No's			
80	L1828S9728401005	PI BOURDON RANGE: 0 - 25 KG/CM ²	1	No's			
81	L1828S9728401006	PI BOURDON RANGE: 0 - 40 KG/CM ²	1	No's			
82	L1828S9728401007	PI BOURDON RANGE: 0 - 40 KG/CM ² WITH PD	1	No's			
83	L1828S9728401008	PI BOURDON RANGE: 0 - 60 KG/CM ²	2	No's			
84	L1828S9728401009	PI BOURDON RANGE: 0 - 100 KG/CM ²	1	No's			
85	L1828S9728401010	PI BOURDON RANGE: 0 - 160 KG/CM ²	1	No's			
86	L1828S9728401011	PI BOURDON RANGE: 0 - 400 KG/CM ²	1	No's	12	WARD 26, BHEL TRICHY	180 Days *
87	L1828S9728401012	PI BOURDON RANGE: 0 - 600 KG/CM ²	1	No's			
88	L1828S9728401013	PI Draft Range: (-)1000 - 0 mmWC	1	No's	13	WARD 26, BHEL TRICHY	180 Days *
89	L1828S9728401014	PI Draft Range: (-)250 - 250 mmWC	1	No's			
90	L1828S9728401015	PI Draft Range: 0 - 600 mmWC	1	No's			
91	L1828S9728401016	PI Draft Range: 0 - 1000 mmWC	1	No's			
92	L1828S9728401017	PI Draft Range: 0 - 2000 mmWC	1	No's			
93	L1828S9728401018	PI DRAFT RANGE: (-)250 - 250 MMWC (FMG)	1	No's			
94	L1828S9728401019	PI DRAFT RANGE: 0 - 160 MMWC (FMG)	1	No's	14	WARD 26, BHEL TRICHY	180 Days *
95	L1828S9728401020	PI DIAPHRAGM RANGE: (-)1 - 1 KG/CM ²	1	No's			
96	L1828S9728401021	PI DIAPHRAGM RANGE: 0 - 6 KG/CM ²	1	No's			
97	L1828S9728401022	PI DIAPHRAGM RANGE: 0 - 16 KG/CM ²	4	No's			
98	L1828S9728401023	PI DIAPHRAGM RANGE: 0 - 25 KG/CM ²	1	No's			
99	L1828S9728401024	PI DIAPHRAGM RANGE: 0 - 40 KG/CM ²	1	No's			
100	L182919728401016	PI BOURDON RANGE: 0 - 10 KG/CM ²	22	No's	15	WARD 26, BHEL TRICHY	90 Days *
101	L182919728401017	PI BOURDON RANGE: 0 - 25 KG/CM ²	2	No's			
102	L182919728401018	PI BOURDON RANGE: 0 - 40 KG/CM ²	4	No's			
103	L182919728401019	PI BOURDON RANGE: 0 - 60 KG/CM ²	10	No's	16	WARD 26, BHEL TRICHY	90 Days *
104	L182919728401020	PI BOURDON RANGE: 0 - 100 KG/CM ²	1	No's			
105	L182919728401021	PI BOURDON RANGE: 0 - 160 KG/CM ²	2	No's			
106	L182919728401022	PI BOURDON RANGE: 0 - 400 KG/CM ²	6	No's	17	WARD 26, BHEL TRICHY	90 Days *
107	L182919728401023	PI BOURDON RANGE: 0 - 600 KG/CM ²	3	No's			
108	L182919728401024	PI DRAFT RANGE: (-)1000 - 0 MMWC	2	No's			
109	L182919728401025	PI DRAFT RANGE: (-)250 - 250 MMWC	1	No's			
110	L182919728401026	PI DRAFT RANGE: 0 - 600 MMWC	4	No's			
111	L182919728401027	PI DRAFT RANGE: 0 - 1000 MMWC	1	No's			
112	L182919728401028	PI DRAFT RANGE: 0 - 2000 MMWC	3	No's	18	WARD 26, BHEL TRICHY	90 Days *
113	L182919728401029	PI DRAFT RANGE: (-)250 - 250 MMWC (FMG)	2	No's			
114	L182919728401030	PI DRAFT RANGE: 0 - 160 MMWC (FMG)	2	No's			
115	L182919728401031	PI DIAPHRAGM RANGE: (-)1 - 1 KG/CM ²	2	No's	19	WARD 26, BHEL TRICHY	90 Days *
116	L182919728401032	PI DIAPHRAGM RANGE: 0 - 16 KG/CM ²	21	No's			
117	L182919728401033	PI DIAPHRAGM RANGE: 0 - 25 KG/CM ²	3	No's			
118	L182919728401034	PI DIAPHRAGM RANGE: 0 - 40 KG/CM ²	2	No's	20	WARD 26, BHEL TRICHY	90 Days *
119	L183019728401016	PI BOURDON RANGE: 0 - 10 KG/CM ²	22	No's			
120	L183019728401017	PI BOURDON RANGE: 0 - 25 KG/CM ²	2	No's			
121	L183019728401018	PI BOURDON RANGE: 0 - 40 KG/CM ²	4	No's	21	WARD 26, BHEL TRICHY	90 Days *
122	L183019728401019	PI BOURDON RANGE: 0 - 60 KG/CM ²	10	No's			
123	L183019728401020	PI BOURDON RANGE: 0 - 100 KG/CM ²	1	No's			
124	L183019728401021	PI BOURDON RANGE: 0 - 160 KG/CM ²	2	No's	22	WARD 26, BHEL TRICHY	90 Days *
125	L183019728401022	PI BOURDON RANGE: 0 - 400 KG/CM ²	6	No's			
126	L183019728401023	PI BOURDON RANGE: 0 - 600 KG/CM ²	3	No's			
127	L183019728401024	PI DRAFT RANGE: (-)1000 - 0 MMWC	2	No's	23	WARD 26, BHEL TRICHY	90 Days *
128	L183019728401025	PI DRAFT RANGE: (-)250 - 250 MMWC	1	No's			
129	L183019728401026	PI DRAFT RANGE: 0 - 600 MMWC	4	No's			
130	L183019728401027	PI DRAFT RANGE: 0 - 1000 MMWC	1	No's	24	WARD 26, BHEL TRICHY	180 Days *
131	L183019728401028	PI DRAFT RANGE: 0 - 2000 MMWC	3	No's			
132	L183019728401029	PI DRAFT RANGE: (-)250 - 250 MMWC (FMG)	2	No's			
133	L183019728401030	PI DRAFT RANGE: 0 - 160 MMWC (FMG)	2	No's	25	WARD 26, BHEL TRICHY	180 Days *
134	L183019728401031	PI DIAPHRAGM RANGE: (-)1 - 1 KG/CM ²	2	No's			
135	L183019728401032	PI DIAPHRAGM RANGE: 0 - 16 KG/CM ²	21	No's			
136	L183019728401033	PI DIAPHRAGM RANGE: 0 - 25 KG/CM ²	3	No's	26	WARD 26, BHEL TRICHY	180 Days *
137	L183019728401035	PI DIAPHRAGM RANGE: 0 - 40 KG/CM ²	2	No's			
138	L172919728403001	DPI RANGE: 0-60 MMWC	1	No's			
139	L172919728403002	DPI Range: 0-1000 mmWC	1	No's	27	UDANGUDI TPS 2X660MW, UDANGUDI, TAMIL NADU	90 Days *
140	L172919728403003	DPI BOURDON RANGE: 0 - 1 KG/CM ²	3	No's			
141	L172919728403004	DPI DIAPHRAGM RANGE: 0 - 1 KG/CM ²	6	No's			
142	L1729S9728403001	DPI RANGE: 0-60 MMWC	1	No's	28	WARD 26, BHEL TRICHY	180 Days *
143	L1729S9728403002	DPI Range: 0-1000 mmWC	1	No's			
144	L1729S9728403003	DPI BOURDON RANGE: 0 - 1 KG/CM ²	1	No's			

	145	L1729S9728403004	DPI DIAPHRAGM RANGE: 0 - 1 KG/CM ²	1	No's			
	146	L172919728401001	PI BOURDON RANGE: (-)1 - 1 KG/CM ²	4	No's			
	147	L172919728401002	PI BOURDON RANGE: 0 - 4 KG/CM ²	1	No's			
	148	L172919728401003	PI BOURDON RANGE: 0 - 10 KG/CM ²	20	No's			
	149	L172919728401004	PI BOURDON RANGE: 0 - 10 KG/CM ² WITH PD	2	No's			
	150	L172919728401005	PI BOURDON RANGE: 0 - 16 KG/CM ²	4	No's			
	151	L172919728401006	PI BOURDON RANGE: 0 - 25 KG/CM ²	7	No's			
	152	L172919728401007	PI BOURDON RANGE: 0 - 40 KG/CM ²	5	No's			
	153	L172919728401008	PI BOURDON RANGE: 0 - 40 KG/CM ² WITH PD	3	No's			
	154	L172919728401009	PI BOURDON RANGE: 0 - 60 KG/CM ²	9	No's	25		90 Days *
	155	L172919728401010	PI BOURDON RANGE: 0 - 100 KG/CM ²	2	No's			
	156	L172919728401011	PI BOURDON RANGE: 0 - 250 KG/CM ²	1	No's			
	157	L172919728401012	PI BOURDON RANGE: 0 - 400 KG/CM ²	7	No's			
	158	L172919728401018	PI DIAPHRAGM RANGE: (-)1 - 1 KG/CM ²	6	No's			
	159	L172919728401019	PI DIAPHRAGM RANGE: 0 - 4 KG/CM ²	1	No's			
	160	L172919728401020	PI DIAPHRAGM RANGE: 0 - 16 KG/CM ²	4	No's			
	161	L172919728401021	PI DIAPHRAGM RANGE: 0 - 25 KG/CM ²	18	No's			
	162	L172919728401022	PI DIAPHRAGM RANGE: 0 - 40 KG/CM ²	7	No's			
	163	L172919728401013	PI BOURDON RANGE: 0 - 600 KG/CM ² (FMG)	1	No's	26		90 Days *
	164	L173019728401009	PI BOURDON RANGE: 0 - 600 KG/CM ² (FMG)	1	No's	27		90 Days *
	165	L173019728401010	PI Draft Range: 0 - 250 mmWC	2	No's			
	166	L173019728401011	PI Draft Range: 0 - 600 mmWC	2	No's			
	167	L173019728401012	PI Draft Range: 0 - 1000 mmWC	1	No's	28		90 Days *
	168	L173019728401013	PI Draft Range: 0 - 1600 mmWC	2	No's			
	169	L172919728401014	PI Draft Range: 0 - 250 mmWC	2	No's			
	170	L172919728401015	PI Draft Range: 0 - 600 mmWC	2	No's			
	171	L172919728401016	PI Draft Range: 0 - 1000 mmWC	1	No's	29		90 Days *
	172	L172919728401017	PI Draft Range: 0 - 1600 mmWC	2	No's			
UDANGUDI TPS 2X660MW	173	L1729S9728401001	PI BOURDON RANGE: (-)1 - 1 KG/CM ²	1	No's			
	174	L1729S9728401002	PI BOURDON RANGE: 0 - 4 KG/CM ²	1	No's			
	175	L1729S9728401003	PI BOURDON RANGE: 0 - 10 KG/CM ²	4	No's			
	176	L1729S9728401004	PI BOURDON RANGE: 0 - 10 KG/CM ² WITH PD	1	No's			
	177	L1729S9728401005	PI BOURDON RANGE: 0 - 16 KG/CM ²	1	No's			
	178	L1729S9728401006	PI BOURDON RANGE: 0 - 25 KG/CM ²	1	No's			
	179	L1729S9728401007	PI BOURDON RANGE: 0 - 40 KG/CM ²	1	No's			
	180	L1729S9728401008	PI BOURDON RANGE: 0 - 40 KG/CM ² WITH PD	1	No's			
	181	L1729S9728401009	PI BOURDON RANGE: 0 - 60 KG/CM ²	2	No's	30		180 Days *
	182	L1729S9728401010	PI BOURDON RANGE: 0 - 100 KG/CM ²	1	No's			
	183	L1729S9728401011	PI BOURDON RANGE: 0 - 250 KG/CM ²	1	No's			
	184	L1729S9728401012	PI BOURDON RANGE: 0 - 400 KG/CM ²	2	No's			
	185	L1729S9728401018	PI DIAPHRAGM RANGE: (-)1 - 1 KG/CM ²	1	No's			
	186	L1729S9728401019	PI DIAPHRAGM RANGE: 0 - 4 KG/CM ²	1	No's			
	187	L1729S9728401020	PI DIAPHRAGM RANGE: 0 - 16 KG/CM ²	1	No's			
	188	L1729S9728401021	PI DIAPHRAGM RANGE: 0 - 25 KG/CM ²	4	No's			
	189	L1729S9728401022	PI DIAPHRAGM RANGE: 0 - 40 KG/CM ²	1	No's			
	190	L1729S9728401013	PI BOURDON RANGE: 0 - 600 KG/CM ² (FMG)	1	No's	31		180 Days *
	191	L1729S9728401014	PI DRAFT RANGE: 0 - 250 MMWC	1	No's			
	192	L1729S9728401015	PI DRAFT RANGE: 0 - 600 MMWC	1	No's			
	193	L1729S9728401016	PI DRAFT RANGE: 0 - 1000 MMWC	1	No's	32		180 Days *
	194	L1729S9728401017	PI DRAFT RANGE: 0 - 1600 MMWC	1	No's			
	195	L173019728401001	PI BOURDON RANGE: 0 - 10 KG/CM ²	18	No's			
	196	L173019728401002	PI BOURDON RANGE: 0 - 16 KG/CM ²	1	No's			
	197	L173019728401003	PI BOURDON RANGE: 0 - 25 KG/CM ²	3	No's			
	198	L173019728401004	PI BOURDON RANGE: 0 - 40 KG/CM ²	4	No's			
	199	L173019728401005	PI BOURDON RANGE: 0 - 60 KG/CM ²	9	No's			
	200	L173019728401006	PI BOURDON RANGE: 0 - 100 KG/CM ²	2	No's	33		90 Days *
	201	L173019728401007	PI BOURDON RANGE: 0 - 250 KG/CM ²	1	No's			
	202	L173019728401008	PI BOURDON RANGE: 0 - 400 KG/CM ²	7	No's			
	203	L173019728401014	PI DIAPHRAGM RANGE: (-)1 - 1 KG/CM ²	1	No's			
	204	L173019728401015	PI DIAPHRAGM RANGE: 0 - 16 KG/CM ²	2	No's			
	205	L173019728401016	PI DIAPHRAGM RANGE: 0 - 25 KG/CM ²	18	No's			
	206	L173019728401017	PI DIAPHRAGM RANGE: 0 - 40 KG/CM ²	2	No's			
	207	L173019728403001	DPI Range: 0-60 mmWC	1	No's			
	208	L173019728403002	DPI Range: 0-1000 mmWC	1	No's	34		90 Days *
	209	L173019728403003	DPI DIAPHRAGM RANGE: 0 - 1 KG/CM ²	2	No's			
	210	L18241SC30001001	PI BOURDON RANGE: 0 - 10 KG/CM ²	2	No's			
	211	L18241SC30001002	PI BOURDON RANGE: 0 - 25 KG/CM ²	1	No's			
	212	L18241SC30001001	PI BOURDON RANGE: 0 - 10 KG/CM ²	2	No's			
	213	L18241SC30001002	PI BOURDON RANGE: 0 - 25 KG/CM ²	1	No's			
	214	L18241SC30001001	PI BOURDON RANGE: 0 - 10 KG/CM ²	2	No's			
	215	L18241SC30001002	PI BOURDON RANGE: 0 - 25 KG/CM ²	1	No's	35		90 Days *
	216	L18231SC30001001	PI BOURDON RANGE: 0 - 10 KG/CM ²	2	No's			
	217	L18231SC30001002	PI BOURDON RANGE: 0 - 25 KG/CM ²	1	No's			
TSGENCO YADADRI 5X800MW Unit 1 2 3 4 5							TSGENCO YADADRI 5X800MW, DAMARACHERLA, NALGONDA, TELANGANA.	

	218	L182315C30001003	PI BOURDON RANGE: 0 - 40 KG/CM ²	10	No's					
	219	L182515C30001001	PI BOURDON RANGE: 0 - 10 KG/CM ²	2	No's					
	220	L182515C30001002	PI BOURDON RANGE: 0 - 25 KG/CM ²	1	No's					
	221	L182515C30001003	PI BOURDON RANGE: 0 - 40 KG/CM ²	11	No's					
SAGARDIGHI EXTENSION TPP 1X660MW	222	L173119728401001	PI BOURDON RANGE: 0 - 10 KG/CM ²	3	No's	36	SAGARDIGHI EXTENSION TPP 1X660MW, SAGARDIGHI, MURSHIDABAD, WEST BENGAL	90 Days *		
	223	L173119728401002	PI BOURDON RANGE: 0 - 25 KG/CM ²	20	No's					
	224	L173119728401003	PI BOURDON RANGE: 0 - 40 KG/CM ²	2	No's					
	225	L173119728401004	PI BOURDON RANGE: 0 - 60 KG/CM ²	7	No's					
	226	L173119728401005	PI BOURDON RANGE: 0 - 250 KG/CM ²	2	No's					
	227	L173119728401006	PI BOURDON RANGE: 0 - 400 KG/CM ²	5	No's					
	228	L173119728401007	PI BOURDON RANGE: 0 - 600 KG/CM ²	3	No's					
	229	L173119728401008	PI Draft Range: (-)250 - 250 mmWC	1	No's	37			90 Days *	
	230	L173119728401009	PI Draft Range: 0 - 800 mmWC	1	No's					
	231	L173119728401010	PI DIAPHRAGM RANGE: (-)1 - 1 KG/CM ²	1	No's	38		90 Days *		
	232	L173119728401011	PI DIAPHRAGM RANGE: 0 - 10 KG/CM ²	1	No's					
	233	L173119728401012	PI DIAPHRAGM RANGE: 0 - 25 KG/CM ²	17	No's					
	234	L173119728401013	PI DIAPHRAGM RANGE: 0 - 40 KG/CM ²	5	No's					
	235	L1731S9728401001	PI BOURDON RANGE: 0 - 10 KG/CM ²	1	No's	39	WARD 26, BHEL TRICHY	180 Days *		
	236	L1731S9728401002	PI BOURDON RANGE: 0 - 25 KG/CM ²	2	No's					
	237	L1731S9728401003	PI BOURDON RANGE: 0 - 40 KG/CM ²	1	No's					
	238	L1731S9728401004	PI BOURDON RANGE: 0 - 60 KG/CM ²	1	No's					
	239	L1731S9728401005	PI BOURDON RANGE: 0 - 250 KG/CM ²	1	No's					
	240	L1731S9728401006	PI BOURDON RANGE: 0 - 400 KG/CM ²	1	No's					
	241	L1731S9728401007	PI BOURDON RANGE: 0 - 600 KG/CM ²	1	No's					
	242	L1731S9728401008	PI Draft Range: (-)250 - 250 mmWC	1	No's	40			180 Days *	
	243	L1731S9728401009	PI Draft Range: 0 - 800 mmWC	1	No's					
	244	L1731S9728401010	PI DIAPHRAGM RANGE: (-)1 - 1 KG/CM ²	1	No's	41			180 Days *	
	245	L1731S9728401011	PI DIAPHRAGM RANGE: 0 - 10 KG/CM ²	1	No's					
	246	L1731S9728401012	PI DIAPHRAGM RANGE: 0 - 25 KG/CM ²	2	No's					
	247	L1731S9728401013	PI DIAPHRAGM RANGE: 0 - 40 KG/CM ²	1	No's					
	248	L173119728403001	DPI RANGE: 0 - 1 KG/CM ²	2	No's	42	SAGARDIGHI EXTENSION TPP 1X660MW, SAGARDIGHI, MURSHIDABAD, WEST BENGAL	90 Days *		
249	L1731S9728403001	DPI RANGE: 0 - 1 KG/CM ²	1	No's	43	WARD 26, BHEL TRICHY	180 Days *			
250	L173115C30001001	PI BOURDON RANGE: 0 - 10 KG/CM ²	2	No's	44	SAGARDIGHI EXTENSION TPP 1X660MW, SAGARDIGHI, MURSHIDABAD, WEST BENGAL	90 Days *			
251	L173115C30001002	PI BOURDON RANGE: 0 - 25 KG/CM ²	1	No's						
252	L173115C30001003	PI NH3 BOURDON RANGE: 0 - 25 KG/CM ²	6	No's						
253	L173115C30001004	PI NH3 BOURDON RANGE: 0 - 40 KG/CM ²	4	No's						
254	L1731SSC30001001	PI BOURDON RANGE: 0 - 25 KG/CM ²	1	No's	45	WARD 26, BHEL TRICHY	180 Days *			
255	L1731SSC30001002	PI NH3 BOURDON RANGE: 0 - 25 KG/CM ²	1	No's						
256	L1731SSC30001003	PI NH3 BOURDON RANGE: 0 - 40 KG/CM ²	1	No's						

TECHNICAL CATALOGUE

Material Code	L738218141101001
Item Description	PG 0-10 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-10 KG/SQ.CM, WITH 2 VALVE MANIFOLD AND ADAPTOR AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:01 OF DATA SHEET DRG. NO:4-81-411-06162/00

TECHNICAL CATALOGUE

Material Code	L738218141101002
Item Description	PG 0-2.5 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-2.5 KG/SQ.CM, WITH ADAPTOR AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:02 OF DATA SHEET DRG. NO:4-81-411-06162/00

TECHNICAL CATALOGUE

Material Code	L738218141101003
Item Description	PG 0-16 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-16 KG/SQ.CM, WITH ADAPTOR AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:03 OF DATA SHEET DRG. NO:4-81-411-06162/00

TECHNICAL CATALOGUE

Material Code	L738218141101004
Item Description	PG 0-25 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-25 KG/SQ.CM, WITH 2 VALVE MANIFOLD & ADPATOR AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:04 OF DATA SHEET DRG. NO:4-81-411-06162/00

TECHNICAL CATALOGUE

Material Code	L738218141101005
Item Description	PG 0-6 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-6 KG/SQ.CM, WITH 2 VALVE MANIFOLD, PULSATION DAMPENER & ADAPTOR, AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:05 OF DATA SHEET DRG. NO:4-81-411-06162/00

TECHNICAL CATALOGUE

Material Code	L738218141101006
Item Description	PG 0-16 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-16 KG/SQ.CM, WITH 2 VALVE MANIFOLD, PULSATION DAMPENER & ADAPTOR, AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:06 OF DATA SHEET DRG. NO:4-81-411-06162/00

TECHNICAL CATALOGUE

Material Code	L738218141101007
Item Description	PG 0-16 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-16 KG/SQ.CM, WITH 2 VALVE MANIFOLD, & ADAPTOR AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:07 OF DATA SHEET DRG. NO:4-81-411-06162/00

TECHNICAL CATALOGUE

Material Code	L738318141101001
Item Description	PG 0-10 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-10 KG/SQ.CM, WITH 2 VALVE MANIFOLD AND ADAPTOR AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:01 OF DATA SHEET DRG. NO:4-81-411-06162/00

TECHNICAL CATALOGUE

Material Code	L738318141101002
Item Description	PG 0-2.5 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-2.5 KG/SQ.CM, WITH ADAPTOR AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:02 OF DATA SHEET DRG. NO:4-81-411-06162/00

TECHNICAL CATALOGUE

Material Code	L738318141101003
Item Description	PG 0-16 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-16 KG/SQ.CM, WITH ADAPTOR AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:03 OF DATA SHEET DRG. NO:4-81-411-06162/00

TECHNICAL CATALOGUE

Material Code	L738318141101004
Item Description	PG 0-25 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-25 KG/SQ.CM, WITH 2 VALVE MANIFOLD & ADPATOR AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:04 OF DATA SHEET DRG. NO:4-81-411-06162/00

TECHNICAL CATALOGUE

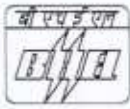
Material Code	L738318141101005
Item Description	PG 0-6 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-6 KG/SQ.CM, WITH 2 VALVE MANIFOLD, PULSATION DAMPENER & ADAPTOR, AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:05 OF DATA SHEET DRG. NO:4-81-411-06162/00

TECHNICAL CATALOGUE

Material Code	L738318141101006
Item Description	PG 0-16 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-16 KG/SQ.CM, WITH 2 VALVE MANIFOLD, PULSATION DAMPENER & ADAPTOR, AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:06 OF DATA SHEET DRG. NO:4-81-411-06162/00

TECHNICAL CATALOGUE

Material Code	L738318141101007
Item Description	PG 0-16 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-16 KG/SQ.CM, WITH 2 VALVE MANIFOLD, & ADAPTOR AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:07 OF DATA SHEET DRG. NO:4-81-411-06162/00



DATA SHEET FOR
PRESSURE GAUGES
(SPEC.:PC:TSP:81008)

PROJECT :
PATRATU
3 x 800 MW
CUST. No.
7381,7382&7383

Item No.	01	02	03
Application	Service water to Mills	Condensate flash tank	APH WW & FF Mill FF
Medium	Water	Steam	Water
Range (kg/cm ²)	0-10	0-2.5	0-16
Tag No.	SGA51 CP501 SGA51 CP502 Spare-1 no	QHE10 CP501	SGA13 CP501 SGA17 CP501 SGA14 CP501 SGA18 CP501 Spare-1 no
Qty/ Boiler	3	1	5
Total Qty	9	3	15

Accuracy	←————— ±1% —————→		
Mounting	Direct	Direct	Direct
Dial Size	6"	6"	6"
Case Material	←————— Die-Cast Aluminium —————→		
Case Finish	←————— Black Enamel with Epoxy coated —————→		
Entry	←————— Bottom —————→		
Inst. Connection	←————— 1/2" NPT (M) —————→		
Model no.	←————— Bidder to furnish —————→		
Accessories	2 Vlv manifold and Adaptor (Type 1)	Adaptor (Type 2)	Adaptor (Type 2)

NOTES:

1. Enclosure: IP65
2. Movement assembly material: SS316
3. Bourdon material: SS316
4. Over range protection: 125% of full scale. External stop at zero.
5. Adjustment: Micrometer screw for Zero. Internal micrometer screw for range.

Rev. No.	Date	Alterations	Altd.	Appd.
Prpd.: MS	Chkd.: BS	Drg. No.	Rev.	SHT.
Appd.: RP	Date: 15.05.19	4-81-411-06162	00	01 OF 03

CI-02
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**DATA SHEET FOR
 PRESSURE GAUGES**
 (SPEC.:PC:TSP:81008)

PROJECT : PATRATU
 3 x 800 MW
 CUST. No.
 7381,7382&7383

Item No.	04	05	06
Application	SCAPH & Mill Inerting	Condensate Pump Discharge	ECW fill Pump discharge
Medium	Steam	Water	Water
Range (kg/cm ²)	0-25	0-6	0-16
Tag No.	LBG73 CP501 to LBG73 CP503 LBG74 CP501 to LBG74 CP503 LBG77 CP501 LBG12 CP501 Spare-2 nos	LCL30 CP501 LCL30 CP502 Spare-1 no	QHX20 CP502 QHX20 CP504 Spare-1 no
Qty/ Boiler	10	3	3
Total Qty	30	9	9

Accuracy	← ±1% →		
Mounting	Direct	Direct	Direct
Dial Size	6"	6"	6"
Case Material	← Die-Cast Aluminium →		
Case Finish	← Black Enamel with Epoxy coated →		
Entry	← Bottom →		
Inst. Connection	← 1/2" NPT (M) →		
Model no.	← Bidder to furnish →		
Accessories	2 Vlv manifold and Adaptor (Type 1)	2 Vlv manifold, Adaptor (Type 1) & Pulsation dampener	2 Vlv manifold, Adaptor (Type 1) & Pulsation dampener

NOTES:

6. Name plate: Tag no, Service engraved in Stainless steel plate

7. Adaptor Type 1:
1/2" NPT(M) x M20X1.5(M)

8. Adaptor Type 2:
1/2" NPT(F) x M20X1.5(M)

Rev. No.	Date	Alterations	Altd.	Appd.

Prpd.: MS NY	Chkd.: BS	Drg. No.	Rev.	SHT.
Appd.: RP AP	Date: 15.05.19	4-81-411-06162	00	02 OF 03

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**DATA SHEET FOR
PRESSURE GAUGES**
(SPEC.:PC:TSP:81008)

PROJECT : PATRATU
3 x 800 MW
CUST. No.
7381,7382&7383

Item No.	07																																								
Application	<i>Cooling water system, Inst air & Serv Air</i>																																								
Medium	<i>Water/Air</i>																																								
Range (kg/cm²)	0-16																																								
Tag No.	<table style="width: 100%; font-size: small;"> <tr> <td><i>QHX10 CP501</i></td> <td><i>QHX19 CP501 to</i></td> <td><i>QHX24 CP501 to</i></td> <td><i>QHX31 CP501 to</i></td> </tr> <tr> <td><i>QHX11 CP501</i></td> <td><i>QHX19 CP504</i></td> <td><i>QHX24 CP506</i></td> <td><i>QHX39 CP501</i></td> </tr> <tr> <td><i>QHX12 CP501</i></td> <td><i>QHX20 CP501</i></td> <td><i>QHX25 CP501to</i></td> <td><i>QHX31 CP502 to</i></td> </tr> <tr> <td><i>QHX12 CP502</i></td> <td><i>QHX20 CP503</i></td> <td><i>QHX25 CP504</i></td> <td><i>QHX39 CP502</i></td> </tr> <tr> <td><i>QHX13 CP501</i></td> <td><i>QHX21 CP501to</i></td> <td><i>QHX26 CP501 to</i></td> <td><i>QHX31 CP503 to</i></td> </tr> <tr> <td><i>QHX13 CP502</i></td> <td><i>QHX21 CP510</i></td> <td><i>QHX26 CP504</i></td> <td><i>QHX39 CP503</i></td> </tr> <tr> <td><i>QHX14 CP501</i></td> <td><i>QHX22 CP501to</i></td> <td><i>QHX27 CP501 to</i></td> <td><i>QHX31 CP504 to</i></td> </tr> <tr> <td><i>QHX14 CP502</i></td> <td><i>QHX22 CP510</i></td> <td><i>QHX27 CP508</i></td> <td><i>QHX39 CP504</i></td> </tr> <tr> <td><i>QHX15 CP501</i></td> <td><i>QHX23 CP501to</i></td> <td><i>QHX28 CP501 to</i></td> <td><i>QFA10 CP501</i></td> </tr> <tr> <td><i>QHX15 CP502</i></td> <td><i>QHX23 CP506</i></td> <td><i>QHX28 CP508</i></td> <td><i>QFB10 CP501</i></td> </tr> </table> <p style="text-align: center;"><i>Spare-8 nos</i></p>	<i>QHX10 CP501</i>	<i>QHX19 CP501 to</i>	<i>QHX24 CP501 to</i>	<i>QHX31 CP501 to</i>	<i>QHX11 CP501</i>	<i>QHX19 CP504</i>	<i>QHX24 CP506</i>	<i>QHX39 CP501</i>	<i>QHX12 CP501</i>	<i>QHX20 CP501</i>	<i>QHX25 CP501to</i>	<i>QHX31 CP502 to</i>	<i>QHX12 CP502</i>	<i>QHX20 CP503</i>	<i>QHX25 CP504</i>	<i>QHX39 CP502</i>	<i>QHX13 CP501</i>	<i>QHX21 CP501to</i>	<i>QHX26 CP501 to</i>	<i>QHX31 CP503 to</i>	<i>QHX13 CP502</i>	<i>QHX21 CP510</i>	<i>QHX26 CP504</i>	<i>QHX39 CP503</i>	<i>QHX14 CP501</i>	<i>QHX22 CP501to</i>	<i>QHX27 CP501 to</i>	<i>QHX31 CP504 to</i>	<i>QHX14 CP502</i>	<i>QHX22 CP510</i>	<i>QHX27 CP508</i>	<i>QHX39 CP504</i>	<i>QHX15 CP501</i>	<i>QHX23 CP501to</i>	<i>QHX28 CP501 to</i>	<i>QFA10 CP501</i>	<i>QHX15 CP502</i>	<i>QHX23 CP506</i>	<i>QHX28 CP508</i>	<i>QFB10 CP501</i>
<i>QHX10 CP501</i>	<i>QHX19 CP501 to</i>	<i>QHX24 CP501 to</i>	<i>QHX31 CP501 to</i>																																						
<i>QHX11 CP501</i>	<i>QHX19 CP504</i>	<i>QHX24 CP506</i>	<i>QHX39 CP501</i>																																						
<i>QHX12 CP501</i>	<i>QHX20 CP501</i>	<i>QHX25 CP501to</i>	<i>QHX31 CP502 to</i>																																						
<i>QHX12 CP502</i>	<i>QHX20 CP503</i>	<i>QHX25 CP504</i>	<i>QHX39 CP502</i>																																						
<i>QHX13 CP501</i>	<i>QHX21 CP501to</i>	<i>QHX26 CP501 to</i>	<i>QHX31 CP503 to</i>																																						
<i>QHX13 CP502</i>	<i>QHX21 CP510</i>	<i>QHX26 CP504</i>	<i>QHX39 CP503</i>																																						
<i>QHX14 CP501</i>	<i>QHX22 CP501to</i>	<i>QHX27 CP501 to</i>	<i>QHX31 CP504 to</i>																																						
<i>QHX14 CP502</i>	<i>QHX22 CP510</i>	<i>QHX27 CP508</i>	<i>QHX39 CP504</i>																																						
<i>QHX15 CP501</i>	<i>QHX23 CP501to</i>	<i>QHX28 CP501 to</i>	<i>QFA10 CP501</i>																																						
<i>QHX15 CP502</i>	<i>QHX23 CP506</i>	<i>QHX28 CP508</i>	<i>QFB10 CP501</i>																																						
Qty/ Boiler	118																																								
Total Qty	354																																								
Accuracy	±1%																																								
Mounting	Direct																																								
Dial Size	6"																																								
Case Material	Die-Cast Aluminium																																								
Case Finish	Black Enamel with Epoxy coated																																								
Entry	Bottom																																								
Inst. Connection	1/2" NPT (M)																																								
Model no.	Bidder to furnish																																								
Accessories	2 Vlv manifold and Adaptor (Type 1)																																								

NOTES:

9. 2 Valve manifold :
1/2"NPT(F) X 1/2"NPT(F)
10. Pulsational dampner must be
1/2"NPT(F) X 1/2"NPT(M)

Rev. No.	Date	Alterations			Altd.	Appd.	

Prpd.: MS <i>WV</i>	Chkd.: BS <i>7</i>	Drg. No.	4-81-411-06162	Rev.	00	SHT.	03 OF 03
Appd.: RP <i>RP</i>	Date: 15.05.19						

TECHNICAL CATALOGUE

Material Code	L729818141101009
Item Description	PG 0-10 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-10 KG/SQ.CM, WITH ADAPTOR, AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:09 OF DATA SHEET DRG. NO:4-81-411-06219/00 AND ANNEXURE-A

TECHNICAL CATALOGUE

Material Code	L729918141101001
Item Description	PG 0-2.5 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-2.5 KG/SQ.CM, WITH ADAPTOR AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:01 OF DATA SHEET DRG. NO:4-81-411-06218/00 AND ANNEXURE-A

TECHNICAL CATALOGUE

Material Code	L729918141101002
Item Description	PG 0-10 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-10 KG/SQ.CM, WITH 2 VALVE MANIFOLD, ADAPTOR & PULSATION DAMPENER, AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:02 OF DATA SHEET DRG. NO:4-81-411-06218/00 AND ANNEXURE-A

TECHNICAL CATALOGUE

Material Code	L729918141101003
Item Description	PG 0-10 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-10 KG/SQ.CM, WITH 2 VALVE MANIFOLD& ADAPTOR AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:03 OF DATA SHEET DRG. NO:4-81-411-06218/00 AND ANNEXURE-A

TECHNICAL CATALOGUE

Material Code	L729918141101004
Item Description	PG 0-16 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-16 KG/SQ.CM, WITH 2 VALVE MANIFOLD & ADPATOR AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:04 OF DATA SHEET DRG. NO:4-81-411-06218/00 AND ANNEXURE-A

TECHNICAL CATALOGUE

Material Code	L729918141101005
Item Description	PG 0-10 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-10 KG/SQ.CM, WITH ADAPTOR, AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:05 OF DATA SHEET DRG. NO:4-81-411-06218/00 AND ANNEXURE-A

TECHNICAL CATALOGUE

Material Code	L729918141101006
Item Description	PG 0-10 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-10 KG/SQ.CM, WITH 2 VALVE MANIFOLD & ADAPTOR, AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:06 OF DATA SHEET DRG. NO:4-81-411-06218/00 AND ANNEXURE-A

TECHNICAL CATALOGUE

Material Code	L729918141101007
Item Description	PG 0-250 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-250 KG/SQ.CM, WITH 2 VALVE MANIFOLD, PULSATION DAMPNER & ADAPTOR AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:07 OF DATA SHEET DRG. NO:4-81-411-06218/00 AND ANNEXURE-A

TECHNICAL CATALOGUE

Material Code	L729918141101008
Item Description	PG 0-25 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-25 KG/SQ.CM, WITH 2 VALVE MANIFOLD & ADAPTOR, AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:08 OF DATA SHEET DRG. NO:4-81-411-06218/00 AND ANNEXURE-A

TECHNICAL CATALOGUE

Material Code	L729918141101009
Item Description	PG 0-10 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-10 KG/SQ.CM, WITH ADAPTOR, AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:09 OF DATA SHEET DRG. NO:4-81-411-06218/00 AND ANNEXURE-A

TECHNICAL CATALOGUE

Material Code	L7306S8141101006
Item Description	PG 0-10 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-10 KG/SQ.CM, WITH 2 VALVE MANIFOLD & ADAPTOR, AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:06 OF DATA SHEET DRG. NO:4-81-411-06154/00 AND ANNEXURE-A

TECHNICAL CATALOGUE

Material Code	L7306S8141101007
Item Description	PG 0-250 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-250 KG/SQ.CM, WITH 2 VALVE MANIFOLD, PULSATION DAMPNER & ADAPTOR AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:07 OF DATA SHEET DRG. NO:4-81-411-06154/00 AND ANNEXURE-A

TECHNICAL CATALOGUE

Material Code	L7306S8141101008
Item Description	PG 0-25 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-25 KG/SQ.CM, WITH 2 VALVE MANIFOLD & ADAPTOR, AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:08 OF DATA SHEET DRG. NO:4-81-411-06154/00 AND ANNEXURE-A

TECHNICAL CATALOGUE

Material Code	L7306S8141101009
Item Description	PG 0-10 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-10 KG/SQ.CM, WITH ADAPTOR, AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:09 OF DATA SHEET DRG. NO:4-81-411-06154/00 AND ANNEXURE-A

TECHNICAL CATALOGUE

Material Code	L7306S8141101001
Item Description	PG 0-2.5 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-2.5 KG/SQ.CM, WITH ADAPTOR AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:01 OF DATA SHEET DRG. NO:4-81-411-06154/00 AND ANNEXURE-A

TECHNICAL CATALOGUE

Material Code	L7306S8141101002
Item Description	PG 0-10 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-10 KG/SQ.CM, WITH 2 VALVE MANIFOLD, ADAPTOR & PULSATION DAMPENER, AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:02 OF DATA SHEET DRG. NO:4-81-411-06154/00 AND ANNEXURE-A

TECHNICAL CATALOGUE

Material Code	L7306S8141101003
Item Description	PG 0-10 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-10 KG/SQ.CM, WITH 2 VALVE MANIFOLD& ADAPTOR AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:03 OF DATA SHEET DRG. NO:4-81-411-06154/00 AND ANNEXURE-A

TECHNICAL CATALOGUE

Material Code	L7306S8141101004
Item Description	PG 0-16 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-16 KG/SQ.CM, WITH 2 VALVE MANIFOLD & ADPATOR AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:04 OF DATA SHEET DRG. NO:4-81-411-06154/00 AND ANNEXURE-A

TECHNICAL CATALOGUE

Material Code	L7306S8141101005
Item Description	PG 0-10 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-10 KG/SQ.CM, WITH ADAPTOR, AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:05 OF DATA SHEET DRG. NO:4-81-411-06154/00 AND ANNEXURE-A

CI-02

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DATA SHEET FOR
PRESSURE GAUGES
(SPEC.:PC:TSP:81008)

PROJECT :
Yadadri 5 x 800 MW
Mandatory spares
CUST. No. 7306

Item No.	01	02	03	04										
Rate Contract SLNo.														
Application	Condensate Flash Tank	Cond Pump A&B discharge	Inst Air	C.W System										
Medium	Steam/Water	Water	Air	Water										
Range (kg/cm ²)	0-2.5	0-10	0-10	0-16										
Tag No.	PG spare 01 PG spare 02	PG spare 03 PG spare 04 PG spare 05 PG spare 06	PG spare 07 PG spare 08 PG spare 09 PG spare 10	PG spare 11 to PG spare 17										
Total Qty. Reqd.	2	4	4	7										
Accuracy	← ±1% of span or better →													
Mounting	Direct	Direct	Direct	Direct										
Dial Size	6"	6"	6"	6"										
Case Material	← SS-304 →													
Window	← Shatterproof glass →													
Case Finish	← Epoxy Coated →													
Entry	← Bottom →													
Inst. Connection	← 1/2" NPT (M) →													
Model no.	← Bidder to furnish →													
Weight / Piece	← Bidder to furnish →													
Accessories	Adaptor (Type1)	Adaptor (Type 2), 2 Valve manifold, Pulsation Dampener	2 Valve Manifold (SS316), Adaptor (Type2)											
NOTES:														
1. Enclosure: IP65														
2. Movement assembly material: SS316														
3. Bourdon Material : SS 316														
4. Over-range Protection: 125% of maximum range by internal stop. External stop at zero.														
5. Adjustment: External Micrometer screw for Zero. Internal micrometer screw for range.														
<table border="1"> <thead> <tr> <th>Rev. No.</th> <th>Date</th> <th>Alterations</th> <th>Altd.</th> <th>Appd.</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>					Rev. No.	Date	Alterations	Altd.	Appd.					
Rev. No.	Date	Alterations	Altd.	Appd.										
Prpd.: MS NW	Chkd.: BS	Drp. No.	Rev. 00	SHT.										
Appd.: RP	Date: 26.03.19	4-81-411-06154		01 OF 03										

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**DATA SHEET FOR
 PRESSURE GAUGES**
 (SPEC.:PC:TSP:81008)

PROJECT :
 Yadadri 5X800MW
 Mandatory spares
CUST. No. 7306

Item No.	05	06	07
Rate Contract Sl.No.			
Application	APH WW & FF	MILL FF	APH HP WW BOOSTER PUMP DISCHARGE
Medium	Water	Water	Water
Range (kg/cm²)	0-10	0-10	0-250
Tag No.	PG spare 18 PG spare 19 PG spare 20 PG spare 21 PG spare 22	PG spare 23 PG spare 24 PG spare 25	PG spare 26 PG spare 27
Total Qty. Reqd.	5	3	2
Accuracy	← ±1% of span or better →		
Mounting	← Direct →		
Dial Size	← 6" →		
Case Material	← SS-304 →		
Window	← Shatterproof glass →		
Case Finish	← Epoxy Coated →		
Entry	← Bottom →		
Inst. Connection	← 1/2" NPT (M) →		
Model no.	← Bidder to specify →		
Weight / Piece	← Bidder to specify →		
Accessories	Adaptor(Type1)	2 Valve Manifold, Adaptor(Type 2)	2 Valve Manifold, Adaptor(Type 2) Pulsation Dampener
NOTES: 6. Nameplate: Tag number, Service engraved in SS tag plate 7. Adaptor type1: 1/2" NPT (F) x M20x1.5(M) 8. Adaptor type 2: 1/2" NPT(M) x M20x1.5(M) 9. Pulsation Dampener: 1/2" NPT(F) x 1/2" NPT(M)			
		Rev. No.	Date
		Alterations	Altd. Appd.
Prpd.: MS <i>YV</i>	Chkd.: BS <i>BS</i>	Drg. No.	Rev.
Appd.: RP <i>RP</i>	Date: 26.03.19	4-81-411-06154	00
			SHT. 02 OF 03

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**DATA SHEET FOR
 PRESSURE GAUGES**
 (SPEC.:PC:TSP:81008)

PROJECT :
 Yadadri 5X800MW
 Mandatory spares
CUST. No. 7306

Item No.	08	09
Rate Contract SLNo.		
Application	SCAPH & Mill inerting	Service Air
Medium	Steam	Air
Range (kg/cm²)	0-25	0-10
Tag No.	PG spare 28 to PG spare 38	PG spare 39 PG spare 40 PG spare 41
Total Qty. Reqd.	11	3
Accuracy	← ±1% of span or better →	
Mounting	← Direct →	
Dial Size	← 6" →	
Case Material	← SS-304 →	
Window	← Shatterproof glass →	
Case Finish	← Epoxy Coated →	
Entry	← Bottom →	
Inst. Connection	← 1/2" NPT (M) →	
Model no.	← Bidder to specify →	
Weight / Piece	← Bidder to specify →	
Accessories	2 Valve Manifold, Adaptor(Type 2)	Adaptor(Type1)

NOTES:

- 10. 2 Valve Manifold :
1/2" NPT (F) x 1/2" NPT(F)
- 11. Blow out disc/Diaphragm at the
back

Rev. No.	Date	Alterations	Altd.	Appd.

Prpd.: MS *[Signature]* **Chkd.:** BS *[Signature]* **Drg. No.** 4-81-411-06154 **Rev.** 00 **SHT.** 03 OF 03
Appd.: RP *[Signature]* **Date:** 26.03.19



**DATA SHEETS FOR
PRESSURE GAUGES
(SPEC:PC:TSP:81008)**

PROJECT:
YADADRI 5 x 800 MW
CUSTOMER NO. 7299

Item No.	01	02	03	04
Rate Contract SI No.	-	-	-	-
Application	CONDENSATE FLASH TANK	COND PUMP A&B DISCHARGE	INSTRUMENT AIR	CW SYSTEM
Medium	Steam / Water	Water	Air	Water
Range (kg/sq.cm)	(0 - 2.5) Kg/sq.cm	(0 - 10) Kg/sq.cm	(0 - 10) Kg/sq.cm	(0 - 16) Kg/sq.cm
Tag No.	50QHE10 CP501	50LCL30 CP501 50LCL30 CP502 50LCL30 CO503 Spares- 1	50QFA10 CP501 50QFA10 CP502 50QFA10 CP503 Spares - 1	50QHX10 CP501 50QHX11 CP501 50QHX20 CP501 50QHX20 CP502 50QHX20 CP503 50QHX20 CP504 10QHX41 CP501,20QHX41 CP501, 30QHX41 CP501, 40QHX41 CP501, 50QHX41 CP501 10QHX41 CP502,20QHX41 CP502, 30QHX41 CP502, 40QHX41 CP502, 50QHX41 CP502 Spares - 1
Quantity / Boiler	1	4	4	17
Accuracy	← ±1 % of span or better →			
Mounting	← DIRECT →			
Dial Size	6"	6"	6"	6"
Case Material	← SS-304 →			
Window	← Shatterproof glass →			
Case Finish	← Epoxy Coated →			
Entry	← Bottom →			
Inst. Connection	← 1/2" NPT (M) →			
Model no.	← Bidder to furnish →			
Weight / piece	← Bidder to furnish →			
Accessories	Adaptor (Type 1)	Adaptor (Type 2) , 2 valve manifold, Pulsation dampener	2 valve Manifold (SS316), Adaptor (Type 2)	2 valve Manifold (SS316), Adaptor (Type 2)
NOTES: 1) Enclosure: IP65 2) Movement assembly material: SS316 3) Bourdon Material : SS316 4) Over-range protection: 125% of maximum range by internal stop. External stop at zero. 5) Adjustment : External Micrometer screw for zero. Internal micrometer screw for range. 6) QHX41 CP501 & QHX41 CP502 under CW system is applicable for all 5 units.				
	Rev no	Date	Alterations	Altd. Appd.
Prepared: KT	Checked: PS	Drawing No.		Rev no.
Approved: CS	Date: 26.04.22	4-81-411-06218		00
				Sheet no 01 of 03



**DATA SHEETS FOR
PRESSURE GAUGES**
(SPEC:PC:TSP:81008)

PROJECT:
YADADRI 5 x 800 MW
CUSTOMER NO. 7299

Item No.	05	06	07
Rate Contract SI No.	-	-	-
Application	APH WW & FF	MILL FF	APH HP WW BOOSTER PUMP DISCHARGE
Medium	Water	Water	Water
Range (kg/sq.cm)	(0 - 10) Kg/sq.cm	(0 - 10) Kg/sq.cm	(0 - 250) Kg/sq.cm
Tag No.	SGA13 CP501	SGA51 CP501	SGA20 CP501
	SGA14 CP501	SGA51 CP502	
	SGA17 CP501		
	SGA18 CP501		
	Spares- 1	Spares- 1	Spares - 1
Quantity / Boiler	5	3	2
Accuracy	← ±1 % of span or better →		
Mounting	← DIRECT →		
Dial Size	6"	6"	6"
Case Material	← SS-304 →		
Window	← Shatterproof glass →		
Case Finish	← Epoxy Coated →		
Entry	← Bottom →		
Inst. Connection	← 1/2" NPT (M) →		
Model no.	← Bidder to furnish →		
Weight / piece	← Bidder to furnish →		
Accessories	Adaptor (Type 1)	2 valve manifold, Adaptor (Type 2)	2 valve manifold, Adaptor (Type 2), Pulsation dampener
NOTES:			
7) Nameplate : Tag number, service engraved in SS tag plate			
8) Adaptor Type 1: 1/2" NPT (F) x M20 x 1.5(M)			
9) Adaptor Type 2: 1/2" NPT (M) x M20 x 1.5(M)			
10) Pulsation Dampener: 1/2" NPT(F) x 1/2" NPT (M)			
	Rev no	Date	Alterations
			Altd.
			Appd.
Prepared: KT	Checked: PS	Drawing No.	
Approved: CS	Date: 26.04.22	4-81-411-06218	
		Rev no.	Sheet no
		00	02 of 03



**DATA SHEETS FOR
PRESSURE GAUGES
(SPEC:PC:TSP:81008)**

PROJECT:
YADADRI 5 x 800 MW
CUSTOMER NO. 7299

Item No.	08	09
Rate Contract SI No.	-	-
Application	SCAPH & MILL INERTING	SERVICE AIR
Medium	<i>Steam</i>	<i>Air</i>
Range (kg/sq.cm)	<i>(0 - 25) Kg/sq.cm</i>	<i>(0 - 10) Kg/sq.cm</i>
Tag No.	50LBG73 CP501	50QFB10 CP501
	50LBG73 CP502	50QFB10 CP502
	50LBG73 CP503	
	50LBG74 CP501	
	50LBG74 CP502	
	50LBG74 CP503	
	50LBG77 CP501	
	50LBG80 CP501	
	50LBG80 CP502	
	<i>Spares- 1</i>	<i>Spares - 1</i>
Quantity / Boiler	11	3
Accuracy	← ±1 % of span or better →	
Mounting	← DIRECT →	
Dial Size	6"	6"
Case Material	← SS-304 →	
Window	← Shatterproof glass →	
Case Finish	← Epoxy Coated →	
Entry	← Bottom →	
Inst. Connection	← 1/2" NPT (M) →	
Model no.	← Bidder to furnish →	
Weight / piece	← Bidder to furnish →	
Accessories	<i>2 valve manifold, Adaptor (Type 2)</i>	<i>Adaptor (Type 1)</i>
NOTES:		
11) 2 Valve Manifold: 1/2" NPT(F) x 1/2" NPT (F)		
12) Blow out disc or diaphragm at the back		
	Rev no	Date
	Alterations	Altd.
	Appd.	
Prepared: KT	Checked: PS PS	Drawing No. 4-81-411-06218
Approved: CS	Date: 26.04.22	Rev no. 00
		Sheet no. 03 of 03



**DATA SHEETS FOR
PRESSURE GAUGES**
(SPEC:PC:TSP:81008)

PROJECT:
YADADRI 5 x 800 MW
CUSTOMER NO. 7298

Item No.	09			
Rate Contract Sl No.	-			
Application	SERVICE AIR			
Medium	Air			
Range (kg/sq.cm)	(0 - 10) Kg/sq.cm			
Tag No.	40QFB10 CP501			
	40QFB10 CP502			
	Spare - 1			
Quantity / Boiler	3			
Accuracy	← ±1 % of span or better →			
Mounting	← DIRECT →			
Dial Size	6"	6"	6"	6"
Case Material	← SS-304 →			
Window	← Shatterproof glass →			
Case Finish	← Epoxy Coated →			
Entry	← Bottom →			
Inst. Connection	← 1/2" NPT (M) →			
Model no.	← Bidder to furnish →			
Weight / piece	← Bidder to furnish →			
Accessories	Adaptor (Type 1)			

NOTES:
 1) Enclosure: IP65
 2) Movement assembly material: SS316
 3) Bourdon Material : SS316
 4) Over-range protection: 125% of maximum range by internal stop. External stop at zero.
 5) Adjustment : External Micrometer screw for zero. Internal micrometer screw for range.
 6) Nameplate : Tag number, service engraved in SS tag plate
 7) Adaptor Type 1: 1/2" NPT (F) x M20 x 1.5(M)
 8) Blow out disc or diaphragm at the back

Rev no	Date	Alterations	Altd.	Appd.

Prepared:	Checked:	Drawing No.	Rev no.	Sheet no
KT	PS	4-81-411-06219	00	01 of 01
Approved:	Date:			
CS	26.04.22			

ANNEXURE-A

4.00.00 LOCAL INSTRUMENTS

4.01.00 PRESSURE GAUGE

- | | | |
|--------------------------|---|--|
| 1. Type | : | Bourdon |
| 2. Sensing & Socket | : | SS-316 |
| 3. Movement Material | : | SS-316 |
| 4. Case Material | : | Stainless steel. IP-65 |
| 5. Dial Size | : | Generally 150 mm |
| 6. Scale | : | Black lettering on white in 270 O arc. |
| 7. Window | : | Shatterproof glass |
| 8. Range Selection | : | Normal process pressure: 50-70 % of range |
| 9. Over-range Protection | : | 125% of maximum range by internal stop. External stop at zero |
| 10. Adjustment | : | For Zero adjustment (Micrometer screw external)
For Range adjustment (Micrometer screw internal). |
| 11. Element Connection | : | Argon welding |
| 12. Process Connection | : | 1/2" NPT (M) Bottom for local, back for panel mounting |
| 13. Performance | : | Accuracy of ± 1.0 % of span or better |
| 14. Operating ambient | : | 0 - 50 °C |
| 15. Safety Feature | : | Blow out disc /diaphragm at the back |
| 16. Accessories | : | a) Snubbers for pulsating fluid application. discharge |
| 17. Nameplate | : | Tag number, service engraved in stainless steel tag plate |

TECHNICAL CATALOGUE

Material Code	L736618141101001
Item Description	PG 0-2.5 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-2.5 KG/SQ.CM, WITH ADAPTOR, AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:01 OF DATA SHEET DRG. NO:4-81-411-06173/00

TECHNICAL CATALOGUE

Material Code	L736618141101002
Item Description	PG 0-10 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-10 KG/SQ.CM, WITH ADAPTOR, AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:02 OF DATA SHEET DRG. NO:4-81-411-06173/00

TECHNICAL CATALOGUE

Material Code	L736618141101003
Item Description	PG 0-10 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-10 KG/SQ.CM, WITH 2 VALVE MANIFOLD, ADAPTOR & AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:03 OF DATA SHEET DRG. NO:4-81-411-06173/00

TECHNICAL CATALOGUE

Material Code	L736618141101004
Item Description	PG 0-10 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-10 KG/SQ.CM, WITH 2 VALVE MANIFOLD, ADAPTOR AND PULSATION DAMPENER, AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:04 OF DATA SHEET DRG. NO:4-81-411-06173/00

TECHNICAL CATALOGUE

Material Code	L736618141101005
Item Description	PG 0-16 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-16 KG/SQ.CM, WITH 2 VALVE MANIFOLD & ADAPTOR AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:05 OF DATA SHEET DRG. NO:4-81-411-06173/00

TECHNICAL CATALOGUE

Material Code	L736618141101006
Item Description	PG 0-16 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-16 KG/SQ.CM, WITH 2 VALVE MANIFOLD & ADAPTOR AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:06 OF DATA SHEET DRG. NO:4-81-411-06173/00

TECHNICAL CATALOGUE

Material Code	L736618141101007
Item Description	PG 0-16 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-16 KG/SQ.CM, WITH 2 VALVE MANIFOLD, ADAPTOR AND PULSATION DAMPENER, AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:07 OF DATA SHEET DRG. NO:4-81-411-06173/00

TECHNICAL CATALOGUE

Material Code	L736618141101008
Item Description	PG 0-25 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-25 KG/SQ.CM, WITH 2 VALVE MANIFOLD & ADAPTOR AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:08 OF DATA SHEET DRG. NO:4-81-411-06173/00

TECHNICAL CATALOGUE

Material Code	L736618141101009
Item Description	PG 0-250 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-250 KG/SQ.CM, WITH 2 VALVE MANIFOLD, ADAPTOR AND PULSATION DAMPENER, AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:09 OF DATA SHEET DRG. NO:4-81-411-06173/00

TECHNICAL CATALOGUE

Material Code	L736718141101001
Item Description	PG 0-2.5 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-2.5 KG/SQ.CM, WITH ADAPTOR, AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:01 OF DATA SHEET DRG. NO:4-81-411-06173/00

TECHNICAL CATALOGUE

Material Code	L736718141101002
Item Description	PG 0-10 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-10 KG/SQ.CM, WITH ADAPTOR, AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:02 OF DATA SHEET DRG. NO:4-81-411-06173/00

TECHNICAL CATALOGUE

Material Code	L736718141101003
Item Description	PG 0-10 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-10 KG/SQ.CM, WITH 2 VALVE MANIFOLD, ADAPTOR & AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:03 OF DATA SHEET DRG. NO:4-81-411-06173/00

TECHNICAL CATALOGUE

Material Code	L736718141101004
Item Description	PG 0-10 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-10 KG/SQ.CM, WITH 2 VALVE MANIFOLD, ADAPTOR AND PULSATION DAMPENER, AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:04 OF DATA SHEET DRG. NO:4-81-411-06173/00

TECHNICAL CATALOGUE

Material Code	L736718141101005
Item Description	PG 0-16 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-16 KG/SQ.CM, WITH 2 VALVE MANIFOLD & ADAPTOR AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:05 OF DATA SHEET DRG. NO:4-81-411-06173/00

TECHNICAL CATALOGUE

Material Code	L736718141101006
Item Description	PG 0-16 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-16 KG/SQ.CM, WITH 2 VALVE MANIFOLD & ADAPTOR AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:06 OF DATA SHEET DRG. NO:4-81-411-06173/00

TECHNICAL CATALOGUE

Material Code	L736718141101007
Item Description	PG 0-16 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-16 KG/SQ.CM, WITH 2 VALVE MANIFOLD, ADAPTOR AND PULSATION DAMPENER, AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:07 OF DATA SHEET DRG. NO:4-81-411-06173/00

TECHNICAL CATALOGUE

Material Code	L736718141101008
Item Description	PG 0-25 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-25 KG/SQ.CM, WITH 2 VALVE MANIFOLD & ADAPTOR AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:08 OF DATA SHEET DRG. NO:4-81-411-06173/00

TECHNICAL CATALOGUE

Material Code	L736718141101009
Item Description	PG 0-250 KG/SQ.CM
Detailed Description	PRESSURE GAUGE 0-250 KG/SQ.CM, WITH 2 VALVE MANIFOLD, ADAPTOR AND PULSATION DAMPENER, AS PER TECHNICAL SPECIFICATION NO:PC:TSP:81008 AND AS PER ITEM NO:09 OF DATA SHEET DRG. NO:4-81-411-06173/00

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**DATA SHEET FOR
PRESSURE GAUGES**
(SPEC.:PC:TSP:81008)

PROJECT :
UDANGUDI
2 x 660 MW
CUST. No. 7366 & 7367

Item No.	01	02	03	04
Application	Condensate Flash Tank	Service Air System	Condensate Pump Inlet	Condensate Pump Discharge
Medium	Water	Air	Water	Water
Range (kg/cm²)	0-2.5	0-10	0-10	0-10
Tag No.	90QHE10 CP501 Spare-1	QFB10 CP501 QFB10 CP502 QFB10 CP503 QFB10 CP504 QFB10 CP505 QFB10 CP506 Spare-1	LCL30 CP503 LCL30 CP504 Spare-1	LCL30 CP501 LCL30 CP502 Spare-1
Qty/ Boiler	2	7	3	3
Total Qty	4	14	6	6
Accuracy	← ±1% →			
Mounting	Direct	Direct	Direct	Direct
Dial Size	6"	6"	6"	6"
Case Material	← SS 304 →			
Window	← Shatter proof toughened glass →			
Entry	← Bottom →			
Inst. Connection	← 1/2" NPT (M) →			
Model no.	← Bidder to furnish →			
Accessories	a) Adaptor (Type 2)	a) Adaptor (Type 2)	a) 2 Vlv manifold, b) Adaptor (Type 1)	a) 2 Vlv manifold, b) Adaptor (Type 1) c) Pulsation Dampener

- NOTES:**
1. Enclosure: IP65
 2. Movement assembly material: SS304
 3. 2 Valve manifold must be 1/2"NPT(F) X 1/2"NPT(F)
 4. Pulsational dampner must be 1/2"NPT(F) X 1/2"NPT(M)

Rev. No.	Date	Alterations				Aldd.	Appd.			

Prpd.: MS *[Signature]* Chkd.: BS *[Signature]* Drg. No. 4-81-411-06173 Rev. 00 SHT. 01 OF 04
 Appd.: RP *[Signature]* Date: 27.11.19

CI-02
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**DATA SHEET FOR
 PRESSURE GAUGES**
(SPEC.:PC:TSP:81008)

PROJECT :
 UDANGUDI
 2 x 660 MW
CUST. No. 7366 & 7367

Item No.	05			
Application	Cooling Water System			
Medium	Water			
Range (kg/cm²)	0-16			
Tag No.	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; border-right: 1px solid black;"> QHX10 CP501 QHX11 CP501 QHX12 CP501 QHX12 CP502 QHX13 CP501 QHX13 CP502 QHX16 CP501 QHX16 CP502 QHX20 CP501 QHX20 CP502 QHX20 CP505 </td> <td style="width: 33%; border-right: 1px solid black;"> QHX17 CP501 to QHX17 CP504 QHX21 CP501 to QHX21 CP510 QHX22 CP501 to QHX22 CP510 QHX23 CP501 to QHX23 P504 </td> <td style="width: 33%;"> QHX24 CP501 to QHX24 CP504 QHX25 CP501 to QHX25 CP504 QHX26 CP501 to QHX26 CP504 QHX27 CP501 to QHX27 CP508 QHX28 CP501 to QHX28 CP508 QHX31 CP501 to QHX37 CP501 QHX31 CP502 to QHX37 CP502 QHX31 CP503 to QHX37 CP503 QHX31 CP504 to QHX37 CP504 Spare-9 </td> </tr> </table>	QHX10 CP501 QHX11 CP501 QHX12 CP501 QHX12 CP502 QHX13 CP501 QHX13 CP502 QHX16 CP501 QHX16 CP502 QHX20 CP501 QHX20 CP502 QHX20 CP505	QHX17 CP501 to QHX17 CP504 QHX21 CP501 to QHX21 CP510 QHX22 CP501 to QHX22 CP510 QHX23 CP501 to QHX23 P504	QHX24 CP501 to QHX24 CP504 QHX25 CP501 to QHX25 CP504 QHX26 CP501 to QHX26 CP504 QHX27 CP501 to QHX27 CP508 QHX28 CP501 to QHX28 CP508 QHX31 CP501 to QHX37 CP501 QHX31 CP502 to QHX37 CP502 QHX31 CP503 to QHX37 CP503 QHX31 CP504 to QHX37 CP504 Spare-9
QHX10 CP501 QHX11 CP501 QHX12 CP501 QHX12 CP502 QHX13 CP501 QHX13 CP502 QHX16 CP501 QHX16 CP502 QHX20 CP501 QHX20 CP502 QHX20 CP505	QHX17 CP501 to QHX17 CP504 QHX21 CP501 to QHX21 CP510 QHX22 CP501 to QHX22 CP510 QHX23 CP501 to QHX23 P504	QHX24 CP501 to QHX24 CP504 QHX25 CP501 to QHX25 CP504 QHX26 CP501 to QHX26 CP504 QHX27 CP501 to QHX27 CP508 QHX28 CP501 to QHX28 CP508 QHX31 CP501 to QHX37 CP501 QHX31 CP502 to QHX37 CP502 QHX31 CP503 to QHX37 CP503 QHX31 CP504 to QHX37 CP504 Spare-9		
Qty/ Boiler	104			
Total Qty	208			

Accuracy	← ±1% →
Mounting	Direct
Dial Size	6"
Case Material	← SS 304 →
Window	← Shatter proof toughened glass →
Entry	← Bottom →
Inst. Connection	← 1/2" NPT (M) →
Model no.	← Bidder to furnish →
Accessories	a) 2 Valve manifold, b) Adaptor (Type 1)

NOTES:							
5. Adaptor Type 1: M20 X 1.5(M) X 1/2" NPT(M)							
6. Adaptor Type 2: M20 X 1.5(M) X 1/2" NPT(F)							
7. Over range protection: 125% of maximum							
8. Adjustment: Micrometer screw for zero adjustment Internal Micrometer screw for range adjustment							
Prpd.:	Chkd.:	Drg. No.	Rev. No.	Date	Alterations	Altd.	Appd.
MS	BS	4-81-411-06173	00	27.11.19			SHT. 02 OF 04

CI-02
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**DATA SHEET FOR
 PRESSURE GAUGES**
(SPEC.:PC:TSP:81008)

PROJECT :
 UDANGUDI
 2 x 660 MW
CUST. No. 7366 & 7367

Item No.	06	07
Application	APH WW & FF Inst Air Mill FF	Cooling Water Pump Discharge
Medium	Water / Air	Water
Range (kg/cm²)	0-16	0-16
Tag No.	SDA10 CP501 SGA10 CP501 QFA10 CP501 to QFA10 CP515 SGA51 CP501 SGA51 CP502 Spare-2	QHX20 CP503 QHX20 CP504 Spare-1
Qty/ Boiler	21	3
Total Qty	42	6
Accuracy	←————— ±1% —————→	
Mounting	Direct	Direct
Dial Size	6"	6"
Case Material	←————— SS 304 —————→	
Window	←————— Shatter proof toughened glass —————→	
Entry	←————— Bottom —————→	
Inst. Connection	←————— 1/2" NPT (M) —————→	
Model no.	←————— Bidder to furnish —————→	
Accessories	a) 2 Valve manifold, b) Adaptor (Type 1)	a) 2 Vlv manifold, b) Adaptor (Type 1) c) Pulsation Dampener

NOTES:
 9. For Unit-1, Tag Nos. are to be prefixed with 10 & for Unit-2, Tag Nos. are to be prefixed with 20 For common systems (Item No:01), tag number shall be with 90

Rev. No.	Date	Alterations	Altd.	Appd.

Prpd.: MS Mv	Chkd.: BS	Drg. No. 4-81-411-06173	Rev. 00	SHT. 03 OF 04
Appd.: RP for SA	Date: 27.11.19			

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**DATA SHEET FOR
PRESSURE GAUGES**
(SPEC.:PC:TSP:81008)

PROJECT :
UDANGUDI
2 x 660 MW
CUST. No. 7366 & 7367

Item No.	08	09	
Application	Aux steam to Mills SCAPH System	Water Wash Booster Pump Discharge	
Medium	Steam	Water	
Range (kg/cm²)	0-25	0-250	
Tag No.	LBG80 CP501 LBG80 CP502 LBG70 CP501 LBG73 CP501 LBG73 CP502 LBG73 CP503 LBG74 CP501 LBG74 CP502 LBG74 CP503 LBG77 CP501 Spare-2	SDA20 CP501 Spare-1	
Qty/ Boiler	12	2	
Total Qty	24	4	

Accuracy	← ±1% →		
Mounting	Direct	Direct	
Dial Size	6"	6"	
Case Material	← SS 304 →		
Window	← Shatter proof toughened glass →		
Entry	← Bottom →		
Inst. Connection	← 1/2" NPT (M) →		
Model no.	← Bidder to furnish →		
Accessories	a) 2 Vlv manifold, b) Adaptor (Type 1)	a) 2 Vlv manifold, b) Adaptor (Type 1) c) Pulsation Dampener	

NOTES:

10. Name Plate:
Tag No. and Service shall be engraved in SS Tag Plate

Rev. No.	Date	Alterations	Altd.	Appd.

Prpd.: MS <i>[Signature]</i>	Chkd.: BS <i>[Signature]</i>	Drg. No. 4-81-411-06173	Rev. 00	SHT. 04 OF 04
Appd.: RP <i>[Signature]</i>	Date: 27.11.19			

TECHNICAL CATALOGUE

Material Code	L182819728401021
Item Description	PI BOURDON RANGE: (-)1 - 1 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: (-)1 - 1 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828/01 Sl. nos: 1 to 4. Applicable Tag nos: 00HJF11CP501, 00HJF12CP501, 00HJF13CP501 & 00HJF40CP501

TECHNICAL CATALOGUE

Material Code	L182819728401022
Item Description	PI BOURDON RANGE: 0 - 6 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 6 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828/01 Sl. nos: 5. Applicable Tag nos: 00HJF14CP502

TECHNICAL CATALOGUE

Material Code	L182819728401023
Item Description	PI BOURDON RANGE: 0 - 10 KG/CM ²
Detailed Description	<p>Pressure Gauges, Bourdon Type Range: 0 - 10 Kg/cm² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828/01 Sl. nos: 6 to 29. Applicable Tag nos: 00HJP01CP501, 00HJP01CP502, 10HJA11CP502, 10HJA12CP502, 10HJA13CP502, 10HJA14CP502, 10HJA21CP502, 10HJA22CP502, 10HJA23CP502, 10HJA24CP502, 10HJA31CP502, 10HJA32CP502, 10HJA33CP502, 10HJA34CP502, 10HJA41CP502, 10HJA42CP502, 10HJA43CP502, 10HJA44CP502, 10HJA51CP502, 10HJA52CP502, 10HJA53CP502, 10HJA54CP502, 10HJM20CP502 & 10HJN10CP501</p>

TECHNICAL CATALOGUE

Material Code	L182819728401024
Item Description	PI BOURDON RANGE: 0 - 16 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 16 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828/01 Sl. nos: 30 to 32. Applicable Tag nos: 00HJT01CP502, 00HJT03CP502 & 00HJT05CP502

TECHNICAL CATALOGUE

Material Code	L182819728401025
Item Description	PI BOURDON RANGE: 0 - 25 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 25 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828/01 Sl. nos: 33 to 37. Applicable Tag nos: 00HJT01CP501, 00HJT03CP501, 00HJT05CP501, 10HJF80CP503 & 10HJM20CP501

TECHNICAL CATALOGUE

Material Code	L182819728401026
Item Description	PI BOURDON RANGE: 0 - 40 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 40 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828/01 Sl. nos: 38 & 42 to 46. Applicable Tag nos: 10HAG27CP502, 00HJF14CP501, 00HJF20CP501, 10HAG27CP501, 10HJF80CP501 & 10HJF80CP502

TECHNICAL CATALOGUE

Material Code	L182819728401027
Item Description	PI BOURDON RANGE: 0 - 40 KG/CM ² WITH PD
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 40 Kg/cm ² 150 mm Dial with Pulsating Dampener as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828/01 Sl. nos: 39 to 41. Applicable Tag nos: 00HJF11CP502, 00HJF12CP502 & 00HJF13CP502

TECHNICAL CATALOGUE

Material Code	L182819728401028
Item Description	PI BOURDON RANGE: 0 - 60 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 60 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828/01 Sl. nos: 47 to 56. Applicable Tag nos: 10HCB01CP501, 10HCB02CP501, 10HCB03CP501, 10HCB03CP502, 10HCB03CP503, 10HCB03CP504, 10HCB04CP501, 10HCB05CP501, 10HCB06CP501 & 10LCR25CP501

TECHNICAL CATALOGUE

Material Code	L182819728401029
Item Description	PI BOURDON RANGE: 0 - 100 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 100 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828/01 Sl. nos: 57. Applicable Tag nos: 10HCB00CP501

TECHNICAL CATALOGUE

Material Code	L182819728401030
Item Description	PI BOURDON RANGE: 0 - 160 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 160 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828/01 Sl. nos: 58 to 59. Applicable Tag nos: 10LAE21CP501 & 10LAE22CP501

TECHNICAL CATALOGUE

Material Code	L182819728401031
Item Description	PI BOURDON RANGE: 0 - 400 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 400 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828/01 Sl. nos: 60 to 65. Applicable Tag nos: 10HCB00CP502, 10LAE20CP501, 10LAE71CP501, 10LAE72CP501, 10LAE91CP501 & 10LAE92CP501

TECHNICAL CATALOGUE

Material Code	L182819728401032
Item Description	PI BOURDON RANGE: 0 - 600 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 600 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828/01 Sl. nos: 66 to 68. Applicable Tag nos: 10HAC10CP501, 10LAE70CP501 & 10LAE90CP501

TECHNICAL CATALOGUE

Material Code	L182819728401033
Item Description	PI DRAFT RANGE: (-)1000 - 0 MMWC
Detailed Description	Pressure Gauges, Draft Type Range: (-)1000 - 0 mmWC 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101A/1828/00 Sl. nos:1 to 2. Applicable Tag nos: 10HNC11CP501 & 10HNC21CP501

TECHNICAL CATALOGUE

Material Code	L182819728401034
Item Description	PI DRAFT RANGE: (-)250 - 250 MMWC
Detailed Description	Pressure Gauges, Draft Type Range: (-)250 - 250 mmWC 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101A/1828/00 Sl. nos:3. Applicable Tag nos: 10HBK30CP501

TECHNICAL CATALOGUE

Material Code	L182819728401035
Item Description	PI DRAFT RANGE: 0 - 600 MMWC
Detailed Description	Pressure Gauges, Draft Type Range: 0 - 600 mmWC 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101A/1828/00 Sl. nos:4 to 7. Applicable Tag nos: 10HLA12CP501, 10HLA22CP501, 10HNC12CP501 & 10HNC22CP501

TECHNICAL CATALOGUE

Material Code	L182819728401036
Item Description	PI DRAFT RANGE: 0 - 1000 MMWC
Detailed Description	Pressure Gauges, Draft Type Range: 0 - 1000 mmWC 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101A/1828/00 Sl. nos:8. Applicable Tag nos: 10HHS01CP501

TECHNICAL CATALOGUE

Material Code	L182819728401037
Item Description	PI DRAFT RANGE: 0 - 2000 MMWC
Detailed Description	Pressure Gauges, Draft Type Range: 0 - 2000 mmWC 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101A/1828/00 Sl. nos:9 to 11. Applicable Tag nos: 10HFE02CP501, 10HFE06CP501 & 10HFW10CP501

TECHNICAL CATALOGUE

Material Code	L182819728401038
Item Description	PI DRAFT RANGE: (-)250 - 250 MMWC (FMG)
Detailed Description	Pressure Gauges, Draft Type Range: (-)250 - 250 mmWC 250 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101A/1828/00 Sl. nos:12 to 13. Applicable Tag nos: 10HBK10CP501 & 10HBK30CP502

TECHNICAL CATALOGUE

Material Code	L182819728401039
Item Description	PI DRAFT RANGE: 0 - 160 MMWC (FMG)
Detailed Description	Pressure Gauges, Draft Type Range: 0 - 160 mmWC 250 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101A/1828/00 Sl. nos:14 to 15. Applicable Tag nos: 10HLA18CP501 & 10HLA28CP501

TECHNICAL CATALOGUE

Material Code	L182819728401040
Item Description	PI DIAPHRAGM RANGE: (-)1 - 1 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: (-)1 - 1 Kg/cm ² 150 mm Dial as per spec ref: TCI:102/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:102/1828/01 Sl. nos:1 to 6. Applicable Tag nos: 00HJF40CP501, 00HJF41CP501, 00HJF42CP501, 00HJF43CP501, 10HJF92CP501 & 10HJF92CP502

TECHNICAL CATALOGUE

Material Code	L182819728401041
Item Description	PI DIAPHRAGM RANGE: 0 - 6 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: 0 - 6 Kg/cm ² 150 mm Dial as per spec ref: TCI:102/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:102/1828/01 Sl. nos:7 to 8. Applicable Tag nos: 00HJF54CP501 & 00HJF54CP502

TECHNICAL CATALOGUE

Material Code	L182819728401042
Item Description	PI DIAPHRAGM RANGE: 0 - 16 KG/CM ²
Detailed Description	<p>Pressure Gauges, Diaphragm Type Range: 0 - 16 Kg/cm² 150 mm Dial as per spec ref: TCI:102/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:102/1828/01 Sl. nos:9 to 29. Applicable Tag nos: 10HJA11CP501, 10HJA12CP501, 10HJA13CP501, 10HJA14CP501, 10HJA21CP501, 10HJA22CP501, 10HJA23CP501, 10HJA24CP501, 10HJA31CP501, 10HJA32CP501, 10HJA33CP501, 10HJA34CP501, 10HJA41CP501, 10HJA42CP501, 10HJA43CP501, 10HJA44CP501, 10HJA51CP501, 10HJA52CP501, 10HJA53CP501, 10HJA54CP501 & 10HJF92CP503</p>

TECHNICAL CATALOGUE

Material Code	L182819728401043
Item Description	PI DIAPHRAGM RANGE: 0 - 25 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: 0 - 25 Kg/cm ² 150 mm Dial as per spec ref: TCI:102/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:102/1828/01 Sl. nos:30 to 32. Applicable Tag nos: 10HJF50CP503, 10HJF50CP504 & 10HJF54CP501

TECHNICAL CATALOGUE

Material Code	L182819728401044
Item Description	PI DIAPHRAGM RANGE: 0 - 40 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: 0 - 40 Kg/cm ² 150 mm Dial as per spec ref: TCI:102/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:102/1828/01 Sl. nos:33 to 39. Applicable Tag nos: 00HJF41CP502, 00HJF42CP502, 00HJF43CP502, 00HJF50CP501, 00HJF60CP501, 10HJF50CP501 & 10HJF50CP502

TECHNICAL CATALOGUE

Material Code	L182919728401016
Item Description	PI BOURDON RANGE: 0 - 10 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 10 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1829/01 Sl. nos: 1 to 22. Applicable Tag nos: 20HJA11CP502, 20HJA12CP502, 20HJA13CP502, 20HJA14CP502, 20HJA21CP502, 20HJA22CP502, 20HJA23CP502, 20HJA24CP502, 20HJA31CP502, 20HJA32CP502, 20HJA33CP502, 20HJA34CP502, 20HJA41CP502, 20HJA42CP502, 20HJA43CP502, 20HJA44CP502, 20HJA51CP502, 20HJA52CP502, 20HJA53CP502, 20HJA54CP502, 20HJM20CP502 & 20HJN10CP501

TECHNICAL CATALOGUE

Material Code	L182919728401017
Item Description	PI BOURDON RANGE: 0 - 25 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 25 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1829/01 Sl. nos: 23 to 24. Applicable Tag nos: 20HJF80CP503 & 20HJM20CP501

TECHNICAL CATALOGUE

Material Code	L182919728401018
Item Description	PI BOURDON RANGE: 0 - 40 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 40 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1829/01 Sl. nos: 25 to 28. Applicable Tag nos: 20HAG27CP502, 20HAG27CP501, 20HJF80CP501 & 20HJF80CP502

TECHNICAL CATALOGUE

Material Code	L182919728401019
Item Description	PI BOURDON RANGE: 0 - 60 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 60 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1829/01 Sl. nos: 29 to 38. Applicable Tag nos: 20HCB01CP501, 20HCB02CP501, 20HCB03CP501, 20HCB03CP502, 20HCB03CP503, 20HCB03CP504, 20HCB04CP501, 20HCB05CP501, 20HCB06CP501 & 20LCR25CP501

TECHNICAL CATALOGUE

Material Code	L182919728401020
Item Description	PI BOURDON RANGE: 0 - 100 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 100 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1829/01 Sl. nos: 39. Applicable Tag nos: 20HCB00CP501

TECHNICAL CATALOGUE

Material Code	L182919728401021
Item Description	PI BOURDON RANGE: 0 - 160 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 160 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1829/01 Sl. nos: 40 to 41. Applicable Tag nos: 20LAE21CP501 & 20LAE22CP501

TECHNICAL CATALOGUE

Material Code	L182919728401022
Item Description	PI BOURDON RANGE: 0 - 400 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 400 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1829/01 Sl. nos: 42 to 47. Applicable Tag nos: 20HCB00CP502, 20LAE20CP501, 20LAE71CP501, 20LAE72CP501, 20LAE91CP501 & 20LAE92CP501

TECHNICAL CATALOGUE

Material Code	L182919728401023
Item Description	PI BOURDON RANGE: 0 - 600 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 600 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1829/01 Sl. nos: 48 to 50. Applicable Tag nos: 20HAC10CP501, 20LAE70CP501 & 20LAE90CP501

TECHNICAL CATALOGUE

Material Code	L182919728401024
Item Description	PI DRAFT RANGE: (-)1000 - 0 MMWC
Detailed Description	Pressure Gauges, Draft Type Range: (-)1000 - 0 mmWC 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101A/1828/00 Sl. nos:1 to 2. Applicable Tag nos: 10HNC11CP501 & 10HNC21CP501

TECHNICAL CATALOGUE

Material Code	L182919728401025
Item Description	PI DRAFT RANGE: (-)250 - 250 MMWC
Detailed Description	Pressure Gauges, Draft Type Range: (-)250 - 250 mmWC 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101A/1828/00 Sl. nos:3. Applicable Tag nos: 10HBK30CP501

TECHNICAL CATALOGUE

Material Code	L182919728401026
Item Description	PI DRAFT RANGE: 0 - 600 MMWC
Detailed Description	Pressure Gauges, Draft Type Range: 0 - 600 mmWC 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101A/1828/00 Sl. nos:4 to 7. Applicable Tag nos: 10HLA12CP501, 10HLA22CP501, 10HNC12CP501 & 10HNC22CP501

TECHNICAL CATALOGUE

Material Code	L182919728401027
Item Description	PI DRAFT RANGE: 0 - 1000 MMWC
Detailed Description	Pressure Gauges, Draft Type Range: 0 - 1000 mmWC 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101A/1828/00 Sl. nos:8. Applicable Tag nos: 10HHS01CP501

TECHNICAL CATALOGUE

Material Code	L182919728401028
Item Description	PI DRAFT RANGE: 0 - 2000 MMWC
Detailed Description	Pressure Gauges, Draft Type Range: 0 - 2000 mmWC 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101A/1828/00 Sl. nos:9 to 11. Applicable Tag nos: 10HFE02CP501, 10HFE06CP501 & 10HFW10CP501

TECHNICAL CATALOGUE

Material Code	L182919728401029
Item Description	PI DRAFT RANGE: (-)250 - 250 MMWC (FMG)
Detailed Description	Pressure Gauges, Draft Type Range: (-)250 - 250 mmWC 250 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101A/1828/00 Sl. nos:12 to 13. Applicable Tag nos: 10HBK10CP501 & 10HBK30CP502

TECHNICAL CATALOGUE

Material Code	L182919728401030
Item Description	PI DRAFT RANGE: 0 - 160 MMWC (FMG)
Detailed Description	Pressure Gauges, Draft Type Range: 0 - 160 mmWC 250 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101A/1828/00 Sl. nos:14 to 15. Applicable Tag nos: 10HLA18CP501 & 10HLA28CP501

TECHNICAL CATALOGUE

Material Code	L182919728401031
Item Description	PI DIAPHRAGM RANGE: (-)1 - 1 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: (-)1 - 1 Kg/cm ² 150 mm Dial as per spec ref: TCI:102/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:102/1829/01 Sl. nos:1 to 2. Applicable Tag nos: 20HJF92CP501 & 20HJF92CP502

TECHNICAL CATALOGUE

Material Code	L182919728401032
Item Description	PI DIAPHRAGM RANGE: 0 - 16 KG/CM ²
Detailed Description	<p>Pressure Gauges, Diaphragm Type Range: 0 - 16 Kg/cm² 150 mm Dial as per spec ref: TCI:102/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:102/1829/01 Sl. nos:3 to 23. Applicable Tag nos: 20HJA11CP501, 20HJA12CP501, 20HJA13CP501, 20HJA14CP501, 20HJA21CP501, 20HJA22CP501, 20HJA23CP501, 20HJA24CP501, 20HJA31CP501, 20HJA32CP501, 20HJA33CP501, 20HJA34CP501, 20HJA41CP501, 20HJA42CP501, 20HJA43CP501, 20HJA44CP501, 20HJA51CP501, 20HJA52CP501, 20HJA53CP501, 20HJA54CP501 & 20HJF92CP503</p>

TECHNICAL CATALOGUE

Material Code	L182919728401033
Item Description	PI DIAPHRAGM RANGE: 0 - 25 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: 0 - 25 Kg/cm ² 150 mm Dial as per spec ref: TCI:102/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:102/1829/01 Sl. nos:24 to 26. Applicable Tag nos: 20HJF50CP503, 20HJF50CP504 & 20HJF54CP501

TECHNICAL CATALOGUE

Material Code	L182919728401034
Item Description	PI DIAPHRAGM RANGE: 0 - 40 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: 0 - 40 Kg/cm ² 150 mm Dial as per spec ref: TCI:102/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:102/1829/01 Sl. nos:27 to 28. Applicable Tag nos: 20HJF50CP501 & 20HJF50CP502

TECHNICAL CATALOGUE

Material Code	L183019728401016
Item Description	PI BOURDON RANGE: 0 - 10 KG/CM ²
Detailed Description	<p>Pressure Gauges, Bourdon Type Range: 0 - 10 Kg/cm² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1830/01 Sl. nos: 1 to 22. Applicable Tag nos: 30HJA11CP502, 30HJA12CP502, 30HJA13CP502, 30HJA14CP502, 30HJA21CP502, 30HJA22CP502, 30HJA23CP502, 30HJA24CP502, 30HJA31CP502, 30HJA32CP502, 30HJA33CP502, 30HJA34CP502, 30HJA41CP502, 30HJA42CP502, 30HJA43CP502, 30HJA44CP502, 30HJA51CP502, 30HJA52CP502, 30HJA53CP502, 30HJA54CP502, 30HJM20CP502 & 30HJN10CP501</p>

TECHNICAL CATALOGUE

Material Code	L183019728401017
Item Description	PI BOURDON RANGE: 0 - 25 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 25 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1830/01 Sl. nos: 23 to 24. Applicable Tag nos: 30HJF80CP503 & 30HJM20CP501

TECHNICAL CATALOGUE

Material Code	L183019728401018
Item Description	PI BOURDON RANGE: 0 - 40 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 40 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1830/01 Sl. nos: 25 to 28. Applicable Tag nos: 30HAG27CP502, 30HAG27CP501, 30HJF80CP501 & 30HJF80CP502

TECHNICAL CATALOGUE

Material Code	L183019728401019
Item Description	PI BOURDON RANGE: 0 - 60 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 60 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1830/01 Sl. nos: 29 to 38. Applicable Tag nos: 30HCB01CP501, 30HCB02CP501, 30HCB03CP501, 30HCB03CP502, 30HCB03CP503, 30HCB03CP504, 30HCB04CP501, 30HCB05CP501, 30HCB06CP501 & 30LCR25CP501

TECHNICAL CATALOGUE

Material Code	L183019728401020
Item Description	PI BOURDON RANGE: 0 - 100 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 100 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1830/01 Sl. nos: 39. Applicable Tag nos: 30HCB00CP501

TECHNICAL CATALOGUE

Material Code	L183019728401021
Item Description	PI BOURDON RANGE: 0 - 160 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 160 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1830/01 Sl. nos: 40 to 41. Applicable Tag nos: 30LAE21CP501 & 30LAE22CP501

TECHNICAL CATALOGUE

Material Code	L183019728401022
Item Description	PI BOURDON RANGE: 0 - 400 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 400 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1830/01 Sl. nos: 42 to 47. Applicable Tag nos: 30HCB00CP502, 30LAE20CP501, 30LAE71CP501, 30LAE72CP501, 30LAE91CP501 & 30LAE92CP501

TECHNICAL CATALOGUE

Material Code	L183019728401023
Item Description	PI BOURDON RANGE: 0 - 600 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 600 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1830/01 Sl. nos: 48 to 50. Applicable Tag nos: 30HAC10CP501, 30LAE70CP501 & 30LAE90CP501

TECHNICAL CATALOGUE

Material Code	L183019728401024
Item Description	PI DRAFT RANGE: (-)1000 - 0 MMWC
Detailed Description	Pressure Gauges, Draft Type Range: (-)1000 - 0 mmWC 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101A/1828/00 Sl. nos:1 to 2. Applicable Tag nos: 10HNC11CP501 & 10HNC21CP501

TECHNICAL CATALOGUE

Material Code	L183019728401025
Item Description	PI DRAFT RANGE: (-)250 - 250 MMWC
Detailed Description	Pressure Gauges, Draft Type Range: (-)250 - 250 mmWC 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101A/1828/00 Sl. nos:3. Applicable Tag nos: 10HBK30CP501

TECHNICAL CATALOGUE

Material Code	L183019728401026
Item Description	PI DRAFT RANGE: 0 - 600 MMWC
Detailed Description	Pressure Gauges, Draft Type Range: 0 - 600 mmWC 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101A/1828/00 Sl. nos:4 to 7. Applicable Tag nos: 10HLA12CP501, 10HLA22CP501, 10HNC12CP501 & 10HNC22CP501

TECHNICAL CATALOGUE

Material Code	L183019728401027
Item Description	PI DRAFT RANGE: 0 - 1000 MMWC
Detailed Description	Pressure Gauges, Draft Type Range: 0 - 1000 mmWC 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101A/1828/00 Sl. nos:8. Applicable Tag nos: 10HHS01CP501

TECHNICAL CATALOGUE

Material Code	L183019728401028
Item Description	PI DRAFT RANGE: 0 - 2000 MMWC
Detailed Description	Pressure Gauges, Draft Type Range: 0 - 2000 mmWC 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101A/1828/00 Sl. nos:9 to 11. Applicable Tag nos: 10HFE02CP501, 10HFE06CP501 & 10HFW10CP501

TECHNICAL CATALOGUE

Material Code	L183019728401029
Item Description	PI DRAFT RANGE: (-)250 - 250 MMWC (FMG)
Detailed Description	Pressure Gauges, Draft Type Range: (-)250 - 250 mmWC 250 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101A/1828/00 Sl. nos:12 to 13. Applicable Tag nos: 10HBK10CP501 & 10HBK30CP502

TECHNICAL CATALOGUE

Material Code	L183019728401030
Item Description	PI DRAFT RANGE: 0 - 160 MMWC (FMG)
Detailed Description	Pressure Gauges, Draft Type Range: 0 - 160 mmWC 250 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101A/1828/00 Sl. nos:14 to 15. Applicable Tag nos: 10HLA18CP501 & 10HLA28CP501

TECHNICAL CATALOGUE

Material Code	L183019728401031
Item Description	PI DIAPHRAGM RANGE: (-)1 - 1 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: (-)1 - 1 Kg/cm ² 150 mm Dial as per spec ref: TCI:102/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:102/1830/01 Sl. nos:1 to 2. Applicable Tag nos: 30HJF92CP501 & 30HJF92CP502

TECHNICAL CATALOGUE

Material Code	L183019728401032
Item Description	PI DIAPHRAGM RANGE: 0 - 16 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: 0 - 16 Kg/cm ² 150 mm Dial as per spec ref: TCI:102/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:102/1830/01 Sl. nos:3 to 23. Applicable Tag nos: 30HJA11CP501, 30HJA12CP501, 30HJA13CP501, 30HJA14CP501, 30HJA21CP501, 30HJA22CP501, 30HJA23CP501, 30HJA24CP501, 30HJA31CP501, 30HJA32CP501, 30HJA33CP501, 30HJA34CP501, 30HJA41CP501, 30HJA42CP501, 30HJA43CP501, 30HJA44CP501, 30HJA51CP501, 30HJA52CP501, 30HJA53CP501, 30HJA54CP501 & 30HJF92CP503

TECHNICAL CATALOGUE

Material Code	L183019728401033
Item Description	PI DIAPHRAGM RANGE: 0 - 25 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: 0 - 25 Kg/cm ² 150 mm Dial as per spec ref: TCI:102/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:102/1830/01 Sl. nos:24 to 26. Applicable Tag nos: 30HJF50CP503, 30HJF50CP504 & 30HJF54CP501

TECHNICAL CATALOGUE

Material Code	L183019728401035
Item Description	PI DIAPHRAGM RANGE: 0 - 40 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: 0 - 40 Kg/cm ² 150 mm Dial as per spec ref: TCI:102/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:102/1830/01 Sl. nos:27 to 28. Applicable Tag nos: 30HJF50CP501 & 30HJF50CP502

TECHNICAL CATALOGUE

Material Code	L1828S9728401001
Item Description	PI BOURDON RANGE: (-)1 - 1 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: (-)1 - 1 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828-S/00 Sl. nos: 1

TECHNICAL CATALOGUE

Material Code	L1828S9728401002
Item Description	PI BOURDON RANGE: 0 - 6 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 6 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828-S/00 Sl. nos: 2

TECHNICAL CATALOGUE

Material Code	L1828S9728401013
Item Description	PI Draft Range: (-)1000 - 0 mmWC
Detailed Description	Pressure Gauges, Draft Type Range: (-)1000 - 0 mmWC 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828-S/00 Sl. nos: 13

TECHNICAL CATALOGUE

Material Code	L1828S9728401014
Item Description	PI Draft Range: (-)250 - 250 mmWC
Detailed Description	Pressure Gauges, Draft Type Range: (-)250 - 250 mmWC 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828-S/00 Sl. nos: 14

TECHNICAL CATALOGUE

Material Code	L1828S9728401015
Item Description	PI Draft Range: 0 - 600 mmWC
Detailed Description	Pressure Gauges, Draft Type Range: 0 - 600 mmWC 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828-S/00 Sl. nos: 15

TECHNICAL CATALOGUE

Material Code	L1828S9728401016
Item Description	PI Draft Range: 0 - 1000 mmWC
Detailed Description	Pressure Gauges, Draft Type Range: 0 - 1000 mmWC 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828-S/00 Sl. nos: 16

TECHNICAL CATALOGUE

Material Code	L1828S9728401017
Item Description	PI Draft Range: 0 - 2000 mmWC
Detailed Description	Pressure Gauges, Draft Type Range: 0 - 2000 mmWC 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828-S/00 Sl. nos: 17

TECHNICAL CATALOGUE

Material Code	L1828S9728401018
Item Description	PI DRAFT RANGE: (-)250 - 250 MMWC (FMG)
Detailed Description	Pressure Gauges, Draft Type Range: (-)250 - 250 mmWC 250 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828-S/00 Sl. nos: 18

TECHNICAL CATALOGUE

Material Code	L1828S9728401019
Item Description	PI DRAFT RANGE: 0 - 160 MMWC (FMG)
Detailed Description	Pressure Gauges, Draft Type Range: 0 - 160 mmWC 250 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828-S/00 Sl. nos: 19

TECHNICAL CATALOGUE

Material Code	L1828S9728401020
Item Description	PI DIAPHRAGM RANGE: (-)1 - 1 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: (-)1 - 1 Kg/cm ² 150 mm Dial as per spec ref: TCI:102/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828-S/00 Sl. nos: 20

TECHNICAL CATALOGUE

Material Code	L1828S9728401003
Item Description	PI BOURDON RANGE: 0 - 10 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 10 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828-S/00 Sl. nos: 3

TECHNICAL CATALOGUE

Material Code	L1828S9728401004
Item Description	PI BOURDON RANGE: 0 - 16 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 16 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828-S/00 Sl. nos: 4

TECHNICAL CATALOGUE

Material Code	L1828S9728401005
Item Description	PI BOURDON RANGE: 0 - 25 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 25 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828-S/00 Sl. nos: 5

TECHNICAL CATALOGUE

Material Code	L1828S9728401006
Item Description	PI BOURDON RANGE: 0 - 40 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 40 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828-S/00 Sl. nos: 6

TECHNICAL CATALOGUE

Material Code	L1828S9728401007
Item Description	PI BOURDON RANGE: 0 - 40 KG/CM ² WITH PD
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 40 Kg/cm ² 150 mm Dial with Pulsating Dampener as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828-S/00 Sl. nos: 7

TECHNICAL CATALOGUE

Material Code	L1828S9728401008
Item Description	PI BOURDON RANGE: 0 - 60 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 60 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828-S/00 Sl. nos: 8

TECHNICAL CATALOGUE

Material Code	L1828S9728401009
Item Description	PI BOURDON RANGE: 0 - 100 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 100 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828-S/00 Sl. nos: 9

TECHNICAL CATALOGUE

Material Code	L1828S9728401010
Item Description	PI BOURDON RANGE: 0 - 160 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 160 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828-S/00 Sl. nos: 10

TECHNICAL CATALOGUE

Material Code	L1828S9728401011
Item Description	PI BOURDON RANGE: 0 - 400 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 400 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828-S/00 Sl. nos: 11

TECHNICAL CATALOGUE

Material Code	L1828S9728401012
Item Description	PI BOURDON RANGE: 0 - 600 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 600 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828-S/00 Sl. nos: 12

TECHNICAL CATALOGUE

Material Code	L1828S9728401021
Item Description	PI DIAPHRAGM RANGE: 0 - 6 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: 0 - 6 Kg/cm ² 150 mm Dial as per spec ref: TCI:102/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828-S/00 Sl. nos: 21

TECHNICAL CATALOGUE

Material Code	L1828S9728401022
Item Description	PI DIAPHRAGM RANGE: 0 - 16 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: 0 - 16 Kg/cm ² 150 mm Dial as per spec ref: TCI:102/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828-S/00 Sl. nos: 22

TECHNICAL CATALOGUE

Material Code	L1828S9728401023
Item Description	PI DIAPHRAGM RANGE: 0 - 25 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: 0 - 25 Kg/cm ² 150 mm Dial as per spec ref: TCI:102/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828-S/00 Sl. nos: 23

TECHNICAL CATALOGUE

Material Code	L1828S9728401024
Item Description	PI DIAPHRAGM RANGE: 0 - 40 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: 0 - 40 Kg/cm ² 150 mm Dial as per spec ref: TCI:102/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/07, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1828-S/00 Sl. nos: 24

a Site Conditions:												
i	Altitude above mean sea level 377.5 m above MSL											
ii	Ambient temperature condition 0 to 50°C											
iii	Relative humidity 60%											
b Technical Data:												
Sl no	Instrument Tag no	Description	Medium	Qty/ Bir	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.	Mounting	Entry
1	00HJF11CP501	PRESSURE AT LDO PUMP-A INLET	LDO	1	40	--	-0.35	--	(-)1 - 1	1/2" NPT(M)	Direct	Bottom
2	00HJF12CP501	PRESSURE AT LDO PUMP-B INLET	LDO	1	40	--	-0.35	--	(-)1 - 1	1/2" NPT(M)	Direct	Bottom
3	00HJF13CP501	PRESSURE AT LDO PUMP-C INLET	LDO	1	40	--	-0.35	--	(-)1 - 1	1/2" NPT(M)	Direct	Bottom
4	00HJF40CP501	PRESSURE AT SUCTION STRAINER INLET	LDO	1	40	--	0	--	(-)1 - 1	1/2" NPT(M)	Direct	Bottom
5	00HJF14CP502	PRESSURE AFTER LOPCV	LDO	1	40	--	1.5 - 3	--	0 - 6	1/2" NPT(M)	Direct	Bottom
6	00HJP01CP501	PREASSURE AT COOLER WATER INLET	WATER	1	38	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
7	00HJP01CP502	PREASSURE AT COOLER WATER INLET	WATER	1	38	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
8	10HJA11CP502	EL "AB" CRNR 1 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
9	10HJA12CP502	EL "AB" CRNR 2 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
10	10HJA13CP502	EL "AB" CRNR 3 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
11	10HJA14CP502	EL "AB" CRNR 4 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
12	10HJA21CP502	EL "BC" CRNR 1 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
13	10HJA22CP502	EL "BC" CRNR 2 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom

PRPD & CHKD: NR *N. G. Rao*
APPD : DK *D. Karthik 8/3/2022*

Project: Patrathu STPS 3 X 800 MW
Cust no: 1828

List of Pressure gauges (Bourdon)
150 mm Dial

Datasheet Ref: DSH:101/1828/01
Date: 07-03-2022

Sl no	Instrument Tag no	Description	Medium	Qty/Blr	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.	Mounting	Entry
14	10HJA23CP502	EL "BC" CRNR 3 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
15	10HJA24CP502	EL "BC" CRNR 4 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
16	10HJA31CP502	EL "DE" CRNR 1 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
17	10HJA32CP502	EL "DE" CRNR 2 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
18	10HJA33CP502	EL "DE" CRNR 3 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
19	10HJA34CP502	EL "DE" CRNR 4 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
20	10HJA41CP502	EL "FG" CRNR 1 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
21	10HJA42CP502	EL "FG" CRNR 2 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
22	10HJA43CP502	EL "FG" CRNR 3 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
23	10HJA44CP502	EL "FG" CRNR 4 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
24	10HJA51CP502	EL "HJ" CRNR 1 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
25	10HJA52CP502	EL "HJ" CRNR 2 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
26	10HJA53CP502	EL "HJ" CRNR 3 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
27	10HJA54CP502	EL "HJ" CRNR 4 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
28	10HJM20CP502	ATOM. STEAM HDR PRESS	STEAM	1	290	--	7.5	--	0 - 10	1/2" NPT(M)	Direct	Bottom
29	10HJN10CP501	ATOM. AIR HDR PRESS	ATOM. AIR	1	35	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom

PRPD & CHKD: NR *[Signature]*
APPD : DK *[Signature]*

Project: Patrathu STPS 3 X 800 MW
Cust no: 1828

List of Pressure gauges (Bourdon)
150 mm Dial

Datasheet Ref: DSH:101/1828/01
Date: 07-03-2022

Sl no	Instrument Tag no	Description	Medium	Qty/Blr	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.	Mounting	Entry
30	00HJT01CP502	HEATING STEAM PRESSURE AT HOTCV OUTLET	STEAM	1	232-125	--	12-6.5	--	0 - 16	1/2" NPT(M)	Direct	Bottom
31	00HJT03CP502	HEATING STEAM PRESSURE AT HOTCV OUTLET	STEAM	1	232-125	--	12-6.5	--	0 - 16	1/2" NPT(M)	Direct	Bottom
32	00HJT05CP502	HEATING STEAM PRESSURE AT HOTCV OUTLET	STEAM	1	232-125	--	12-6.5	--	0 - 16	1/2" NPT(M)	Direct	Bottom
33	00HJT01CP501	HEATING STEAM PRESSURE AT HOTCV INLET	STEAM	1	290	--	15	--	0 - 25	1/2" NPT(M)	Direct	Bottom
34	00HJT03CP501	HEATING STEAM PRESSURE AT HOTCV INLET	STEAM	1	290	--	15	--	0 - 25	1/2" NPT(M)	Direct	Bottom
35	00HJT05CP501	HEATING STEAM PRESSURE AT HOTCV INLET	STEAM	1	290	--	15	--	0 - 25	1/2" NPT(M)	Direct	Bottom
36	10HJF80CP503	LIGHT OIL HDR SUPPLY PRESS	LDO	1	35	--	16.1	--	0 - 25	1/2" NPT(M)	Direct	Bottom
37	10HJM20CP501	ATOM. STEAM HDR PRESS	STEAM	1	290	--	15	--	0 - 25	1/2" NPT(M)	Direct	Bottom
38	10HAG27CP502	BWCP COOLING WTR RETURN PRESS	WATER	1	39	60	7	28.2	0 - 40	1/2" NPT(M)	Direct	Bottom
39	00HJF11CP502	PRESSURE AT LDO PUMP-A OUTLET	LDO	1	40	--	25	--	0 - 40	1/2" NPT(M)	Direct	Bottom
40	00HJF12CP502	PRESSURE AT LDO PUMP-B OUTLET	LDO	1	40	--	25	--	0 - 40	1/2" NPT(M)	Direct	Bottom
41	00HJF13CP502	PRESSURE AT LDO PUMP-C OUTLET	LDO	1	40	--	25	--	0 - 40	1/2" NPT(M)	Direct	Bottom
42	00HJF14CP501	PRESSURE BEFORE LOPCV	LDO	1	40	--	25	--	0 - 40	1/2" NPT(M)	Direct	Bottom
43	00HJF20CP501	PRESSURE AT PUMP HOUSE DISCHARGE	LDO	1	40	--	25	--	0 - 40	1/2" NPT(M)	Direct	Bottom
44	10HAG27CP501	BWCP COOLING WTR SUPPLY PRESS	WATER	1	39	60	7	28.2	0 - 40	1/2" NPT(M)	Direct	Bottom
45	10HJF80CP501	LIGHT OIL SUPPLY PRESS	LDO	1	35	--	22.5	--	0 - 40	1/2" NPT(M)	Direct	Bottom

PRPD & CHKD: NR

APPD : DK

NR
D. Karitha 8/3/2022


SI no	Instrument Tag no	Description	Medium	Qty/Blr	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.	Mounting	Entry
46	10HJF80CP502	LIGHT OIL SUPPLY PRESS	LDO	1	35	--	22.5	--	0 - 40	1/2" NPT(M)	Direct	Bottom
47	10HC801CP501	SB STM PRESS (AFTER PRV)	STEAM	1	371	400	30	40	0 - 60	1/2" NPT(M)	Direct	Bottom
48	10HC802CP501	SB STM PRESS (LRSB LINE-RIGHT)	STEAM	1	371	400	30	40	0 - 60	1/2" NPT(M)	Direct	Bottom
49	10HC803CP501	APH "A" SOOTBLOWER STEAM PRESS (COLD END)	STEAM	1	371	400	30	40	0 - 60	1/2" NPT(M)	Direct	Bottom
50	10HC803CP502	APH "A" SOOTBLOWER STEAM PRESS (HOT END)	STEAM	1	371	400	30	40	0 - 60	1/2" NPT(M)	Direct	Bottom
51	10HC803CP503	APH "B" SOOTBLOWER STEAM PRESS (COLD END)	STEAM	1	371	400	30	40	0 - 60	1/2" NPT(M)	Direct	Bottom
52	10HC803CP504	APH "B" SOOTBLOWER STEAM PRESS (HOT END)	STEAM	1	371	400	30	40	0 - 60	1/2" NPT(M)	Direct	Bottom
53	10HC804CP501	SB STM PRESS (LRSB LINE-LEFT)	STEAM	1	371	400	30	40	0 - 60	1/2" NPT(M)	Direct	Bottom
54	10HC805CP501	SB STM PRESS (WB LINE-RIGHT & REAR)	STEAM	1	371	400	30	40	0 - 60	1/2" NPT(M)	Direct	Bottom
55	10HC806CP501	SB STM PRESS (WB LINE-FRONT & LEFT)	STEAM	1	371	400	30	40	0 - 60	1/2" NPT(M)	Direct	Bottom
56	10LCR25CP501	BOILER RECIR PUMP MOTOR LP FILL WTR PRESS	WATER	1	48.65	95	35	42	0 - 60	1/2" NPT(M)	Direct	Bottom
57	10HC800CP501	SB STM PRESS (BEFORE PRV)	STEAM	1	371	--	63.8	--	0 - 100	1/2" NPT(M)	Direct	Bottom
58	10LAE21CP501	RH / DSH "A" SPRAY WATER PRESS	WATER	1	178	215	67.2	92.2	0 - 160	1/2" NPT(M)	Direct	Bottom
59	10LAE22CP501	RH / DSH "B" SPRAY WATER PRESS	WATER	1	178	215	67.2	92.2	0 - 160	1/2" NPT(M)	Direct	Bottom
60	10HC800CP502	SB STM PRESS (BEFORE PRV)	STEAM	1	504	--	294.6	--	0 - 400	1/2" NPT(M)	Direct	Bottom
61	10LAE20CP501	RH SPRAY WATER PRESS	WATER	1	190.8	215	126.6	250	0 - 400	1/2" NPT(M)	Direct	Bottom

PRPD & CHKD: NR 
APPD : DK 

SI no	Instrument Tag no	Description	Medium	Qty/ Bir	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.	Mounting	Entry
62	10LAE71CPS01	SH / DSH STAGE-I "A" SPRAY WATER	WATER	1	295.6	308	338.5	307.3	0 - 400	1/2" NPT(M)	Direct	Bottom
63	10LAE72CPS01	SH / DSH STAGE-I "B" SPRAY WATER	WATER	1	295.6	308	338.5	307.3	0 - 400	1/2" NPT(M)	Direct	Bottom
64	10LAE91CPS01	SH / DSH STAGE-II "A" SPRAY WATER	WATER	1	308	308	292.6	310	0 - 400	1/2" NPT(M)	Direct	Bottom
65	10LAE92CPS01	SH / DSH STAGE-II "B" SPRAY WATER	WATER	1	308	308	292.6	310	0 - 400	1/2" NPT(M)	Direct	Bottom
66	10HAC10CPS01	ECON INLET BOILER FW PRESS	WATER	1	295.6	348	338.53	359.4	0 - 600	1/2" NPT(M)	Direct	Bottom
67	10LAE70CPS01	SH / DSH STAGE-I SPRAY WATER PRESS	WATER	1	295.6	348	338.5	359.4	0 - 600	1/2" NPT(M)	Direct	Bottom
68	10LAE90CPS01	SH / DSH STAGE-II SPRAY WATER PRESS	WATER	1	308	348	338.5	359.4	0 - 600	1/2" NPT(M)	Direct	Bottom

Note :

1. For Datasheet sl nos: 39 to 41, Vendor shall supply pulsating Dampeners along with pressure gauges.

PRPD & CHKD: NR 
APPD : DK  8/3/2022

a Site Conditions:	
i	Altitude above mean sea level 377.5 m above MSL
ii	Ambient temperature condition 0 to 50°C
iii	Relative humidity 60%

b Technical Data:												
Sl no	Instrument Tag no	Description	Medium	Qty/Blr	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.	Mounting	Entry
1	00HJF40CP501	PRESSURE AT SUCTION STRAINER INLET	HFO	1	140	--	0	--	(-)1 - 1	1/2" NPT(M)	Direct	Bottom
2	00HJF41CP501	PRESSURE AT HFO PUMP-A INLET	HFO	1	140	--	-0.35	--	(-)1 - 1	1/2" NPT(M)	Direct	Bottom
3	00HJF42CP501	PRESSURE AT HFO PUMP-B INLET	HFO	1	140	--	-0.35	--	(-)1 - 1	1/2" NPT(M)	Direct	Bottom
4	00HJF43CP501	PRESSURE AT HFO PUMP-C INLET	HFO	1	140	--	-0.35	--	(-)1 - 1	1/2" NPT(M)	Direct	Bottom
5	10HJF92CP501	BF DO PRESSURE BEFORE STRAINER	DRAIN OIL	1	82	--	0	--	(-)1 - 1	1/2" NPT(M)	Direct	Bottom
6	10HJF92CP502	BF DO PUMP INLET PRESSURE	DRAIN OIL	1	82	--	0	--	(-)1 - 1	1/2" NPT(M)	Direct	Bottom
7	00HJF54CP501	PRESSURE AT HOPCV INLET	HFO	1	140	--	1.5-3	--	0 - 6	1/2" NPT(M)	Direct	Bottom
8	00HJF54CP502	PRESSURE AT HOPCV OUTLET	HFO	1	140	--	1.5-3	--	0 - 6	1/2" NPT(M)	Direct	Bottom
9	10HJA11CP501	EL "AB" CRNR 1 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
10	10HJA12CP501	EL "AB" CRNR 2 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
11	10HJA13CP501	EL "AB" CRNR 3 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom

PRPD & CHKD: NR *N. Subramanian*
APPD : DK *D. Karthikeyan* 8/3/2022

Project: Patrathu STPS 3 X 800 MW
Cust no: 1828

List of Pressure gauges (Chemical Seal)
150 mm Dial

Datasheet Ref: DSH:102/1828/01
Date: 07-03-2022

Sl no	Instrument Tag no	Description	Medium	Qty/Blr	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.	Mounting	Entry
12	10HJA14CP501	EL "AB" CRNR 4 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
13	10HJA21CP501	EL "BC" CRNR 1 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
14	10HJA22CP501	EL "BC" CRNR 2 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
15	10HJA23CP501	EL "BC" CRNR 3 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
16	10HJA24CP501	EL "BC" CRNR 4 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
17	10HJA31CP501	EL "DE" CRNR 1 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
18	10HJA32CP501	EL "DE" CRNR 2 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
19	10HJA33CP501	EL "DE" CRNR 3 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
20	10HJA34CP501	EL "DE" CRNR 4 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
21	10HJA41CP501	EL "FG" CRNR 1 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
22	10HJA42CP501	EL "FG" CRNR 2 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
23	10HJA43CP501	EL "FG" CRNR 3 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
24	10HJA44CP501	EL "FG" CRNR 4 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
25	10HJA51CP501	EL "HJ" CRNR 1 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom

PRPD & CHKD: NR

APPD : DK

N. G. G. G.
D. Karthik 8/1/2022

Project: Patrathu STPS 3 X 800 MW
Cust no: 1828

List of Pressure gauges (Chemical Seal)
150 mm Dial

Datasheet Ref: DSH:102/1828/01
Date: 07-03-2022

Sl no	Instrument Tag no	Description	Medium	Qty/Blr	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.	Mounting	Entry
26	10HJA52CP501	EL "HJ" CRNR 2 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
27	10HJA53CP501	EL "HJ" CRNR 3 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
28	10HJA54CP501	EL "HJ" CRNR 4 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
29	10HJF92CP503	BF DO PUMP OUTLET PRESSURE	DRAIN OIL	1	82	--	10	--	0 - 16	1/2" NPT(M)	Direct	Bottom
30	10HJF50CP503	HEAVY OIL SUPPLY PRESS	HFO	1	140	--	18.0	--	0 - 25	1/2" NPT(M)	Direct	Bottom
31	10HJF50CP504	HEAVY OIL SUPPLY PRESS	HFO	1	140	--	14.0	--	0 - 25	1/2" NPT(M)	Direct	Bottom
32	10HJF54CP501	HEAVY OIL RETURN LINE PRESS	HFO	1	140	--	14.0	--	0 - 25	1/2" NPT(M)	Direct	Bottom
33	00HJF41CP502	PRESSURE AT HFO PUMP-A OUTLET	HFO	1	140	--	30	--	0 - 40	1/2" NPT(M)	Direct	Bottom
34	00HJF42CP502	PRESSURE AT HFO PUMP-A OUTLET	HFO	1	140	--	30	--	0 - 40	1/2" NPT(M)	Direct	Bottom
35	00HJF43CP502	PRESSURE AT HFO PUMP-A OUTLET	HFO	1	140	--	30	--	0 - 40	1/2" NPT(M)	Direct	Bottom
36	00HJF50CP501	PRESSURE AT PUMP HOUSE DISCHARGE	HFO	1	140	--	30	--	0 - 40	1/2" NPT(M)	Direct	Bottom
37	00HJF60CP501	PRESSURE AT HFO HEATER SET DISCHARGE	HFO	1	145	--	28	--	0 - 40	1/2" NPT(M)	Direct	Bottom
38	10HJF50CP501	HEAVY OIL SUPPLY PRESS	HFO	1	140	--	21.0	--	0 - 40	1/2" NPT(M)	Direct	Bottom
39	10HJF50CP502	HEAVY OIL SUPPLY PRESS	HFO	1	140	--	21.0	--	0 - 40	1/2" NPT(M)	Direct	Bottom

PRPD & CHKD: NR
APPD : DK *NR*
D. Kanthas 8/3/2022

a Site Conditions:												
i	Altitude above mean sea level	377.5 m above MSL										
ii	Ambient temperature condition	0 to 50°C										
iii	Relative humidity	60%										
b Technical Data:												
Sl no	Instrument Tag no	Description	Medium	Qty/ Bir	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.	Mounting	Entry
1	20HJA11CP502	EL "AB" CRNR 1 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
2	20HJA12CP502	EL "AB" CRNR 2 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
3	20HJA13CP502	EL "AB" CRNR 3 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
4	20HJA14CP502	EL "AB" CRNR 4 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
5	20HJA21CP502	EL "BC" CRNR 1 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
6	20HJA22CP502	EL "BC" CRNR 2 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
7	20HJA23CP502	EL "BC" CRNR 3 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
8	20HJA24CP502	EL "BC" CRNR 4 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
9	20HJA31CP502	EL "DE" CRNR 1 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
10	20HJA32CP502	EL "DE" CRNR 2 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
11	20HJA33CP502	EL "DE" CRNR 3 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
12	20HJA34CP502	EL "DE" CRNR 4 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
13	20HJA41CP502	EL "FG" CRNR 1 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom

PRPD & CHKD: NR *M. R. Ramesh*
APPD : DK *D. Kavitha* 14/3/2022

Project: Patrathu STPS 3 X 800 MW
Cust no: 1829

List of Pressure gauges (Bourdon)
150 mm Dial

Datasheet Ref: DSH:101/1829/01
Date: 07-03-2022

Sl no	Instrument Tag no	Description	Medium	Qty/Blr	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.	Mounting	Entry
14	20HJA42CP502	EL "FG" CRNR 2 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
15	20HJA43CP502	EL "FG" CRNR 3 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
16	20HJA44CP502	EL "FG" CRNR 4 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
17	20HJA51CP502	EL "HJ" CRNR 1 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
18	20HJA52CP502	EL "HJ" CRNR 2 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
19	20HJA53CP502	EL "HJ" CRNR 3 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
20	20HJA54CP502	EL "HJ" CRNR 4 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
21	20HJM20CP502	ATOM. STEAM HDR PRESS	STEAM	1	290	--	7.5	--	0 - 10	1/2" NPT(M)	Direct	Bottom
22	20HJN10CP501	ATOM. AIR HDR PRESS	ATOM. AIR	1	35	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
23	20HJF80CP503	LIGHT OIL HDR SUPPLY PRESS	LDO	1	35	--	16.1	--	0 - 25	1/2" NPT(M)	Direct	Bottom
24	20HJM20CP501	ATOM. STEAM HDR PRESS	STEAM	1	290	--	15	--	0 - 25	1/2" NPT(M)	Direct	Bottom
25	20HAG27CP502	BWCP COOLING WTR RETURN PRESS	WATER	1	39	60	7	28.2	0 - 40	1/2" NPT(M)	Direct	Bottom
26	20HAG27CP501	BWCP COOLING WTR SUPPLY PRESS	WATER	1	39	60	7	28.2	0 - 40	1/2" NPT(M)	Direct	Bottom
27	20HJF80CP501	LIGHT OIL SUPPLY PRESS	LDO	1	35	--	22.5	--	0 - 40	1/2" NPT(M)	Direct	Bottom
28	20HJF80CP502	LIGHT OIL SUPPLY PRESS	LDO	1	35	--	22.5	--	0 - 40	1/2" NPT(M)	Direct	Bottom
29	20HC801CP501	SB STM PRESS (AFTER PRV)	STEAM	1	371	400	30	40	0 - 60	1/2" NPT(M)	Direct	Bottom

PRPD & CHKD: NR *M. Mohan*
APPD : DK *D. Karthi* 14/3/2022

Sl no	Instrument Tag no	Description	Medium	Qty/Blr	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.	Mounting	Entry
30	20HCB02CP501	SB STM PRESS (LRSB LINE-RIGHT)	STEAM	1	371	400	30	40	0 - 60	1/2" NPT(M)	Direct	Bottom
31	20HCB03CP501	APH "A" SOOTBLOWER STEAM PRESS (COLD END)	STEAM	1	371	400	30	40	0 - 60	1/2" NPT(M)	Direct	Bottom
32	20HCB03CP502	APH "A" SOOTBLOWER STEAM PRESS (HOT END)	STEAM	1	371	400	30	40	0 - 60	1/2" NPT(M)	Direct	Bottom
33	20HCB03CP503	APH "B" SOOTBLOWER STEAM PRESS (COLD END)	STEAM	1	371	400	30	40	0 - 60	1/2" NPT(M)	Direct	Bottom
34	20HCB03CP504	APH "B" SOOTBLOWER STEAM PRESS (HOT END)	STEAM	1	371	400	30	40	0 - 60	1/2" NPT(M)	Direct	Bottom
35	20HCB04CP501	SB STM PRESS (LRSB LINE-LEFT)	STEAM	1	371	400	30	40	0 - 60	1/2" NPT(M)	Direct	Bottom
36	20HCB05CP501	SB STM PRESS (WB LINE-RIGHT & REAR)	STEAM	1	371	400	30	40	0 - 60	1/2" NPT(M)	Direct	Bottom
37	20HCB06CP501	SB STM PRESS (WB LINE-FRONT & LEFT)	STEAM	1	371	400	30	40	0 - 60	1/2" NPT(M)	Direct	Bottom
38	20LCR25CP501	BOILER RECIR PUMP MOTOR LP FILL WTR PRESS	WATER	1	48.65	95	35	42	0 - 60	1/2" NPT(M)	Direct	Bottom
39	20HCB00CP501	SB STM PRESS (BEFORE PRV)	STEAM	1	371	--	63.8	--	0 - 100	1/2" NPT(M)	Direct	Bottom
40	20LAE21CP501	RH / DSH "A" SPRAY WATER PRESS	WATER	1	178	215	67.2	92.2	0 - 160	1/2" NPT(M)	Direct	Bottom
41	20LAE22CP501	RH / DSH "B" SPRAY WATER PRESS	WATER	1	178	215	67.2	92.2	0 - 160	1/2" NPT(M)	Direct	Bottom
42	20HCB00CP502	SB STM PRESS (BEFORE PRV)	STEAM	1	504	--	294.6	--	0 - 400	1/2" NPT(M)	Direct	Bottom
43	20LAE20CP501	RH SPRAY WATER PRESS	WATER	1	190.8	215	126.6	250	0 - 400	1/2" NPT(M)	Direct	Bottom
44	20LAE71CP501	SH / DSH STAGE-I "A" SPRAY WATER	WATER	1	295.6	308	338.5	307.3	0 - 400	1/2" NPT(M)	Direct	Bottom
45	20LAE72CP501	SH / DSH STAGE-I "B" SPRAY WATER	WATER	1	295.6	308	338.5	307.3	0 - 400	1/2" NPT(M)	Direct	Bottom

Project: Patrathu STPS 3 X 800 MW
Cust no: 1829

List of Pressure gauges (Bourdon)
150 mm Dial

Datasheet Ref: DSH:101/1829/01
Date: 07-03-2022

Sl no	Instrument Tag no	Description	Medium	Qty/ Blr	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.	Mounting	Entry
46	20LAE91CP501	SH / DSH STAGE-II "A" SPRAY WATER	WATER	1	308	308	292.6	310	0 - 400	1/2" NPT(M)	Direct	Bottom
47	20LAE92CP501	SH / DSH STAGE-II "B" SPRAY WATER	WATER	1	308	308	292.6	310	0 - 400	1/2" NPT(M)	Direct	Bottom
48	20HAC10CP501	ECON INLET BOILER FW PRESS	WATER	1	295.6	348	338.53	359.4	0 - 600	1/2" NPT(M)	Direct	Bottom
49	20LAE70CP501	SH / DSH STAGE-I SPRAY WATER PRESS	WATER	1	295.6	348	338.5	359.4	0 - 600	1/2" NPT(M)	Direct	Bottom
50	20LAE90CP501	SH / DSH STAGE-II SPRAY WATER PRESS	WATER	1	308	348	338.5	359.4	0 - 600	1/2" NPT(M)	Direct	Bottom

PRPD & CHKD: NR *NR*
APPD : DK *D. Kavitha* 16/3/2022

a Site Conditions:												
i	Altitude above mean sea level		377.5 m above MSL									
ii	Ambient temperature condition		0 to 50°C									
iii	Relative humidity		60%									
b Technical Data:												
Sl no	Instrument Tag no	Description	Medium	Qty/Bir	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.	Mounting	Entry
1	20HJF92CP501	BF DO PRESSURE BEFORE STRAINER	DRAIN OIL	1	82	--	0	--	(-)1 - 1	1/2" NPT(M)	Direct	Bottom
2	20HJF92CP502	BF DO PUMP INLET PRESSURE	DRAIN OIL	1	82	--	0	--	(-)1 - 1	1/2" NPT(M)	Direct	Bottom
3	20HJA11CP501	EL "AB" CRNR 1 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
4	20HJA12CP501	EL "AB" CRNR 2 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
5	20HJA13CP501	EL "AB" CRNR 3 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
6	20HJA14CP501	EL "AB" CRNR 4 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
7	20HJA21CP501	EL "BC" CRNR 1 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
8	20HJA22CP501	EL "BC" CRNR 2 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
9	20HJA23CP501	EL "BC" CRNR 3 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
10	20HJA24CP501	EL "BC" CRNR 4 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom

PRPD & CHKD: NR *N. Gohil*
APPD : DK *D. K. Kishore* 14/3/2022

Project: Patratlu STPS 3 X 800 MW
Cust no: 1829

List of Pressure gauges (Chemical Seal)
150 mm Dial

Datasheet Ref: DSH:102/1829/01
Date: 07-03-2022

Sl no	Instrument Tag no	Description	Medium	Qty/ Bir	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.	Mounting	Entry
11	20HJA31CP501	EL "DE" CRNR 1 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
12	20HJA32CP501	EL "DE" CRNR 2 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
13	20HJA33CP501	EL "DE" CRNR 3 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
14	20HJA34CP501	EL "DE" CRNR 4 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
15	20HJA41CP501	EL "FG" CRNR 1 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
16	20HJA42CP501	EL "FG" CRNR 2 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
17	20HJA43CP501	EL "FG" CRNR 3 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
18	20HJA44CP501	EL "FG" CRNR 4 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
19	20HJA51CP501	EL "HJ" CRNR 1 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
20	20HJA52CP501	EL "HJ" CRNR 2 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
21	20HJA53CP501	EL "HJ" CRNR 3 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
22	20HJA54CP501	EL "HJ" CRNR 4 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
23	20HJF92CP503	BF DO PUMP OUTLET PRESSURE	DRAIN OIL	1	82	--	10	--	0 - 16	1/2" NPT(M)	Direct	Bottom

PRPD & CHKD: NR *M. Reddy*
APPD : DK *D. Kavitha 14/3/2022*

Project: Patrathu STPS 3 X 800 MW
Cust no: 1829

List of Pressure gauges (Chemical Seal)
150 mm Dial

Datasheet Ref: DSH:102/1829/01
Date: 07-03-2022

Sl no	Instrument Tag no	Description	Medium	Qty/Bir	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.	Mounting	Entry
24	20HJF50CP503	HEAVY OIL SUPPLY PRESS	HFO	1	140	--	18.0	--	0 - 25	1/2" NPT(M)	Direct	Bottom
25	20HJF50CP504	HEAVY OIL SUPPLY PRESS	HFO	1	140	--	14.0	--	0 - 25	1/2" NPT(M)	Direct	Bottom
26	20HJF54CP501	HEAVY OIL RETURN LINE PRESS	HFO	1	140	--	14.0	--	0 - 25	1/2" NPT(M)	Direct	Bottom
27	20HJF50CP501	HEAVY OIL SUPPLY PRESS	HFO	1	140	--	21.0	--	0 - 40	1/2" NPT(M)	Direct	Bottom
28	20HJF50CP502	HEAVY OIL SUPPLY PRESS	HFO	1	140	--	21.0	--	0 - 40	1/2" NPT(M)	Direct	Bottom

PRPD & CHKD: NR

APPD : DK

N. Srinivas
D. Kantharaj 14/3/2022

a Site Conditions:	
i	Altitude above mean sea level 377.5 m above MSL
ii	Ambient temperature condition 0 to 50°C
iii	Relative humidity 60%

b Technical Data:												
Sl no	Instrument Tag no	Description	Medium	Qty/Blr	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.	Mounting	Entry
1	30HJA11CP502	EL "AB" CRNR 1 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
2	30HJA12CP502	EL "AB" CRNR 2 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
3	30HJA13CP502	EL "AB" CRNR 3 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
4	30HJA14CP502	EL "AB" CRNR 4 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
5	30HJA21CP502	EL "BC" CRNR 1 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
6	30HJA22CP502	EL "BC" CRNR 2 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
7	30HJA23CP502	EL "BC" CRNR 3 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
8	30HJA24CP502	EL "BC" CRNR 4 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
9	30HJA31CP502	EL "DE" CRNR 1 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
10	30HJA32CP502	EL "DE" CRNR 2 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
11	30HJA33CP502	EL "DE" CRNR 3 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
12	30HJA34CP502	EL "DE" CRNR 4 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
13	30HJA41CP502	EL "FG" CRNR 1 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom

PRP & CHKD: NR
APPD : DK *(Signature)* 14/3/2022

Project: Patrathu STPS 3 X 800 MW
Cust no: 1830

List of Pressure gauges (Bourdon)
150 mm Dial

Datasheet Ref: DSH:101/1830/01
Date: 07-03-2022

Sl no	Instrument Tag no	Description	Medium	Qty/ Blr	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.	Mounting	Entry
14	30HJA42CP502	EL "FG" CRNR 2 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
15	30HJA43CP502	EL "FG" CRNR 3 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
16	30HJA44CP502	EL "FG" CRNR 4 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
17	30HJA51CP502	EL "HJ" CRNR 1 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
18	30HJA52CP502	EL "HJ" CRNR 2 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
19	30HJA53CP502	EL "HJ" CRNR 3 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
20	30HJA54CP502	EL "HJ" CRNR 4 ATOMIZING PRESS	ATOM. STM	1	290	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
21	30HJM20CP502	ATOM. STEAM HDR PRESS	STEAM	1	290	--	7.5	--	0 - 10	1/2" NPT(M)	Direct	Bottom
22	30HJN10CP501	ATOM. AIR HDR PRESS	ATOM. AIR	1	35	--	6	--	0 - 10	1/2" NPT(M)	Direct	Bottom
23	30HJF80CP503	LIGHT OIL HDR SUPPLY PRESS	LDO	1	35	--	16.1	--	0 - 25	1/2" NPT(M)	Direct	Bottom
24	30HJM20CP501	ATOM. STEAM HDR PRESS	STEAM	1	290	--	15	--	0 - 25	1/2" NPT(M)	Direct	Bottom
25	30HAG27CP502	BWCP COOLING WTR RETURN PRESS	WATER	1	39	60	7	28.2	0 - 40	1/2" NPT(M)	Direct	Bottom
26	30HAG27CP501	BWCP COOLING WTR SUPPLY PRESS	WATER	1	39	60	7	28.2	0 - 40	1/2" NPT(M)	Direct	Bottom
27	30HJF80CP501	LIGHT OIL SUPPLY PRESS	LDO	1	35	--	22.5	--	0 - 40	1/2" NPT(M)	Direct	Bottom
28	30HJF80CP502	LIGHT OIL SUPPLY PRESS	LDO	1	35	--	22.5	--	0 - 40	1/2" NPT(M)	Direct	Bottom
29	30HCB01CP501	SB STM PRESS (AFTER PRV)	STEAM	1	371	400	30	40	0 - 60	1/2" NPT(M)	Direct	Bottom

PRP & CHKD: NR
APPD : DK *D. Kantharaj* 14/3/2022

Project: Patrathu STPS 3 X 800 MW
Cust no: 1830

List of Pressure gauges (Bourdon)
150 mm Dial

Datasheet Ref: DSH:101/1830/01
Date: 07-03-2022

Sl no	Instrument Tag no	Description	Medium	Qty/ Blr	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.	Mounting	Entry
30	30HCB02CP501	SB STM PRESS (LRSB LINE-RIGHT)	STEAM	1	371	400	30	40	0 - 60	1/2" NPT(M)	Direct	Bottom
31	30HCB03CP501	APH "A" SOOTBLOWER STEAM PRESS (COLD END)	STEAM	1	371	400	30	40	0 - 60	1/2" NPT(M)	Direct	Bottom
32	30HCB03CP502	APH "A" SOOTBLOWER STEAM PRESS (HOT END)	STEAM	1	371	400	30	40	0 - 60	1/2" NPT(M)	Direct	Bottom
33	30HCB03CP503	APH "B" SOOTBLOWER STEAM PRESS (COLD END)	STEAM	1	371	400	30	40	0 - 60	1/2" NPT(M)	Direct	Bottom
34	30HCB03CP504	APH "B" SOOTBLOWER STEAM PRESS (HOT END)	STEAM	1	371	400	30	40	0 - 60	1/2" NPT(M)	Direct	Bottom
35	30HCB04CP501	SB STM PRESS (LRSB LINE-LEFT)	STEAM	1	371	400	30	40	0 - 60	1/2" NPT(M)	Direct	Bottom
36	30HCB05CP501	SB STM PRESS (WB LINE-RIGHT & REAR)	STEAM	1	371	400	30	40	0 - 60	1/2" NPT(M)	Direct	Bottom
37	30HCB06CP501	SB STM PRESS (WB LINE-FRONT & LEFT)	STEAM	1	371	400	30	40	0 - 60	1/2" NPT(M)	Direct	Bottom
38	30LCR25CP501	BOILER RECIR PUMP MOTOR LP FILL WTR PRESS	WATER	1	48.65	95	35	42	0 - 60	1/2" NPT(M)	Direct	Bottom
39	30HCB00CP501	SB STM PRESS (BEFORE PRV)	STEAM	1	371	--	63.8	--	0 - 100	1/2" NPT(M)	Direct	Bottom
40	30LAE21CP501	RH / DSH "A" SPRAY WATER PRESS	WATER	1	178	215	67.2	92.2	0 - 160	1/2" NPT(M)	Direct	Bottom
41	30LAE22CP501	RH / DSH "B" SPRAY WATER PRESS	WATER	1	178	215	67.2	92.2	0 - 160	1/2" NPT(M)	Direct	Bottom
42	30HCB00CP502	SB STM PRESS (BEFORE PRV)	STEAM	1	504	--	294.6	--	0 - 400	1/2" NPT(M)	Direct	Bottom
43	30LAE20CP501	RH SPRAY WATER PRESS	WATER	1	190.8	215	126.6	250	0 - 400	1/2" NPT(M)	Direct	Bottom
44	30LAE71CP501	SH / DSH STAGE-I "A" SPRAY WATER	WATER	1	295.6	308	338.5	307.3	0 - 400	1/2" NPT(M)	Direct	Bottom
45	30LAE72CP501	SH / DSH STAGE-I "B" SPRAY WATER	WATER	1	295.6	308	338.5	307.3	0 - 400	1/2" NPT(M)	Direct	Bottom

PRPD & CHKD: NR *[Signature]*
APPD : DK *[Signature]* 14/3/2022

Project: Patrathu STPS 3 X 800 MW
Cust no: 1830

List of Pressure gauges (Bourdon)
150 mm Dial

Datasheet Ref: DSH:101/1830/01
Date: 07-03-2022

SI no	Instrument Tag no	Description	Medium	Qty/Blr	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.	Mounting	Entry
46	30LAE91CP501	SH / DSH STAGE-II "A" SPRAY WATER	WATER	1	308	308	292.6	310	0 - 400	1/2" NPT(M)	Direct	Bottom
47	30LAE92CP501	SH / DSH STAGE-II "B" SPRAY WATER	WATER	1	308	308	292.6	310	0 - 400	1/2" NPT(M)	Direct	Bottom
48	30HAC10CP501	ECON INLET BOILER FW PRESS	WATER	1	295.6	348	338.53	359.4	0 - 600	1/2" NPT(M)	Direct	Bottom
49	30LAE70CP501	SH / DSH STAGE-I SPRAY WATER PRESS	WATER	1	295.6	348	338.5	359.4	0 - 600	1/2" NPT(M)	Direct	Bottom
50	30LAE90CP501	SH / DSH STAGE-II SPRAY WATER PRESS	WATER	1	308	348	338.5	359.4	0 - 600	1/2" NPT(M)	Direct	Bottom

PRPD & CHKD: NR *NR*
APPD : DK *D. Kantha* 14/3/2022

Project: Patrathu STPS 3 X 800 MW
Cust no: 1830

List of Pressure gauges (Chemical Seal)
150 mm Dial

Datasheet Ref: DSH:102/1830/01
Date: 07-03-2022

a Site Conditions:												
i	Altitude above mean sea level	377.5 m above MSL										
ii	Ambient temperature condition	0 to 50°C										
iii	Relative humidity	60%										
b Technical Data:												
Sl no	Instrument Tag no	Description	Medium	Qty/ Blr	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.	Mounting	Entry
1	30HJF92CP501	BF DO PRESSURE BEFORE STRAINER	DRAIN OIL	1	82	--	0	--	(-)-1 - 1	1/2" NPT(M)	Direct	Bottom
2	30HJF92CP502	BF DO PUMP INLET PRESSURE	DRAIN OIL	1	82	--	0	--	(-)-1 - 1	1/2" NPT(M)	Direct	Bottom
3	30HJA11CP501	EL "AB" CRNR 1 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
4	30HJA12CP501	EL "AB" CRNR 2 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
5	30HJA13CP501	EL "AB" CRNR 3 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
6	30HJA14CP501	EL "AB" CRNR 4 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
7	30HJA21CP501	EL "BC" CRNR 1 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
8	30HJA22CP501	EL "BC" CRNR 2 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
9	30HJA23CP501	EL "BC" CRNR 3 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
10	30HJA24CP501	EL "BC" CRNR 4 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom

PRPD & CHKD: NR *N. Srinivas*
APPD : DK *D. Karthikeyan* 14/3/2022

Project: Patratthu STPS 3 X 800 MW
Cust no: 1830

List of Pressure gauges (Chemical Seal)
150 mm Dial

Datasheet Ref: DSH:102/1830/01
Date: 07-03-2022

Sl no	Instrument Tag no	Description	Medium	Qty/Blr	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.	Mounting	Entry
11	30HJA31CP501	EL "DE" CRNR 1 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
12	30HJA32CP501	EL "DE" CRNR 2 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
13	30HJA33CP501	EL "DE" CRNR 3 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
14	30HJA34CP501	EL "DE" CRNR 4 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
15	30HJA41CP501	EL "FG" CRNR 1 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
16	30HJA42CP501	EL "FG" CRNR 2 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
17	30HJA43CP501	EL "FG" CRNR 3 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
18	30HJA44CP501	EL "FG" CRNR 4 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
19	30HJA51CP501	EL "HJ" CRNR 1 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
20	30HJA52CP501	EL "HJ" CRNR 2 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
21	30HJA53CP501	EL "HJ" CRNR 3 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
22	30HJA54CP501	EL "HJ" CRNR 4 OIL PRESS	HFO	1	140	--	12	--	0 - 16	1/2" NPT(M)	Direct	Bottom
23	30HJF92CP503	BF DO PUMP OUTLET PRESSURE	DRAIN OIL	1	82	--	10	--	0 - 16	1/2" NPT(M)	Direct	Bottom

PRPD & CHKD: NR *N. G. Srinivas*
APPD : DK *D. Karthik* 14/3/2022

Project: Patrathu STPS 3 X 800 MW
Cust no: 1830

List of Pressure gauges (Chemical Seal)
150 mm Dial

Datasheet Ref: DSH:102/1830/01
Date: 07-03-2022

Sl no	Instrument Tag no	Description	Medium	Qty/ Blr	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.	Mounting	Entry
24	30HJF50CP503	HEAVY OIL SUPPLY PRESS	HFO	1	140	--	18.0	--	0 - 25	1/2" NPT(M)	Direct	Bottom
25	30HJF50CP504	HEAVY OIL SUPPLY PRESS	HFO	1	140	--	14.0	--	0 - 25	1/2" NPT(M)	Direct	Bottom
26	30HJF54CP501	HEAVY OIL RETURN LINE PRESS	HFO	1	140	--	14.0	--	0 - 25	1/2" NPT(M)	Direct	Bottom
27	30HJF50CP501	HEAVY OIL SUPPLY PRESS	HFO	1	140	--	21.0	--	0 - 40	1/2" NPT(M)	Direct	Bottom
28	30HJF50CP502	HEAVY OIL SUPPLY PRESS	HFO	1	140	--	21.0	--	0 - 40	1/2" NPT(M)	Direct	Bottom

PRPD & CHKD: NR 
APPD : DK  14/3/2022

a Site Conditions:				
i	Altitude above mean sea level	377.5 m above MSL		
ii	Ambient temperature condition	0 to 50°C		
iii	Relative humidity	60%		
b Technical Data:				
Sl. No.	Instrument Type	Range	Pressure Units	Quantity (Nos.)
1	Bourdon	(-)1 - 1	kg/cm ²	1
2	Bourdon	0 - 6	kg/cm ²	1
3	Bourdon	0 - 10	kg/cm ²	4
4	Bourdon	0 - 16	kg/cm ²	1
5	Bourdon	0 - 25	kg/cm ²	1
6	Bourdon	0 - 40	kg/cm ²	1
7	Bourdon	0 - 40 (Note 2)	kg/cm ²	1
8	Bourdon	0 - 60	kg/cm ²	2
9	Bourdon	0 - 100	kg/cm ²	1
10	Bourdon	0 - 160	kg/cm ²	1
11	Bourdon	0 - 400	kg/cm ²	1
12	Bourdon	0 - 600	kg/cm ²	1
13	Draft	(-)1000 - 0	mmWC	1
14	Draft	(-)250 - 250	mmWC	1
15	Draft	0 - 600	mmWC	1
16	Draft	0 - 1000	mmWC	1
17	Draft	0 - 2000	mmWC	1
18	Draft	(-)250 - 250 (Note 3)	mmWC	1
19	Draft	0 - 160 (Note 3)	mmWC	1
20	Diaphragm Seal	(-)1 - 1	kg/cm ²	1
21	Diaphragm Seal	0 - 6	kg/cm ²	1
22	Diaphragm Seal	0 - 16	kg/cm ²	4
23	Diaphragm Seal	0 - 25	kg/cm ²	1
24	Diaphragm Seal	0 - 40	kg/cm ²	1

Sl. No.	Instrument Type	Range	Pressure Units	Quantity (Nos.)
Note : 1. This Datasheet requirement takes precedence over the main specification. 2. For Datasheet sl nos: 7, Vendor shall supply pulsating Dampeners along with pressure gauges. 3. For Datasheet sl nos: 18 & 19, Vendor shall supply pressure gauges with 250 mm Dial. 4. Pressure Gauges shall be Direct Mounting & Bottom Entry.				

a Site Conditions:												
i	Altitude above mean sea level											377.5 m above MSL
ii	Ambient temperature condition											0 to 50°C
iii	Relative humidity											60%
b Technical Data:												
Sl no	Instrument Tag no	Description	Medium	Qty/ Bir	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (mmWC)	Max. Press. (mmWC)	Range (mmWC)	Inst. End Conn.	Mounting	Entry
1	10HNC11CP501	ID FAN "A" COLD FLUE GAS INLET PRESS	FLUE GAS	1	129	150	-489	-775	(-)1000 - 0	1/2" NPT(M)	Direct	Bottom
2	10HNC21CP501	ID FAN "B" COLD FLUE GAS INLET PRESS	FLUE GAS	1	129	150	-489	-775	(-)1000 - 0	1/2" NPT(M)	Direct	Bottom
3	10HBK30CP501	FURNACE PRESS	FLUE GAS	1	1199	1300	-5	-10	(-)250 - 250	1/2" NPT(M)	Direct	Bottom
4	10HLA12CP501	FD FAN "A" OUTLET AIR PRESS	SA	1	30	53	285	475	0 - 600	1/2" NPT(M)	Direct	Bottom
5	10HLA22CP501	FD FAN "B" OUTLET AIR PRESS	SA	1	30	53	285	475	0 - 600	1/2" NPT(M)	Direct	Bottom
6	10HNC12CP501	ID FAN "A" COLD FLUE GAS OUTLET PRESS	FLUE GAS	1	129	150	216	425	0 - 600	1/2" NPT(M)	Direct	Bottom
7	10HNC22CP501	ID FAN "B" COLD FLUE GAS OUTLET TEMP	FLUE GAS	1	129	150	216	425	0 - 600	1/2" NPT(M)	Direct	Bottom
8	10HHS01CP501	SCANNER AIR FAN OUTLET PRESS	SCA. AIR/ FLUE GAS	1	30	53	551	710	0 - 1000	1/2" NPT(M)	Direct	Bottom
9	10HFE02CP501	PA FAN "A" OUTLET AIR PRESS	PA	1	35	58	1138	1555	0 - 2000	1/2" NPT(M)	Direct	Bottom
10	10HFE06CP501	PA FAN "B" OUTLET AIR PRESS	PA	1	35	58	1138	1555	0 - 2000	1/2" NPT(M)	Direct	Bottom
11	10HFW10CP501	PULV SEAL AIR FAN DISCHARGE	SEAL AIR	1	--	50	1171	1394	0 - 2000	1/2" NPT(M)	Direct	Bottom
12	10HBK10CP501	FURNACE PRESS	FLUE GAS	1	1199	1300	-5	-10	(-)250 - 250	1/2" NPT(M)	Direct	Bottom

M. G. Patil
P. S. Rao

PRPD & CHKD: NR
APPD : TK

Sl no	Instrument Tag no	Description	Medium	Qty/Blr	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (mmWC)	Max. Press. (mmWC)	Range (mmWC)	Inst. End Conn.	Mounting	Entry
13	10HBK30CP502	FURNACE PRESS	FLUE GAS	1	1199	1300	-5	-10	(-1250 - 250	1/2" NPT(M)	Direct	Bottom
14	10HLA18CP501	WINDBOX PRESS (LEFT SIDE)	SA	1	321	324	100	100	0 - 160	1/2" NPT(M)	Direct	Bottom
15	10HLA28CP501	WINDBOX PRESS (RIGHT SIDE)	SA	1	321	324	100	100	0 - 160	1/2" NPT(M)	Direct	Bottom

NOTES:

1. For Datasheet sl nos: 1 to 11 , Vendor shall supply 150 mm Dial Draft Pressure Gauges
2. For Datasheet sl nos: 12 to 15 , Vendor shall supply 250 mm Dial Draft Pressure Gauges

N. Ramesh
P. Sangeetha

TECHNICAL CATALOGUE

Material Code	L172919728401001
Item Description	PI BOURDON RANGE: (-)1 - 1 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: (-)1 - 1 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1729/00 Sl. nos: 1 to 4. Applicable Tag nos: 90HJF10CP501, 90HJF11CP502, 90HJF12CP502 & 90HJF13CP502

TECHNICAL CATALOGUE

Material Code	L172919728401002
Item Description	PI BOURDON RANGE: 0 - 4 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 4 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1729/00 Sl. nos: 5. Applicable Tag nos: 90HJF14CP502

TECHNICAL CATALOGUE

Material Code	L172919728401003
Item Description	PI BOURDON RANGE: 0 - 10 KG/CM ²
Detailed Description	<p>Pressure Gauges, Bourdon Type Range: 0 - 10 Kg/cm² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1729/00 Sl. nos: 6 to 25. Applicable Tag nos: 10HJA11CP502, 10HJA12CP502, 10HJA13CP502, 10HJA14CP502, 10HJA21CP502, 10HJA22CP502, 10HJA23CP502, 10HJA24CP502, 10HJA31CP502, 10HJA32CP502, 10HJA33CP502, 10HJA34CP502, 10HJA41CP502, 10HJA42CP502, 10HJA43CP502, 10HJA44CP502, 10HJM01CP502, 10HJN10CP501, 90HJP01CP501 & 90HJP01CP502</p>

TECHNICAL CATALOGUE

Material Code	L172919728401004
Item Description	PI BOURDON RANGE: 0 - 10 KG/CM ² WITH PD
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 10 Kg/cm ² with PD 150 mm Dial with Pulsating Dampener as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1729/00 Sl. nos: 26 to 27. Applicable Tag nos: 90HJP93CP501 & 90HJP94CP501

TECHNICAL CATALOGUE

Material Code	L172919728401005
Item Description	PI BOURDON RANGE: 0 - 16 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 16 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1729/00 Sl. nos: 28 to 31. Applicable Tag nos: 10HAG27CP501, 90HJT21CP502, 90HJT23CP502 & 90HJT30CP502

TECHNICAL CATALOGUE

Material Code	L172919728401013
Item Description	PI BOURDON RANGE: 0 - 600 KG/CM ² (FMG)
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 600 Kg/cm ² 250 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1729/00 Sl. nos: 66. Applicable Tag nos: 10HAC10CP501

TECHNICAL CATALOGUE

Material Code	L172919728401014
Item Description	PI Draft Range: 0 - 250 mmWC
Detailed Description	Pressure Gauges, Draft Type Range: 0 - 250 mmWC 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101A/1729/00 Sl. nos:1 to 2. Applicable Tag nos: 10HNA70CP501 & 10HNA75CP501

TECHNICAL CATALOGUE

Material Code	L172919728401015
Item Description	PI Draft Range: 0 - 600 mmWC
Detailed Description	Pressure Gauges, Draft Type Range: 0 - 600 mmWC 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101A/1729/00 Sl. nos:3 to 4. Applicable Tag nos: 10HLA10CP501 & 10HLA15CP501

TECHNICAL CATALOGUE

Material Code	L172919728401016
Item Description	PI Draft Range: 0 - 1000 mmWC
Detailed Description	Pressure Gauges, Draft Type Range: 0 - 1000 mmWC 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101A/1729/00 Sl. nos:5. Applicable Tag nos: 10HHQ20CP501

TECHNICAL CATALOGUE

Material Code	L172919728401017
Item Description	PI Draft Range: 0 - 1600 mmWC
Detailed Description	Pressure Gauges, Draft Type Range: 0 - 1600 mmWC 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101A/1729/00 Sl. nos:6 to 7. Applicable Tag nos: 10HFE20CP501 & 10HFE25CP501

TECHNICAL CATALOGUE

Material Code	L172919728401018
Item Description	PI DIAPHRAGM RANGE: (-)1 - 1 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: (-)1 - 1 Kg/cm ² 150 mm Dial as per spec ref: TCI:102/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:102/1729/00 Sl. nos:1 to 6. Applicable Tag nos: 10HJF73CP502, 90HJF28CP502, 90HJF40CP501, 90HJF41CP502, 90HJF42CP502 & 90HJF43CP502

TECHNICAL CATALOGUE

Material Code	L172919728401019
Item Description	PI DIAPHRAGM RANGE: 0 - 4 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: 0 - 4 Kg/cm ² 150 mm Dial as per spec ref: TCI:102/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:102/1729/00 Sl. nos:7. Applicable Tag nos: 90HJF54CP502

TECHNICAL CATALOGUE

Material Code	L172919728401020
Item Description	PI DIAPHRAGM RANGE: 0 - 16 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: 0 - 16 Kg/cm ² 150 mm Dial as per spec ref: TCI:102/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:102/1729/00 Sl. nos:8 to 11. Applicable Tag nos: 10HJF73CP503, 10HJF74CP501, 90HJF28CP503 & 90HJF29CP501

TECHNICAL CATALOGUE

Material Code	L172919728401021
Item Description	PI DIAPHRAGM RANGE: 0 - 25 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: 0 - 25 Kg/cm ² 150 mm Dial as per spec ref: TCI:102/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:102/1729/00 Sl. nos:12 to 29. Applicable Tag nos: 10HJA11CP501, 10HJA12CP501, 10HJA13CP501, 10HJA14CP501, 10HJA21CP501, 10HJA22CP501, 10HJA23CP501, 10HJA24CP501, 10HJA31CP501, 10HJA32CP501, 10HJA33CP501, 10HJA34CP501, 10HJA41CP501, 10HJA42CP501, 10HJA43CP501, 10HJA44CP501, 10HJF61CP504 & 10HJF64CP501

TECHNICAL CATALOGUE

Material Code	L172919728401022
Item Description	PI DIAPHRAGM RANGE: 0 - 40 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: 0 - 40 Kg/cm ² 150 mm Dial as per spec ref: TCI:102/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:102/1729/00 Sl. nos:30 to 36. Applicable Tag nos: 10HJF61CP501, 10HJF61CP503, 90HJF41CP503, 90HJF42CP503, 90HJF43CP503, 90HJF54CP501 & 90HJF60CP501

TECHNICAL CATALOGUE

Material Code	L172919728401006
Item Description	PI BOURDON RANGE: 0 - 25 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 25 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1729/00 Sl. nos: 32 to 38. Applicable Tag nos: 10HJF20CP503, 10HJM01CP501, 10HJT45CP501, 90HJT21CP501, 90HJT23CP501, 90HJT30CP501 & 90HJT41CP501

TECHNICAL CATALOGUE

Material Code	L172919728401007
Item Description	PI BOURDON RANGE: 0 - 40 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 40 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1729/00 Sl. nos: 39 to 43. Applicable Tag nos: 10HAG27CP502, 10HJF20CP501, 10HJF20CP502, 10LCR25CP501 & 90HJF14CP501

TECHNICAL CATALOGUE

Material Code	L172919728401008
Item Description	PI BOURDON RANGE: 0 - 40 KG/CM ² WITH PD
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 40 Kg/cm ² with PD 150 mm Dial with Pulsating Dampener as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1729/00 Sl. nos: 44 to 46. Applicable Tag nos: 90HJF11CP503, 90HJF12CP503 & 90HJF13CP503

TECHNICAL CATALOGUE

Material Code	L172919728401009
Item Description	PI BOURDON RANGE: 0 - 60 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 60 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1729/00 Sl. nos: 47 to 55. Applicable Tag nos: 10HCB01CP501, 10HCB02CP501, 10HCB03CP501, 10HCB03CP502, 10HCB03CP503, 10HCB03CP504, 10HCB04CP501, 10HCB05CP501 & 10HCB06CP503

TECHNICAL CATALOGUE

Material Code	L172919728401010
Item Description	PI BOURDON RANGE: 0 - 100 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 100 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1729/00 Sl. nos: 56 to 57. Applicable Tag nos: 10LAE21CP501 & 10LAE22CP501

TECHNICAL CATALOGUE

Material Code	L172919728401011
Item Description	PI BOURDON RANGE: 0 - 250 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 250 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1729/00 Sl. nos: 58. Applicable Tag nos: 10LAE20CP501

TECHNICAL CATALOGUE

Material Code	L172919728401012
Item Description	PI BOURDON RANGE: 0 - 400 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 400 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1729/00 Sl. nos: 59 to 65. Applicable Tag nos: 10HCB00CP501, 10LAE70CP501, 10LAE71CP501, 10LAE72CP501, 10LAE90CP501, 10LAE91CP501 & 10LAE92CP501

TECHNICAL CATALOGUE

Material Code	L173019728401002
Item Description	PI BOURDON RANGE: 0 - 16 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 16 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1730/00 Sl. nos: 19. Applicable Tag nos: 10HAG27CP501

TECHNICAL CATALOGUE

Material Code	L173019728401003
Item Description	PI BOURDON RANGE: 0 - 25 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 25 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1730/00 Sl. nos: 20 to 22. Applicable Tag nos: 10HJF20CP503, 10HJM01CP501 & 10HJT45CP501

TECHNICAL CATALOGUE

Material Code	L173019728401004
Item Description	PI BOURDON RANGE: 0 - 40 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 40 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1730/00 Sl. nos: 23 to 26. Applicable Tag nos: 10HAG27CP502, 10HJF20CP501, 10HJF20CP502 & 10LCR25CP501

TECHNICAL CATALOGUE

Material Code	L173019728401005
Item Description	PI BOURDON RANGE: 0 - 60 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 60 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1730/00 Sl. nos: 27 to 35. Applicable Tag nos: 10HCB01CP501, 10HCB02CP501, 10HCB03CP501, 10HCB03CP502, 10HCB03CP503, 10HCB03CP504, 10HCB04CP501, 10HCB05CP501 & 10HCB06CP503

TECHNICAL CATALOGUE

Material Code	L173019728401006
Item Description	PI BOURDON RANGE: 0 - 100 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 100 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1730/00 Sl. nos: 36 to 37. Applicable Tag nos: 10LAE21CP501 & 10LAE22CP501

TECHNICAL CATALOGUE

Material Code	L173019728401007
Item Description	PI BOURDON RANGE: 0 - 250 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 250 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1730/00 Sl. nos: 38. Applicable Tag nos: 10LAE20CP501

TECHNICAL CATALOGUE

Material Code	L173019728401008
Item Description	PI BOURDON RANGE: 0 - 400 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 400 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1730/00 Sl. nos: 39 to 45. Applicable Tag nos: 10HCB00CP501, 10LAE70CP501, 10LAE71CP501, 10LAE72CP501, 10LAE90CP501, 10LAE91CP501 & 10LAE92CP501

TECHNICAL CATALOGUE

Material Code	L173019728401009
Item Description	PI BOURDON RANGE: 0 - 600 KG/CM ² (FMG)
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 600 Kg/cm ² 250 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1730/00 Sl. nos: 46. Applicable Tag nos: 10HAC10CP501

TECHNICAL CATALOGUE

Material Code	L173019728401010
Item Description	PI Draft Range: 0 - 250 mmWC
Detailed Description	Pressure Gauges, Draft Type Range: 0 - 250 mmWC 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101A/1729/00 Sl. nos:1 to 2. Applicable Tag nos: 10HNA70CP501 & 10HNA75CP501

TECHNICAL CATALOGUE

Material Code	L173019728401011
Item Description	PI Draft Range: 0 - 600 mmWC
Detailed Description	Pressure Gauges, Draft Type Range: 0 - 600 mmWC 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101A/1729/00 Sl. nos:3 to 4. Applicable Tag nos: 10HLA10CP501 & 10HLA15CP501

TECHNICAL CATALOGUE

Material Code	L173019728401012
Item Description	PI Draft Range: 0 - 1000 mmWC
Detailed Description	Pressure Gauges, Draft Type Range: 0 - 1000 mmWC 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101A/1729/00 Sl. nos:5. Applicable Tag nos: 10HHQ20CP501

TECHNICAL CATALOGUE

Material Code	L173019728401013
Item Description	PI Draft Range: 0 - 1600 mmWC
Detailed Description	Pressure Gauges, Draft Type Range: 0 - 1600 mmWC 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101A/1729/00 Sl. nos:6 to 7. Applicable Tag nos: 10HFE20CP501 & 10HFE25CP501

TECHNICAL CATALOGUE

Material Code	L173019728401014
Item Description	PI DIAPHRAGM RANGE: (-)1 - 1 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: (-)1 - 1 Kg/cm ² 150 mm Dial as per spec ref: TCI:102/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:102/1730/00 Sl. nos:1. Applicable Tag nos: 10HJF73CP502

TECHNICAL CATALOGUE

Material Code	L173019728401015
Item Description	PI DIAPHRAGM RANGE: 0 - 16 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: 0 - 16 Kg/cm ² 150 mm Dial as per spec ref: TCI:102/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:102/1730/00 Sl. nos:2 to 3. Applicable Tag nos: 10HJF73CP503 & 10HJF74CP501

TECHNICAL CATALOGUE

Material Code	L173019728401016
Item Description	PI DIAPHRAGM RANGE: 0 - 25 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: 0 - 25 Kg/cm ² 150 mm Dial as per spec ref: TCI:102/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:102/1730/00 Sl. nos:4 to 21. Applicable Tag nos: 10HJA11CP501, 10HJA12CP501, 10HJA13CP501, 10HJA14CP501, 10HJA21CP501, 10HJA22CP501, 10HJA23CP501, 10HJA24CP501, 10HJA31CP501, 10HJA32CP501, 10HJA33CP501, 10HJA34CP501, 10HJA41CP501, 10HJA42CP501, 10HJA43CP501, 10HJA44CP501, 10HJF61CP504 & 10HJF64CP501

TECHNICAL CATALOGUE

Material Code	L173019728401001
Item Description	PI BOURDON RANGE: 0 - 10 KG/CM ²
Detailed Description	<p>Pressure Gauges, Bourdon Type Range: 0 - 10 Kg/cm² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1730/00 Sl. nos: 1 to 18. Applicable Tag nos: 10HJA11CP502, 10HJA12CP502, 10HJA13CP502, 10HJA14CP502, 10HJA21CP502, 10HJA22CP502, 10HJA23CP502, 10HJA24CP502, 10HJA31CP502, 10HJA32CP502, 10HJA33CP502, 10HJA34CP502, 10HJA41CP502, 10HJA42CP502, 10HJA43CP502, 10HJA44CP502, 10HJM01CP502 & 10HJN10CP501</p>

TECHNICAL CATALOGUE

Material Code	L173019728401017
Item Description	PI DIAPHRAGM RANGE: 0 - 40 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: 0 - 40 Kg/cm ² 150 mm Dial as per spec ref: TCI:102/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:102/1730/00 Sl. nos:22 to 23. Applicable Tag nos: 10HJF61CP501 & 10HJF61CP503

TECHNICAL CATALOGUE

Material Code	L1729S9728401021
Item Description	PI DIAPHRAGM RANGE: 0 - 25 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: 0 - 25 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1729-S/00 Sl. no:21.

TECHNICAL CATALOGUE

Material Code	L1729S9728401022
Item Description	PI DIAPHRAGM RANGE: 0 - 40 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: 0 - 40 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1729-S/00 Sl. no:22.

TECHNICAL CATALOGUE

Material Code	L1729S9728401001
Item Description	PI BOURDON RANGE: (-)1 - 1 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: (-)1 - 1 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1729-S/00 Sl. no:1.

TECHNICAL CATALOGUE

Material Code	L1729S9728401002
Item Description	PI BOURDON RANGE: 0 - 4 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 4 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1729-S/00 Sl. no:2.

TECHNICAL CATALOGUE

Material Code	L1729S9728401003
Item Description	PI BOURDON RANGE: 0 - 10 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 10 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1729-S/00 Sl. no:3.

TECHNICAL CATALOGUE

Material Code	L1729S9728401004
Item Description	PI BOURDON RANGE: 0 - 10 KG/CM ² WITH PD
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 10 Kg/cm ² with PD 150 mm Dial with Pulsating Dampener as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1729-S/00 Sl. no:4.

TECHNICAL CATALOGUE

Material Code	L1729S9728401005
Item Description	PI BOURDON RANGE: 0 - 16 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 16 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1729-S/00 Sl. no:5

TECHNICAL CATALOGUE

Material Code	L1729S9728401006
Item Description	PI BOURDON RANGE: 0 - 25 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 25 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1729-S/00 Sl. no:6.

TECHNICAL CATALOGUE

Material Code	L1729S9728401007
Item Description	PI BOURDON RANGE: 0 - 40 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 40 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1729-S/00 Sl. no:7.

TECHNICAL CATALOGUE

Material Code	L1729S9728401008
Item Description	PI BOURDON RANGE: 0 - 40 KG/CM ² WITH PD
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 40 Kg/cm ² with PD 150 mm Dial with Pulsating Dampener as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1729-S/00 Sl. no:8.

TECHNICAL CATALOGUE

Material Code	L1729S9728401009
Item Description	PI BOURDON RANGE: 0 - 60 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 60 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1729-S/00 Sl. no:9.

TECHNICAL CATALOGUE

Material Code	L1729S9728401010
Item Description	PI BOURDON RANGE: 0 - 100 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 100 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1729-S/00 Sl. no:10.

TECHNICAL CATALOGUE

Material Code	L1729S9728401011
Item Description	PI BOURDON RANGE: 0 - 250 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 250 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1729-S/00 Sl. no:11.

TECHNICAL CATALOGUE

Material Code	L1729S9728401012
Item Description	PI BOURDON RANGE: 0 - 400 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 400 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1729-S/00 Sl. no:12.

TECHNICAL CATALOGUE

Material Code	L1729S9728401013
Item Description	PI BOURDON RANGE: 0 - 600 KG/CM ² (FMG)
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 600 Kg/cm ² 250 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1729-S/00 Sl. no:13.

TECHNICAL CATALOGUE

Material Code	L1729S9728401014
Item Description	PI DRAFT RANGE: 0 - 250 MMWC
Detailed Description	Pressure Gauges, Draft Type Range: 0 - 250 mmWC 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1729-S/00 Sl. no:14.

TECHNICAL CATALOGUE

Material Code	L1729S9728401015
Item Description	PI DRAFT RANGE: 0 - 600 MMWC
Detailed Description	Pressure Gauges, Draft Type Range: 0 - 600 mmWC 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1729-S/00 Sl. no:15.

TECHNICAL CATALOGUE

Material Code	L1729S9728401016
Item Description	PI DRAFT RANGE: 0 - 1000 MMWC
Detailed Description	Pressure Gauges, Draft Type Range: 0 - 1000 mmWC 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1729-S/00 Sl. no:16.

TECHNICAL CATALOGUE

Material Code	L1729S9728401017
Item Description	PI DRAFT RANGE: 0 - 1600 MMWC
Detailed Description	Pressure Gauges, Draft Type Range: 0 - 1600 mmWC 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1729-S/00 Sl. no:17.

TECHNICAL CATALOGUE

Material Code	L1729S9728401018
Item Description	PI DIAPHRAGM RANGE: (-)1 - 1 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: (-)1 - 1 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1729-S/00 Sl. no:18.

TECHNICAL CATALOGUE

Material Code	L1729S9728401019
Item Description	PI DIAPHRAGM RANGE: 0 - 4 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: 0 - 4 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1729-S/00 Sl. no:19.

TECHNICAL CATALOGUE

Material Code	L1729S9728401020
Item Description	PI DIAPHRAGM RANGE: 0 - 16 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: 0 - 16 Kg/cm ² 150 mm Dial as per spec ref: TCI:101/08, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1729-S/00 Sl. no:20.

TECHNICAL CATALOGUE

Material Code	L172919728403001
Item Description	DPI RANGE: 0-60 MMWC
Detailed Description	Differential Pressure Gauges, Draft Type Range: 0-60 mmWC 150 mm Dial as per spec ref: TCI:104/08, Applicable Quality Plan ref: QA:CI:STD:QP:17/05, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:104/1729/00 Sl. nos:1. Applicable Tag nos: 10HHQ10CP501

TECHNICAL CATALOGUE

Material Code	L172919728403002
Item Description	DPI Range: 0-1000 mmWC
Detailed Description	Differential Pressure Gauges, Draft Type Range: 0-1000 mmWC 150 mm Dial as per spec ref: TCI:104/08, Applicable Quality Plan ref: QA:CI:STD:QP:17/05, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:104/1729/00 Sl. nos:2. Applicable Tag nos: 10HFW20CP501

TECHNICAL CATALOGUE

Material Code	L172919728403003
Item Description	DPI BOURDON RANGE: 0 - 1 KG/CM ²
Detailed Description	Differential Pressure Gauges, Bourdon Type Range: 0 - 1 Kg/cm ² 150 mm Dial as per spec ref: TCI:104/08, Applicable Quality Plan ref: QA:CI:STD:QP:17/05, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:104/1729/00 Sl. nos: 3 to 5. Applicable Tag nos: 90HJF11CP501, 90HJF12CP501 & 90HJF13CP501

TECHNICAL CATALOGUE

Material Code	L172919728403004
Item Description	DPI DIAPHRAGM RANGE: 0 - 1 KG/CM ²
Detailed Description	Differential Pressure Gauges, Diaphragm Type Range: 0 - 1 Kg/cm ² 150 mm Dial as per spec ref: TCI:104/08, Applicable Quality Plan ref: QA:CI:STD:QP:17/05, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:104/1729/00 Sl. nos: 6 to 11. Applicable Tag nos: 10HJF61CP502, 10HJF73CP501, 90HJF28CP501, 90HJF41CP501, 90HJF42CP501 & 90HJF43CP501

TECHNICAL CATALOGUE

Material Code	L1729S9728403001
Item Description	DPI RANGE: 0-60 MMWC
Detailed Description	Differential Pressure Gauges, Draft Type Range: 0-60 mmWC 150 mm Dial as per spec ref: TCI:104/08, Applicable Quality Plan ref: QA:CI:STD:QP:17/05, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:104/1729-S/00 Sl. no:1.

TECHNICAL CATALOGUE

Material Code	L1729S9728403002
Item Description	DPI Range: 0-1000 mmWC
Detailed Description	Differential Pressure Gauges, Draft Type Range: 0-1000 mmWC 150 mm Dial as per spec ref: TCI:104/08, Applicable Quality Plan ref: QA:CI:STD:QP:17/05, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:104/1729-S/00 Sl. no:2.

TECHNICAL CATALOGUE

Material Code	L1729S9728403003
Item Description	DPI BOURDON RANGE: 0 - 1 KG/CM ²
Detailed Description	Differential Pressure Gauges, Draft Type Range: 0 - 1 Kg/cm ² 150 mm Dial as per spec ref: TCI:104/08, Applicable Quality Plan ref: QA:CI:STD:QP:17/05, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:104/1729-S/00 Sl. no:3

TECHNICAL CATALOGUE

Material Code	L1729S9728403004
Item Description	DPI DIAPHRAGM RANGE: 0 - 1 KG/CM ²
Detailed Description	Differential Pressure Gauges, DPI DIAPHRAGM RANGE: 0 - 1 KG/CM ² 150 mm Dial as per spec ref: TCI:104/08, Applicable Quality Plan ref: QA:CI:STD:QP:17/05, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:104/1729-S/00 Sl. no:4

TECHNICAL CATALOGUE

Material Code	L173019728403001
Item Description	DPI Range: 0-60 mmWC
Detailed Description	Differential Pressure Gauges, Draft Type Range: 0-60 mmWC 150 mm Dial as per spec ref: TCI:104/08, Applicable Quality Plan ref: QA:CI:STD:QP:17/05, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:104/1730/00 Sl. nos:1. Applicable Tag nos: 10HHQ10CP501

TECHNICAL CATALOGUE

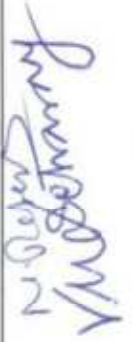
Material Code	L173019728403002
Item Description	DPI Range: 0-1000 mmWC
Detailed Description	Differential Pressure Gauges, Draft Type Range: 0-1000 mmWC 150 mm Dial as per spec ref: TCI:104/08, Applicable Quality Plan ref: QA:CI:STD:QP:17/05, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:104/1730/00 Sl. nos:2. Applicable Tag nos: 10HFW20CP501

TECHNICAL CATALOGUE

Material Code	L173019728403003
Item Description	DPI DIAPHRAGM RANGE: 0 - 1 KG/CM ²
Detailed Description	Differential Pressure Gauges, Draft Type Range: 0 - 1 Kg/cm ² 150 mm Dial as per spec ref: TCI:104/08, Applicable Quality Plan ref: QA:CI:STD:QP:17/05, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:104/1730/00 Sl. nos:3 to 4. Applicable Tag nos: 10HJF61CP502 & 10HJF73CP501

a		Site Conditions:									
i	Altitude above mean sea level	3.3 m above MSL									
ii	Ambient temperature condition	17 - 41 °C									
iii	Relative humidity	65%									
b		Technical Data:									
Sl no	Instrument Tag no	Description	Medium	Qty/ Blr	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.	
1	10HJA11CP502	ATM. STEAM PRESSURE INDICATORS - EL AB CORNER 1	ATM. STEAM	1	290	290	6.27	6.27	0 - 10	1/2" NPT(M)	
2	10HJA12CP502	ATM. STEAM PRESSURE INDICATORS - EL AB CORNER 2	ATM. STEAM	1	290	290	6.27	6.27	0 - 10	1/2" NPT(M)	
3	10HJA13CP502	ATM. STEAM PRESSURE INDICATORS - EL AB CORNER 3	ATM. STEAM	1	290	290	6.27	6.27	0 - 10	1/2" NPT(M)	
4	10HJA14CP502	ATM. STEAM PRESSURE INDICATORS - EL AB CORNER 4	ATM. STEAM	1	290	290	6.27	6.27	0 - 10	1/2" NPT(M)	
5	10HJA21CP502	ATM. STEAM PRESSURE INDICATORS - EL BC CORNER 1	ATM. STEAM	1	290	290	6.27	6.27	0 - 10	1/2" NPT(M)	
6	10HJA22CP502	ATM. STEAM PRESSURE INDICATORS - EL BC CORNER 2	ATM. STEAM	1	290	290	6.27	6.27	0 - 10	1/2" NPT(M)	
7	10HJA23CP502	ATM. STEAM PRESSURE INDICATORS - EL BC CORNER 3	ATM. STEAM	1	290	290	6.27	6.27	0 - 10	1/2" NPT(M)	
8	10HJA24CP502	ATM. STEAM PRESSURE INDICATORS - EL BC CORNER 4	ATM. STEAM	1	290	290	6.27	6.27	0 - 10	1/2" NPT(M)	
9	10HJA31CP502	ATM. STEAM PRESSURE INDICATORS - EL DE CORNER 1	ATM. STEAM	1	290	290	6.27	6.27	0 - 10	1/2" NPT(M)	
10	10HJA32CP502	ATM. STEAM PRESSURE INDICATORS - EL DE CORNER 2	ATM. STEAM	1	290	290	6.27	6.27	0 - 10	1/2" NPT(M)	
11	10HJA33CP502	ATM. STEAM PRESSURE INDICATORS - EL DE CORNER 3	ATM. STEAM	1	290	290	6.27	6.27	0 - 10	1/2" NPT(M)	
12	10HJA34CP502	ATM. STEAM PRESSURE INDICATORS - EL DE CORNER 4	ATM. STEAM	1	290	290	6.27	6.27	0 - 10	1/2" NPT(M)	
13	10HJA41CP502	ATM. STEAM PRESSURE INDICATORS - EL FG CORNER 1	ATM. STEAM	1	290	290	6.27	6.27	0 - 10	1/2" NPT(M)	
14	10HJA42CP502	ATM. STEAM PRESSURE INDICATORS - EL FG CORNER 2	ATM. STEAM	1	290	290	6.27	6.27	0 - 10	1/2" NPT(M)	
15	10HJA43CP502	ATM. STEAM PRESSURE INDICATORS - EL FG CORNER 3	ATM. STEAM	1	290	290	6.27	6.27	0 - 10	1/2" NPT(M)	
16	10HJA44CP502	ATM. STEAM PRESSURE INDICATORS - EL FG CORNER 4	ATM. STEAM	1	290	290	6.27	6.27	0 - 10	1/2" NPT(M)	
17	10HJM01CP502	ATOMISING STEAM HEADER PRESSURE	ATM. STEAM	1	290	290	7	7	0 - 10	1/2" NPT(M)	

Prepared & Checked : NR
Approved : VMS



Sl no	Instrument Tag no	Description	Medium	Qty/ Blr	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.
18	10HJN10CP501	ATOMISING AIR HEADER PRESSURE	ATOM. AIR	1	30	--	6	7.00	0 - 10	1/2" NPT(M)
19	10HAG27CP501	BCP COOLING WATER LINE PRESSURE	WATER	1	60	--	12	--	0 - 16	1/2" NPT(M)
20	10HJF20CP503	HSD HEADER PRESSURE	HSD	1	40	40	5.27	14.00	0 - 25	1/2" NPT(M)
21	10HJM01CP501	ATOMISING STEAM HEADER PRESSURE	ATM. STEAM	1	290	290	16	16	0 - 25	1/2" NPT(M)
22	10HJT45CP501	PRESSURE OF AUX. STEAM SUPPLY TO DRAIN OIL TANK (BOILER AREA)	STEAM	1	290	290	15	15	0 - 25	1/2" NPT(M)
23	10HAG27CP502	BCP COOLING WATER RETURN LINE PRESSURE	WATER	1	--	100	--	30	0 - 40	1/2" NPT(M)
24	10HJF20CP501	PRESSURE BEFORE LOTV	HSD	1	40	40	23	23	0 - 40	1/2" NPT(M)
25	10HJF20CP502	PRESSURE AFTER LOTV	HSD	1	40	40	23	23	0 - 40	1/2" NPT(M)
26	10LCR25CP501	BOILER RECIRCULATING PUMP MOTOR LP FILL WATER PRESSURE BEFORE FILTER	WATER	1	--	100	--	30	0 - 40	1/2" NPT(M)
27	10HCB01CP501	SB STEAM PRESSURE AFTER SBPRV	STEAM	1	348	395	40	50	0 - 60	1/2" NPT(M)
28	10HCB02CP501	SB RETRACT STEAM PRESSURE - RIGHT	STEAM	1	348	395	40	50	0 - 60	1/2" NPT(M)
29	10HCB03CP501	AH-A DA HEAD PRESSURE (HOT END)	STEAM	1	348	395	40	50	0 - 60	1/2" NPT(M)
30	10HCB03CP502	AH-A DA HEAD PRESSURE (COLD END)	STEAM	1	348	395	40	50	0 - 60	1/2" NPT(M)
31	10HCB03CP503	AH-B DA HEAD PRESSURE (HOT END)	STEAM	1	348	395	40	50	0 - 60	1/2" NPT(M)
32	10HCB03CP504	AH-B DA HEAD PRESSURE (COLD END)	STEAM	1	348	395	40	50	0 - 60	1/2" NPT(M)
33	10HCB04CP501	WALL BLOWER STEAM PRESSURE - RIGHT & REAR	STEAM	1	348	395	40	50	0 - 60	1/2" NPT(M)
34	10HCB05CP501	SB RETRACT STEAM PRESSURE - LEFT	STEAM	1	348	395	40	50	0 - 60	1/2" NPT(M)
35	10HCB06CP503	WALL BLOWER STEAM PRESSURE - LEFT & FRONT	STEAM	1	348	395	40	50	0 - 60	1/2" NPT(M)
36	10LAE21CP501	RH/DSH SPRAY WATER PRESSURE AFTER CONTROL VALVE -A	WATER	1	189	189	59.24	70.85	0 - 100	1/2" NPT(M)
37	10LAE22CP501	RH/DSH SPRAY WATER PRESSURE AFTER CONTROL VALVE -B	WATER	1	189	189	59.24	70.85	0 - 100	1/2" NPT(M)
38	10LAE20CP501	RH/DSH SPRAY WATER PRESSURE - AFTER COMMON BLOCK VALVE	WATER	1	189	189	127	139	0 - 250	1/2" NPT(M)

Prepared & Checked : NR
Approved : VMS

Sl no	Instrument Tag no	Description	Medium	Qty/ Bir	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.
39	10HCB00CP501	SH STEAM PRESSURE BEFORE SBPRV	STEAM	1	495	517	290.8	309.5	0 - 400	1/2" NPT(M)
40	10LAE70CP501	SH DSH-1 SPRAY WATER PRESSURE - AFTER COMMON BLOCK VALVE	WATER	1	308	308	321.91	325.34	0 - 400	1/2" NPT(M)
41	10LAE71CP501	SH DSH-1 SPRAY WATER PRESSURE AFTER CONTROL VALVE -A	WATER	1	308	308	291.76	297.75	0 - 400	1/2" NPT(M)
42	10LAE72CP501	SH DSH-1 SPRAY WATER PRESSURE AFTER CONTROL VALVE -B	WATER	1	308	308	291.76	297.75	0 - 400	1/2" NPT(M)
43	10LAE90CP501	SH DeSH-2 SPRAY WATER PRESSURE - AFTER COMMON BLOCK VALVE	WATER	1	308	308	319.19	325.03	0 - 400	1/2" NPT(M)
44	10LAE91CP501	SH DeSH-2 SPRAY WATER PRESSURE AFTER CONTROL VALVE -A	WATER	1	308	308	285.55	295.19	0 - 400	1/2" NPT(M)
45	10LAE92CP501	SH DeSH-2 SPRAY WATER PRESSURE AFTER CONTROL VALVE -B	WATER	1	308	308	319.19	325.03	0 - 400	1/2" NPT(M)
46	10HAC10CP501	ECO. INLET BOILER FEED WATER PRESSURE	WATER	1	308	348	331	349.1	0 - 600	1/2" NPT(M)

NOTES:

- Pressure Gauges shall be Direct Mounting & Bottom Entry
- For Datasheet Sl. No. 46, vendor shall offer 250 mm Dial Pressure Gauges.

Prepared & Checked : NR
Approved : VMS



a Site Conditions:												
i	Altitude above mean sea level											
ii	Ambient temperature condition											
iii	Relative humidity											
	3.3 m above MSL											
	17 - 41 °C											
	65%											
b Technical Data:												
Sl no	Instrument Tag no	Description	Medium	Qty/ Blr	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.		
1	10HJF73CP502	DRAIN OIL PUMP INLET PRESSURE (BOILER AREA)	HFO	1	55	55	0	0	(-)1 - 1	1/2" NPT(M)		
2	10HJF73CP503	DRAIN OIL PUMP OUTLET PRESSURE (BOILER AREA)	HFO	1	55	55	10	10	0 - 16	1/2" NPT(M)		
3	10HJF74CP501	DRAIN OIL PUMP OUTLET PRESSURE (BOILER AREA)	HFO	1	55	55	10	10	0 - 16	1/2" NPT(M)		
4	10HJA11CP501	HFO PRESSURE INDICATORS - EL.AB CORNER 1	HFO	1	120	120	14.2	14.2	0 - 25	1/2" NPT(M)		
5	10HJA12CP501	HFO PRESSURE INDICATORS - EL.AB CORNER 2	HFO	1	120	120	14.2	14.2	0 - 25	1/2" NPT(M)		
6	10HJA13CP501	HFO PRESSURE INDICATORS - EL.AB CORNER 3	HFO	1	120	120	14.2	14.2	0 - 25	1/2" NPT(M)		
7	10HJA14CP501	HFO PRESSURE INDICATORS - EL.AB CORNER 4	HFO	1	120	120	14.2	14.2	0 - 25	1/2" NPT(M)		
8	10HJA21CP501	HFO PRESSURE INDICATORS - EL.BC CORNER 1	HFO	1	120	120	14.2	14.2	0 - 25	1/2" NPT(M)		
9	10HJA22CP501	HFO PRESSURE INDICATORS - EL.BC CORNER 2	HFO	1	120	120	14.2	14.2	0 - 25	1/2" NPT(M)		
10	10HJA23CP501	HFO PRESSURE INDICATORS - EL.BC CORNER 3	HFO	1	120	120	14.2	14.2	0 - 25	1/2" NPT(M)		
11	10HJA24CP501	HFO PRESSURE INDICATORS - EL.BC CORNER 4	HFO	1	120	120	14.2	14.2	0 - 25	1/2" NPT(M)		
12	10HJA31CP501	HFO PRESSURE INDICATORS - EL. DE CORNER 1	HFO	1	120	120	14.2	14.2	0 - 25	1/2" NPT(M)		
13	10HJA32CP501	HFO PRESSURE INDICATORS - EL. DE CORNER 2	HFO	1	120	120	14.2	14.2	0 - 25	1/2" NPT(M)		
14	10HJA33CP501	HFO PRESSURE INDICATORS - EL. DE CORNER 3	HFO	1	120	120	14.2	14.2	0 - 25	1/2" NPT(M)		
15	10HJA34CP501	HFO PRESSURE INDICATORS - EL. DE CORNER 4	HFO	1	120	120	14.2	14.2	0 - 25	1/2" NPT(M)		

Handwritten signature

Prepared & Checked : NR
Approved : VMS

Sl no	Instrument Tag no	Description	Medium	Qty/ Blr	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.
16	10HJA41CP501	HFO PRESSURE INDICATORS - EL.FG CORNER 1	HFO	1	120	120	14.2	14.2	0 - 25	1/2" NPT(M)
17	10HJA42CP501	HFO PRESSURE INDICATORS - EL.FG CORNER 2	HFO	1	120	120	14.2	14.2	0 - 25	1/2" NPT(M)
18	10HJA43CP501	HFO PRESSURE INDICATORS - EL.FG CORNER 3	HFO	1	120	120	14.2	14.2	0 - 25	1/2" NPT(M)
19	10HJA44CP501	HFO PRESSURE INDICATORS - EL.FG CORNER 4	HFO	1	120	120	14.2	14.2	0 - 25	1/2" NPT(M)
20	10HJF61CP504	HFO HEADER PRESSURE	HFO	1	120	120	6.27	13.50	0 - 25	1/2" NPT(M)
21	10HJF64CP501	HFO RETURN HEADER PRESSURE	HFO	1	120	120	3	6.27 - 13.25	0 - 25	1/2" NPT(M)
22	10HJF61CP501	PRESSURE BEFORE OP. FLOOR STRAINER	HFO	1	125	125	23	23	0 - 40	1/2" NPT(M)
23	10HJF61CP503	PRESSURE AFTER HOTV	HFO	1	125	125	23	23	0 - 40	1/2" NPT(M)

NOTES:

1. Pressure Gauges shall be Direct Mounting & Bottom Entry

M. Peter
VMS

Prepared & Checked : NR
Approved : VMS

Project: Udangudi, 2 x 660 MW
Cust No: 1729 & 1730

List of Pressure gauges (Draft)
150 mm Dial

Datasheet Ref.: DSH:101A/1729/00
Date: 04-11-2019

a Site Conditions:	
i	Altitude above mean sea level 3.3 m above MSL
ii	Ambient temperature condition 17 - 41 °C
iii	Relative humidity 65%

b Technical Data:										
Sl no	Instrument Tag no	Description	Medium	Qty/ Bir	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (mmWC)	Max. Press. (mmWC)	Range (mmWC)	Inst. End Conn.
1	10HNA70CP501	ID FAN-A OUTLET PRESSURE	FLUE GAS	1	127	140	85	134	0 - 250	1/2" NPT(M)
2	10HNA75CP501	ID FAN-B OUTLET PRESSURE	FLUE GAS	1	127	140	85	134	0 - 250	1/2" NPT(M)
3	10HLA10CP501	FD FAN-A OUTLET PRESSURE	SEC. AIR	1	35	44	333	490	0 - 600	1/2" NPT(M)
4	10HLA15CP501	FD FAN-B OUTLET PRESSURE	SEC. AIR	1	35	44	333	490	0 - 600	1/2" NPT(M)
5	10HHQ20CP501	SCANNER AIR FAN OUTLET PRESSURE	SCA. AIR	1	35	44	533	690	0 - 1000	1/2" NPT(M)
6	10HFE20CP501	PA FAN-A OUTLET PRESSURE	PY. AIR	1	40	49	962	1213	0 - 1600	1/2" NPT(M)
7	10HFE25CP501	PA FAN-B OUTLET PRESSURE	PY. AIR	1	40	49	962	1213	0 - 1600	1/2" NPT(M)

Signature
VMS

Prepared & Checked : NR
Approved : VMS

a Site Conditions:												
i	Altitude above mean sea level											
ii	Ambient temperature condition											
iii	Relative humidity											
	3.3 m above MSL											
	17 - 41 °C											
	65%											
b Technical Data:												
Sl no	Instrument Tag no	Description	Medium	Qty/ Bir	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.		
1	90HJF10CP501	PRESSURE AT HSD PUMP HOUSE INLET	HSD	1	40	40	0	0	(-) 1 - 1	1/2" NPT(M)		
2	90HJF11CP502	PRESSURE AT HSD PUMP INLET	HSD	1	40	40	0	0	(-) 1 - 1	1/2" NPT(M)		
3	90HJF12CP502	PRESSURE AT HSD PUMP INLET	HSD	1	40	40	0	0	(-) 1 - 1	1/2" NPT(M)		
4	90HJF13CP502	PRESSURE AT HSD PUMP INLET	HSD	1	40	40	0	0	(-) 1 - 1	1/2" NPT(M)		
5	90HJF14CP502	PRESSURE AT LOPCV OUTLET	HSD	1	40	40	3	3	0 - 4	1/2" NPT(M)		
6	10HJA11CP502	ATM. STEAM PRESSURE INDICATORS - EL AB CORNER 1	ATM. STEAM	1	290	290	6.27	6.27	0 - 10	1/2" NPT(M)		
7	10HJA12CP502	ATM. STEAM PRESSURE INDICATORS - EL AB CORNER 2	ATM. STEAM	1	290	290	6.27	6.27	0 - 10	1/2" NPT(M)		
8	10HJA13CP502	ATM. STEAM PRESSURE INDICATORS - EL AB CORNER 3	ATM. STEAM	1	290	290	6.27	6.27	0 - 10	1/2" NPT(M)		
9	10HJA14CP502	ATM. STEAM PRESSURE INDICATORS - EL AB CORNER 4	ATM. STEAM	1	290	290	6.27	6.27	0 - 10	1/2" NPT(M)		
10	10HJA21CP502	ATM. STEAM PRESSURE INDICATORS - EL BC CORNER 1	ATM. STEAM	1	290	290	6.27	6.27	0 - 10	1/2" NPT(M)		
11	10HJA22CP502	ATM. STEAM PRESSURE INDICATORS - EL BC CORNER 2	ATM. STEAM	1	290	290	6.27	6.27	0 - 10	1/2" NPT(M)		
12	10HJA23CP502	ATM. STEAM PRESSURE INDICATORS - EL BC CORNER 3	ATM. STEAM	1	290	290	6.27	6.27	0 - 10	1/2" NPT(M)		
13	10HJA24CP502	ATM. STEAM PRESSURE INDICATORS - EL BC CORNER 4	ATM. STEAM	1	290	290	6.27	6.27	0 - 10	1/2" NPT(M)		
14	10HJA31CP502	ATM. STEAM PRESSURE INDICATORS - EL DE CORNER 1	ATM. STEAM	1	290	290	6.27	6.27	0 - 10	1/2" NPT(M)		
15	10HJA32CP502	ATM. STEAM PRESSURE INDICATORS - EL DE CORNER 2	ATM. STEAM	1	290	290	6.27	6.27	0 - 10	1/2" NPT(M)		

Prepared & Checked : NR
Approved : VMS



Sl no	Instrument Tag no	Description	Medium	Qty/ Blr	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Insl. End Conn.
16	10HJA33CP502	ATM. STEAM PRESSURE INDICATORS - EL DE CORNER 3	ATM. STEAM	1	290	290	6.27	6.27	0 - 10	1/2" NPT(M)
17	10HJA34CP502	ATM. STEAM PRESSURE INDICATORS - EL DE CORNER 4	ATM. STEAM	1	290	290	6.27	6.27	0 - 10	1/2" NPT(M)
18	10HJA41CP502	ATM. STEAM PRESSURE INDICATORS - EL FG CORNER 1	ATM. STEAM	1	290	290	6.27	6.27	0 - 10	1/2" NPT(M)
19	10HJA42CP502	ATM. STEAM PRESSURE INDICATORS - EL FG CORNER 2	ATM. STEAM	1	290	290	6.27	6.27	0 - 10	1/2" NPT(M)
20	10HJA43CP502	ATM. STEAM PRESSURE INDICATORS - EL FG CORNER 3	ATM. STEAM	1	290	290	6.27	6.27	0 - 10	1/2" NPT(M)
21	10HJA44CP502	ATM. STEAM PRESSURE INDICATORS - EL FG CORNER 4	ATM. STEAM	1	290	290	6.27	6.27	0 - 10	1/2" NPT(M)
22	10HJM01CP502	ATOMISING STEAM HEADER PRESSURE	ATM. STEAM	1	290	290	7	7	0 - 10	1/2" NPT(M)
23	10HJN10CP501	ATOMISING AIR HEADER PRESSURE	ATOM. AIR	1	30	--	6	7.00	0 - 10	1/2" NPT(M)
24	90HJP01CP501	COOLING WATER SUPPLY LINE PRESSURE	WATER	1	38	38	6	6	0 - 10	1/2" NPT(M)
25	90HJP01CP502	COOLING WATER SUPPLY LINE PRESSURE AFTER HOTCV	WATER	1	38	38	6	6	0 - 10	1/2" NPT(M)
26	90HJP93CP501	SUMP PUMP DISCHARGE PRESSURE	WATER	1	37.8	37.8	5	5	0 - 10	1/2" NPT(M)
27	90HJP94CP501	SUMP PUMP DISCHARGE PRESSURE	WATER	1	37.8	37.8	5	5	0 - 10	1/2" NPT(M)
28	10HAG27CP501	B/C P COOLING WATER LINE PRESSURE	WATER	1	60	--	12	--	0 - 16	1/2" NPT(M)
29	90HJT21CP502	HEATING STEAM PRESSURE AT HOTCV OUTLET	STEAM	1	290	290	5.50	11.50	0 - 16	1/2" NPT(M)
30	90HJT23CP502	HEATING STEAM PRESSURE AT HOTCV OUTLET	STEAM	1	290	290	5.50	11.50	0 - 16	1/2" NPT(M)
31	90HJT30CP502	HEATING STEAM PRESSURE AT HOTCV OUTLET	STEAM	1	290	290	5.50	11.50	0 - 16	1/2" NPT(M)
32	10HJF20CP503	HSD HEADER PRESSURE	HSD	1	40	40	5.27	14.00	0 - 25	1/2" NPT(M)
33	10HJM01CP501	ATOMISING STEAM HEADER PRESSURE	ATM. STEAM	1	290	290	16	16	0 - 25	1/2" NPT(M)
34	10HJT45CP501	PRESSURE OF AUX. STEAM SUPPLY TO DRAIN OIL TANK (BOILER AREA)	STEAM	1	290	290	15	15	0 - 25	1/2" NPT(M)

Handwritten signature

Prepared & Checked : NR
Approved : VMS

Sl no	Instrument Tag no	Description	Medium	Qty/ Blr	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.
35	90HJT1CP501	HEATING STEAM PRESSURE AT HOTCV-1 INLET	STEAM	1	290	290	14.5	14.5	0 - 25	1/2" NPT(M)
36	90HJT23CP501	HEATING STEAM PRESSURE AT HOTCV-2 INLET	STEAM	1	290	290	14.5	14.5	0 - 25	1/2" NPT(M)
37	90HJT30CP501	HEATING STEAM PRESSURE AT HOTCV-3 INLET	STEAM	1	290	290	14.5	14.5	0 - 25	1/2" NPT(M)
38	90HJT41CP501	PRESSURE OF AUX. STEAM SUPPLY TO DRAIN OIL TANK (PUMP HOUSE)	STEAM	1	290	290	15	15	0 - 25	1/2" NPT(M)
39	10HAG27CP502	BCP COOLING WATER RETURN LINE PRESSURE	WATER	1	--	100	--	30	0 - 40	1/2" NPT(M)
40	10HJF20CP501	PRESSURE BEFORE LOTV	HSD	1	40	40	23	23	0 - 40	1/2" NPT(M)
41	10HJF20CP502	PRESSURE AFTER LOTV	HSD	1	40	40	23	23	0 - 40	1/2" NPT(M)
42	10LCR25CP501	BOILER RECIRCULATING PUMP MOTOR LP FILL WATER PRESSURE BEFORE FILTER	WATER	1	--	100	--	30	0 - 40	1/2" NPT(M)
43	90HJF14CP501	PRESSURE AT LOPCV INLET	HSD	1	40	40	25	25	0 - 40	1/2" NPT(M)
44	90HJF11CP503	PRESSURE AT HSD PUMP OUTLET	HSD	1	40	40	25	25	0 - 40	1/2" NPT(M)
45	90HJF12CP503	PRESSURE AT HSD PUMP OUTLET	HSD	1	40	40	25	25	0 - 40	1/2" NPT(M)
46	90HJF13CP503	PRESSURE AT HSD PUMP OUTLET	HSD	1	40	40	25	25	0 - 40	1/2" NPT(M)
47	10HCB01CP501	SB STEAM PRESSURE AFTER SBPRV	STEAM	1	348	395	40	50	0 - 60	1/2" NPT(M)
48	10HCB02CP501	SB RETRACT STEAM PRESSURE - RIGHT	STEAM	1	348	395	40	50	0 - 60	1/2" NPT(M)
49	10HCB03CP501	AH-A DA HEAD PRESSURE (HOT END)	STEAM	1	348	395	40	50	0 - 60	1/2" NPT(M)
50	10HCB03CP502	AH-A DA HEAD PRESSURE (COLD END)	STEAM	1	348	395	40	50	0 - 60	1/2" NPT(M)
51	10HCB03CP503	AH-B DA HEAD PRESSURE (HOT END)	STEAM	1	348	395	40	50	0 - 60	1/2" NPT(M)
52	10HCB03CP504	AH-B DA HEAD PRESSURE (COLD END)	STEAM	1	348	395	40	50	0 - 60	1/2" NPT(M)
53	10HCB04CP501	WALL BLOWER STEAM PRESSURE - RIGHT & REAR	STEAM	1	348	395	40	50	0 - 60	1/2" NPT(M)

N. R. Sathyanarayana
V. M. Sathyanarayana

Sl no	Instrument Tag no	Description	Medium	Qty/ Blr	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.
54	10HCB05CP501	SB RETRACT STEAM PRESSURE - LEFT	STEAM	1	348	395	40	50	0 - 60	1/2" NPT(M)
55	10HCB06CP503	WALL BLOWER STEAM PRESSURE - LEFT & FRONT	STEAM	1	348	395	40	50	0 - 60	1/2" NPT(M)
56	10LAE21CP501	RH/DSH SPRAY WATER PRESSURE AFTER CONTROL VALVE -A	WATER	1	189	189	59.24	70.85	0 - 100	1/2" NPT(M)
57	10LAE22CP501	RH/DSH SPRAY WATER PRESSURE AFTER CONTROL VALVE -B	WATER	1	189	189	59.24	70.85	0 - 100	1/2" NPT(M)
58	10LAE20CP501	RH/DSH SPRAY WATER PRESSURE - AFTER COMMON BLOCK VALVE	WATER	1	189	189	127	139	0 - 250	1/2" NPT(M)
59	10HCB00CP501	SB STEAM PRESSURE BEFORE SBPRV	STEAM	1	495	517	290.8	309.5	0 - 400	1/2" NPT(M)
60	10LAE70CP501	SH DSH-1 SPRAY WATER PRESSURE - AFTER COMMON BLOCK VALVE	WATER	1	308	308	321.91	325.34	0 - 400	1/2" NPT(M)
61	10LAE71CP501	SH DSH-1 SPRAY WATER PRESSURE AFTER CONTROL VALVE -A	WATER	1	308	308	291.76	297.75	0 - 400	1/2" NPT(M)
62	10LAE72CP501	SH DSH-1 SPRAY WATER PRESSURE AFTER CONTROL VALVE -B	WATER	1	308	308	291.76	297.75	0 - 400	1/2" NPT(M)
63	10LAE90CP501	SH DeSH-2 SPRAY WATER PRESSURE - AFTER COMMON BLOCK VALVE	WATER	1	308	308	319.19	325.03	0 - 400	1/2" NPT(M)
64	10LAE91CP501	SH DeSH-2 SPRAY WATER PRESSURE AFTER CONTROL VALVE -A	WATER	1	308	308	285.55	295.19	0 - 400	1/2" NPT(M)
65	10LAE92CP501	SH DeSH-2 SPRAY WATER PRESSURE AFTER CONTROL VALVE -B	WATER	1	308	308	319.19	325.03	0 - 400	1/2" NPT(M)
66	10HAC10CP501	ECO. INLET BOILER FEED WATER PRESSURE	WATER	1	308	348	331	349.1	0 - 600	1/2" NPT(M)

NOTES:

- For Datasheet Sl. No. 66, vendor shall offer 250 mm Dial Pressure Gauges.
- For Datasheet Sl. Nos. 26, 27 & 44 - 46, Vendor shall provide Pulsating Dampeners.
- Pressure Gauges shall be Direct Mounting & Bottom Entry

Noted
VMS

Prepared & Checked : NR
Approved : VMS

Project: Udangudi, 2 x 660 MW
Cust No: 1729 & 1730

List of Pressure gauges (Draft)
150 mm Dial

Datasheet Ref.: DSH:101A/1729/00
Date: 04-11-2019

a Site Conditions:	
i	Altitude above mean sea level 3.3 m above MSL
ii	Ambient temperature condition 17 - 41 °C
iii	Relative humidity 65%

b Technical Data:										
Sl no	Instrument Tag no	Description	Medium	Qty/ Bir	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (mmWC)	Max. Press. (mmWC)	Range (mmWC)	Inst. End Conn.
1	10HNA70CP501	ID FAN-A OUTLET PRESSURE	FLUE GAS	1	127	140	85	134	0 - 250	1/2" NPT(M)
2	10HNA75CP501	ID FAN-B OUTLET PRESSURE	FLUE GAS	1	127	140	85	134	0 - 250	1/2" NPT(M)
3	10HLA10CP501	FD FAN-A OUTLET PRESSURE	SEC. AIR	1	35	44	333	490	0 - 600	1/2" NPT(M)
4	10HLA15CP501	FD FAN-B OUTLET PRESSURE	SEC. AIR	1	35	44	333	490	0 - 600	1/2" NPT(M)
5	10HHQ20CP501	SCANNER AIR FAN OUTLET PRESSURE	SCA. AIR	1	35	44	533	690	0 - 1000	1/2" NPT(M)
6	10HFE20CP501	PA FAN-A OUTLET PRESSURE	PY. AIR	1	40	49	962	1213	0 - 1600	1/2" NPT(M)
7	10HFE25CP501	PA FAN-B OUTLET PRESSURE	PY. AIR	1	40	49	962	1213	0 - 1600	1/2" NPT(M)

Signature
M. Subramanyam

Prepared & Checked : NR
Approved : VMS

Project: Udangudi, 2 x 660 MW
Cust No: 1729

List of Pressure gauges (Chemical Seal)
150 mm Dial

Datasheet Ref: DSH:102/1729/00
Date: 04-11-2019

a		Site Conditions:										
i	Altitude above mean sea level	3.3 m above MSL										
ii	Ambient temperature condition	17 - 41 °C										
iii	Relative humidity	65%										
b		Technical Data:										
Sl no	Instrument Tag no	Description	Medium	Qty./ Blr.	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.		
1	10HJF73CP502	DRAIN OIL PUMP INLET PRESSURE (BOILER AREA)	HFO	1	55	55	0	0	(-)1 - 1	1/2" NPT(M)		
2	90HJF28CP502	DRAIN OIL PUMP INLET PRESSURE (PUMP HOUSE)	HFO	1	55	55	0	0	(-)1 - 1	1/2" NPT(M)		
3	90HJF40CP501	PRESSURE AT HFO PUMP HOUSE INLET	HFO	1	55	55	0	0	(-)1 - 1	1/2" NPT(M)		
4	90HJF41CP502	PRESSURE AT HFO PUMP INLET	HFO	1	55	55	0	0	(-)1 - 1	1/2" NPT(M)		
5	90HJF42CP502	PRESSURE AT HFO PUMP INLET	HFO	1	55	55	0	0	(-)1 - 1	1/2" NPT(M)		
6	90HJF43CP502	PRESSURE AT HFO PUMP INLET	HFO	1	55	55	0	0	(-)1 - 1	1/2" NPT(M)		
7	90HJF54CP502	PRESSURE AT HOPCV OUTLET	HFO	1	55	55	2	2	0 - 4	1/2" NPT(M)		
8	10HJF73CP503	DRAIN OIL PUMP OUTLET PRESSURE (BOILER AREA)	HFO	1	55	55	10	10	0 - 16	1/2" NPT(M)		
9	10HJF74CP501	DRAIN OIL PUMP OUTLET PRESSURE (BOILER AREA)	HFO	1	55	55	10	10	0 - 16	1/2" NPT(M)		
10	90HJF28CP503	DRAIN OIL PUMP OUTLET PRESSURE (PUMP HOUSE)	HFO	1	55	55	10	10	0 - 16	1/2" NPT(M)		
11	90HJF29CP501	DRAIN OIL PUMP OUTLET PRESSURE (PUMP HOUSE)	HFO	1	55	55	10	10	0 - 16	1/2" NPT(M)		
12	10HJA11CP501	HFO PRESSURE INDICATORS - EL AB CORNER 1	HFO	1	120	120	14.2	14.2	0 - 25	1/2" NPT(M)		
13	10HJA12CP501	HFO PRESSURE INDICATORS - EL AB CORNER 2	HFO	1	120	120	14.2	14.2	0 - 25	1/2" NPT(M)		
14	10HJA13CP501	HFO PRESSURE INDICATORS - EL AB CORNER 3	HFO	1	120	120	14.2	14.2	0 - 25	1/2" NPT(M)		

(Handwritten signatures)

Prepared & Checked : NR
Approved : VMS

Sl no	Instrument Tag no	Description	Medium	Qty./Blr.	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.
15	10HJA14CP501	HFO PRESSURE INDICATORS - EL.AB CORNER 4	HFO	1	120	120	14.2	14.2	0 - 25	1/2" NPT(M)
16	10HJA21CP501	HFO PRESSURE INDICATORS - EL.BC CORNER 1	HFO	1	120	120	14.2	14.2	0 - 25	1/2" NPT(M)
17	10HJA22CP501	HFO PRESSURE INDICATORS - EL.BC CORNER 2	HFO	1	120	120	14.2	14.2	0 - 25	1/2" NPT(M)
18	10HJA23CP501	HFO PRESSURE INDICATORS - EL.BC CORNER 3	HFO	1	120	120	14.2	14.2	0 - 25	1/2" NPT(M)
19	10HJA24CP501	HFO PRESSURE INDICATORS - EL.BC CORNER 4	HFO	1	120	120	14.2	14.2	0 - 25	1/2" NPT(M)
20	10HJA31CP501	HFO PRESSURE INDICATORS - EL. DE CORNER 1	HFO	1	120	120	14.2	14.2	0 - 25	1/2" NPT(M)
21	10HJA32CP501	HFO PRESSURE INDICATORS - EL. DE CORNER 2	HFO	1	120	120	14.2	14.2	0 - 25	1/2" NPT(M)
22	10HJA33CP501	HFO PRESSURE INDICATORS - EL. DE CORNER 3	HFO	1	120	120	14.2	14.2	0 - 25	1/2" NPT(M)
23	10HJA34CP501	HFO PRESSURE INDICATORS - EL. DE CORNER 4	HFO	1	120	120	14.2	14.2	0 - 25	1/2" NPT(M)
24	10HJA41CP501	HFO PRESSURE INDICATORS - EL.FG CORNER 1	HFO	1	120	120	14.2	14.2	0 - 25	1/2" NPT(M)
25	10HJA42CP501	HFO PRESSURE INDICATORS - EL.FG CORNER 2	HFO	1	120	120	14.2	14.2	0 - 25	1/2" NPT(M)
26	10HJA43CP501	HFO PRESSURE INDICATORS - EL.FG CORNER 3	HFO	1	120	120	14.2	14.2	0 - 25	1/2" NPT(M)
27	10HJA44CP501	HFO PRESSURE INDICATORS - EL.FG CORNER 4	HFO	1	120	120	14.2	14.2	0 - 25	1/2" NPT(M)
28	10HJF61CP504	HFO HEADER PRESSURE	HFO	1	120	120	6.27	13.50	0 - 25	1/2" NPT(M)
29	10HJF64CP501	HFO RETURN HEADER PRESSURE	HFO	1	120	120	3	6.27 - 13.5	0 - 25	1/2" NPT(M)
30	10HJF61CP501	PRESSURE BEFORE OP. FLOOR STRAINER	HFO	1	125	125	23	23	0 - 40	1/2" NPT(M)
31	10HJF61CP503	PRESSURE AFTER HOTV	HFO	1	125	125	23	23	0 - 40	1/2" NPT(M)
32	90HJF41CP503	PRESSURE AT HFO PUMP OUTLET	HFO	1	55	55	30	30	0 - 40	1/2" NPT(M)

Notes

Prepared & Checked : NR
Approved :VMS

Project: Udangudi, 2 x 660 MW
Cust No: 1729

List of Pressure gauges (Chemical Seal)
150 mm Dial

Datasheet Ref: DSH:102/1729/00
Date: 04-11-2019

Sl no	Instrument Tag no	Description	Medium	Qty./ Blr.	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.
33	90HJF42CP503	PRESSURE AT HFO PUMP OUTLET	HFO	1	55	55	30	30	0 - 40	1/2" NPT(M)
34	90HJF43CP503	PRESSURE AT HFO PUMP OUTLET	HFO	1	55	55	30	30	0 - 40	1/2" NPT(M)
35	90HJF54CP501	PRESSURE AT HOPCV INLET	HFO	1	55	55	30	30	0 - 40	1/2" NPT(M)
36	90HJF60CP501	PRESSURE AT HFO HEATER COMMON OUTLET	HFO	1	125	125	28	28	0 - 40	1/2" NPT(M)

NOTES:

1. Pressure Gauges shall be Direct Mounting & Bottom Entry

M. S. Srinivasan
V. M. Srinivasan

Prepared & Checked : NR
Approved : VMS

a Site Conditions:					
i	Altitude above mean sea level				3.3 m above MSL
ii	Ambient temperature condition				17 - 41 °C
iii	Relative humidity				65%
b Technical Data:					
Sl. No.	Instrument Type	Range	Pressure Units	Dial Size	Quantity (Nos.)
1	Bourdon	(-)1 - 1	Kg/cm ²	150 mm	1
2	Bourdon	0 - 4	Kg/cm ²	150 mm	1
3	Bourdon	0 - 10	Kg/cm ²	150 mm	4
4	Bourdon	0 - 10	Kg/cm ²	150 mm	1
5	Bourdon	0 - 16	Kg/cm ²	150 mm	1
6	Bourdon	0 - 25	Kg/cm ²	150 mm	1
7	Bourdon	0 - 40	Kg/cm ²	150 mm	1
8	Bourdon	0 - 40	Kg/cm ²	150 mm	1
9	Bourdon	0 - 60	Kg/cm ²	150 mm	2
10	Bourdon	0 - 100	Kg/cm ²	150 mm	1
11	Bourdon	0 - 250	Kg/cm ²	150 mm	1
12	Bourdon	0 - 400	Kg/cm ²	150 mm	2
13	Bourdon	0 - 600	Kg/cm ²	250 mm	1
14	Draft	0 - 250	mmWC	150 mm	1
15	Draft	0 - 600	mmWC	150 mm	1
16	Draft	0 - 1000	mmWC	150 mm	1
17	Draft	0 - 1600	mmWC	150 mm	1
18	Diaphragm Seal	(-)1 - 1	Kg/cm ²	150 mm	1
19	Diaphragm Seal	0 - 4	Kg/cm ²	150 mm	1
20	Diaphragm Seal	0 - 16	Kg/cm ²	150 mm	1
21	Diaphragm Seal	0 - 25	Kg/cm ²	150 mm	4
22	Diaphragm Seal	0 - 40	Kg/cm ²	150 mm	1

Note :

- For Datasheet sl nos: 4 & 8, Vendor shall supply pulsating Dampeners along with pressure gauges.
- Pressure Gauges shall be Direct Mounting & Bottom Entry

a Site Conditions:	
i	Altitude above mean sea level 3.3 m above MSL
ii	Ambient temperature condition 17 - 41 °C
iii	Relative humidity 65%

b Technical Data:														
Sl No.	Tag No.	Description	Medium	Qty./Blr.	Op. Temp.	Max. Temp.	Unit of temp	Op. Press.	Max. Press.	Op. DP.	Max. DP.	DP Range	Unit of Press.	Inst. End Conn.
1	10HHQ10CP501	DP ACROSS SCANNER AIR FILTER	SCA. AIR	1	35	44	°C	333	490	4 - 15	--	0-60	mmWC	1/2" NPT(M)
2	10HPW20CP501	SEAL AIR FAN DISCHARGE/ CPA HEADER DIFF. PRESSURE	SEAL AIR	1	--	50	°C	772/1063	727/1235	DP= 29.1	DP=508	0-1000	mmWC	1/2" NPT(M)
3	90HJF11CP501	DIFF. PRESSURE ACROSS STRAINER AT HSD PUMP INLET	HSD	1	40	40	°C	0	0	DP= <0.3	0.30	0 - 1	kg/cm ²	1/2" NPT(M)
4	90HJF12CP501	DIFF. PRESSURE ACROSS STRAINER AT HSD PUMP INLET	HSD	1	40	40	°C	0	0	DP= <0.3	0.30	0 - 1	kg/cm ²	1/2" NPT(M)
5	90HJF13CP501	DIFF. PRESSURE ACROSS STRAINER AT HSD PUMP INLET	HSD	1	40	40	°C	0	0	DP= <0.3	0.30	0 - 1	kg/cm ²	1/2" NPT(M)
6	10HJF61CP502	DIFF. PRESSURE ACROSS OP. FLOOR STRAINER	HFO	1	125	125	°C	23	23	DP= <0.3	0.30	0 - 1	kg/cm ²	1/2" NPT(M)
7	10HJF73CP501	DIFF. PRESSURE ACROSS STRAINER AT DRAIN OIL PUMP INLET (BOILER AREA)	HFO	1	60	60	°C	0	0	DP= <0.3	0.30	0 - 1	kg/cm ²	1/2" NPT(M)
8	90HJF28CP501	DIFF. PRESSURE ACROSS STRAINER AT DRAIN OIL PUMP INLET (PUMP HOUSE)	HFO	1	55	55	°C	0	0	DP= <0.3	0.30	0 - 1	kg/cm ²	1/2" NPT(M)
9	90HJF41CP501	DIFF. PRESSURE ACROSS STRAINER AT HFO PUMP INLET	HFO	1	55	55	°C	0	0	DP= <0.3	0.30	0 - 1	kg/cm ²	1/2" NPT(M)
10	90HJF42CP501	DIFF. PRESSURE ACROSS STRAINER AT HFO PUMP INLET	HFO	1	55	55	°C	0	0	DP= <0.3	0.30	0 - 1	kg/cm ²	1/2" NPT(M)
11	90HJF43CP501	DIFF. PRESSURE ACROSS STRAINER AT HFO PUMP INLET	HFO	1	55	55	°C	0	0	DP= <0.3	0.30	0 - 1	kg/cm ²	1/2" NPT(M)

NOTES:

1. For sl. Nos. 6 to 11 vendor shall offer diaphragm sealed DP gauge with 5 metre capillary.

Prepared & Checked : NR
Approved : VMS



a Site Conditions:					
i	Altitude above mean sea level	3.3 m above MSL			
ii	Ambient temperature condition	17 - 41 °C			
iii	Relative humidity	65%			
b Technical Data:					
Sl. No.	Instrument Type	Range	Pressure Units	Dial Size	Quantity (No.)
1	Draft	0 - 60	mmWC	150 mm	1
2	Draft	0 - 1000	mmWC	150 mm	1
3	Bourdon	0 - 1	Kg/cm ²	150 mm	1
4	Diaphragm Seal	0 - 1	Kg/cm ²	150 mm	1

N. D. Reddy
V. Madhava

a Site Conditions:	
i	Altitude above mean sea level 3.3 m above MSL
ii	Ambient temperature condition 17 - 41 °C
iii	Relative humidity 65%

b Technical Data:														
SI No.	Tag No.	Description	Medium	Qty./Blr.	Op. Temp.	Max. Temp.	Unit of temp	Op. Press.	Max. Press.	Op. DP.	Max. DP.	DP Range	Unit of Press.	Inst. End Conn.
1	10HHQ10CP501	DP ACROSS SCANNER AIR FILTER	SCA AIR	1	35	44	°C	333	490	4 - 15	--	0-60	mmWC	1/2" NPT(M)
2	10HFW20CP501	SEAL AIR FAN DISCHARGE/ CPA HEADER DIFF. PRESSURE	SEAL AIR	1	--	50	°C	772/1063	727/1235	DP= 2.91	DP=508	0-1000	mmWC	1/2" NPT(M)
3	10HJF61CP502	DIFF. PRESSURE ACROSS OP. FLOOR STRAINER	HFO	1	125	125	°C	23	23	DP= <0.3	0.30	0 - 1	kg/cm ²	1/2" NPT(M)
4	10HJF73CP501	DIFF. PRESSURE ACROSS STRAINER AT DRAIN OIL PUMP INLET (BOILER AREA)	HFO	1	60	60	°C	0	0	DP= <0.3	0.30	0 - 1	kg/cm ²	1/2" NPT(M)

NOTES:

1. For sl. Nos. 3 & 4 vendor shall offer diaphragm sealed DP gauge with 5 metre capillary.



Prepared & Checked : NR
Approved : VMS

TECHNICAL CATALOGUE

Material Code	L18241SC30001001
Item Description	PI BOURDON RANGE: 0 - 10 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 10 Kg/cm ² 150 mm Dial as per spec ref: TCI:1823-SCR/101, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1823-C-SCR/00 Sl. nos: 1 to 2. Applicable Tag nos: 10HSF20CP501 & 10HSF30CP501

TECHNICAL CATALOGUE

Material Code	L18241SC30001002
Item Description	PI BOURDON RANGE: 0 - 25 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 25 Kg/cm ² 150 mm Dial as per spec ref: TCI:1823-SCR/101, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1823-C-SCR/00 Sl. nos: 3. Applicable Tag nos: 10HSU15CP501

TECHNICAL CATALOGUE

Material Code	L18241SC30001001
Item Description	PI BOURDON RANGE: 0 - 10 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 10 Kg/cm ² 150 mm Dial as per spec ref: TCI:1823-SCR/101, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1823-C-SCR/00 Sl. nos: 1 to 2. Applicable Tag nos: 10HSF20CP501 & 10HSF30CP501

TECHNICAL CATALOGUE

Material Code	L18241SC30001002
Item Description	PI BOURDON RANGE: 0 - 25 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 25 Kg/cm ² 150 mm Dial as per spec ref: TCI:1823-SCR/101, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1823-C-SCR/00 Sl. nos: 3. Applicable Tag nos: 10HSU15CP501

TECHNICAL CATALOGUE

Material Code	L18241SC30001001
Item Description	PI BOURDON RANGE: 0 - 10 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 10 Kg/cm ² 150 mm Dial as per spec ref: TCI:1823-SCR/101, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1823-C-SCR/00 Sl. nos: 1 to 2. Applicable Tag nos: 10HSF20CP501 & 10HSF30CP501

TECHNICAL CATALOGUE

Material Code	L18241SC30001002
Item Description	PI BOURDON RANGE: 0 - 25 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 25 Kg/cm ² 150 mm Dial as per spec ref: TCI:1823-SCR/101, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1823-C-SCR/00 Sl. nos: 3. Applicable Tag nos: 10HSU15CP501

TECHNICAL CATALOGUE

Material Code	L18231SC30001001
Item Description	PI BOURDON RANGE: 0 - 10 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 10 Kg/cm ² 150 mm Dial as per spec ref: TCI:1823-SCR/101, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1823-C-SCR/00 Sl. nos: 1 to 2. Applicable Tag nos: 10HSF20CP501 & 10HSF30CP501

TECHNICAL CATALOGUE

Material Code	L18231SC30001002
Item Description	PI BOURDON RANGE: 0 - 25 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 25 Kg/cm ² 150 mm Dial as per spec ref: TCI:1823-SCR/101, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1823-C-SCR/00 Sl. nos: 3. Applicable Tag nos: 10HSU15CP501

TECHNICAL CATALOGUE

Material Code	L18231SC30001003
Item Description	PI BOURDON RANGE: 0 - 40 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 40 Kg/cm ² 150 mm Dial as per spec ref: TCI:1823-SCR/101, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/R4 Datasheet ref: DSH:101-NH3/1823-91-SCR/00 Sl. nos: 1 to 10. Applicable Tag nos: 91HSJ10CP501, 91HSJ11CP501, 91HSJ15CP501, 91HSJ15CP502, 91HSJ16CP501, 91HSJ16CP502, 91HSJ20CP501, 91HSJ21CP501, 91HSK10CP501 & 91HSK20CP501

TECHNICAL CATALOGUE

Material Code	L18251SC30001001
Item Description	PI BOURDON RANGE: 0 - 10 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 10 Kg/cm ² 150 mm Dial as per spec ref: TCI:1823-SCR/101, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1823-C-SCR/00 Sl. nos: 1 to 2. Applicable Tag nos: 30HSF20CP501 & 30HSF30CP501

TECHNICAL CATALOGUE

Material Code	L18251SC30001002
Item Description	PI BOURDON RANGE: 0 - 25 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 25 Kg/cm ² 150 mm Dial as per spec ref: TCI:1823-SCR/101, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1823-C-SCR/00 Sl. nos: 3. Applicable Tag nos: 30HSU15CP501

TECHNICAL CATALOGUE

Material Code	L18251SC30001003
Item Description	PI BOURDON RANGE: 0 - 40 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 40 Kg/cm ² 150 mm Dial as per spec ref: TCI:1823-SCR/101, Applicable Quality Plan ref: QA:CI:STD:QP:01/08, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101-NH3/1823-92-SCR/00 Sl. nos: 1 to 11. Applicable Tag nos: 92HSJ10CP501, 92HSJ11CP501, 92HSJ15CP501, 92HSJ15CP502, 92HSJ16CP501, 92HSJ16CP502, 92HSJ20CP501, 92HSJ21CP501 , 92HSJ22CP501, 92HSK10CP501 & 92HSK20CP501

a Site Conditions:	
i	Altitude above mean sea level 81m above MSL
ii	Ambient temperature condition 12.9 to 44.9 °C
iii	Relative humidity 35-82 %

b Technical Data:										
Sl. No.	Instrument Tag no	Description	Medium	Qty/Blr	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.
1	10HSF20CP501	SONIC HORN SYSTEM OF SCR REACTOR A-RECEIVER TANK PRESSURE	AIR	1	27	-	7	-	0 - 10	1/2" NPT(M)
2	10HSF30CP501	SONIC HORN SYSTEM OF SCR REACTOR B-RECEIVER TANK PRESSURE	AIR	1	27	-	7	-	0 - 10	1/2" NPT(M)
3	10HSU15CP501	AUX STEAM SUPPLY TO DILUTION AIR HEATER PRESSURE AFTER CONTROL VALVE	STEAM	1	290	350	15	20	0 - 25	1/2" NPT(M)

Note:
 1. Pressure Gauges shall be Direct Mounting & Bottom Entry
 2. Pressure Gauges shall have prefix 10, 20, 30, 40 & 50 for Units 1, 2, 3, 4 & 5 respectively. Instrument Tag Nos with prefix pertaining to unit - 1 is mentioned in this datasheet.

Prepared & Checked : NR 
 Approved :DK 

a Site Conditions:	
i	Altitude above mean sea level 81m above MSL
ii	Ambient temperature condition 12.9 to 44.9 °C
iii	Relative humidity 35-82 %

b Technical Data:										
Sl. No.	Instrument Tag no	Description	Medium	Qty/ Blf	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.
1	91HS10CP501	ANHYDROUS AMMONIA PRESSURE IN LIQUID LINE FROM CARGO TANK TO STORAGE TANK A, B	AMMONIA	1	27	55	11.5	23	0 - 40	1/2" NPT(M)
2	91HS11CP501	ANHYDROUS AMMONIA PRESSURE IN VAPOUR LINE FROM CARGO TANK TO STORAGE TANK A, B	AMMONIA	1	27	55	12	23	0 - 40	1/2" NPT(M)
3	91HS15CP501	COMPRESSOR TANK A PRESSURE	AMMONIA	1	27	55	12	23	0 - 40	1/2" NPT(M)
4	91HS15CP502	COMPRESSOR TANK B PRESSURE	AMMONIA	1	27	55	12	23	0 - 40	1/2" NPT(M)
5	91HS16CP501	COMPRESSOR TANK A PRESSURE	AMMONIA	1	27	55	12	23	0 - 40	1/2" NPT(M)
6	91HS16CP502	COMPRESSOR TANK B PRESSURE	AMMONIA	1	27	55	12	23	0 - 40	1/2" NPT(M)
7	91HS20CP501	ANHYDROUS AMMONIA TANK A PRESSURE	AMMONIA	1	27	55	10	23	0 - 40	1/2" NPT(M)
8	91HS21CP501	ANHYDROUS AMMONIA TANK B PRESSURE	AMMONIA	1	27	55	10	23	0 - 40	1/2" NPT(M)
9	91HSK10CP501	AMMONIA FORWARDING PUMP A OUTLET PRESSURE	AMMONIA	1	27	55	17.5	30	0 - 40	1/2" NPT(M)
10	91HSK20CP501	AMMONIA FORWARDING PUMP B OUTLET PRESSURE	AMMONIA	1	27	55	17.5	30	0 - 40	1/2" NPT(M)

NOTE:
 1. Pressure Gauges in Ammonia Process Lines shall be provided with Block & Bleed Valve with 1/2" NPT(M) End Connection.
 2. Pressure Gauges shall be Direct Mounting & Bottom Entry




Prepared & Checked : NR
 Approved :DK

a Site Conditions:	
i	Altitude above mean sea level 81m above MSL
ii	Ambient temperature condition 12.9 to 44.9 °C
iii	Relative humidity 35-82 %

b Technical Data:										
Sl. No.	Instrument Tag no	Description	Medium	Qty/ #	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.
1	92HS10CP501	ANHYDROUS AMMONIA PRESSURE IN LIQUID LINE FROM CARGO TANK TO STORAGE TANK C,D,E	AMMONIA	1	27	55	11.5	23	0 - 40	1/2" NPT(M)
2	92HS11CP501	ANHYDROUS AMMONIA PRESSURE IN VAPOUR LINE FROM CARGO TANK TO STORAGE TANK C,D,E	AMMONIA	1	27	55	12	23	0 - 40	1/2" NPT(M)
3	92HS15CP501	COMPRESSOR TANK A PRESSURE	AMMONIA	1	27	55	12	23	0 - 40	1/2" NPT(M)
4	92HS16CP501	COMPRESSOR TANK B PRESSURE	AMMONIA	1	27	55	12	23	0 - 40	1/2" NPT(M)
5	92HS16CP501	COMPRESSOR TANK C PRESSURE	AMMONIA	1	27	55	12	23	0 - 40	1/2" NPT(M)
6	92HS20CP501	ANHYDROUS AMMONIA TANK D PRESSURE	AMMONIA	1	27	55	10	23	0 - 40	1/2" NPT(M)
7	92HS21CP501	ANHYDROUS AMMONIA TANK E PRESSURE	AMMONIA	1	27	55	10	23	0 - 40	1/2" NPT(M)
8	92HS22CP501	ANHYDROUS AMMONIA TANK F PRESSURE	AMMONIA	1	27	55	10	23	0 - 40	1/2" NPT(M)
9	92HSK10CP501	AMMONIA FORWARDING PUMP C OUTLET PRESSURE	AMMONIA	1	27	55	17.5	30	0 - 40	1/2" NPT(M)
10	92HSK10CP501	AMMONIA FORWARDING PUMP D OUTLET PRESSURE	AMMONIA	1	27	55	17.5	30	0 - 40	1/2" NPT(M)
11	92HSK20CP501	AMMONIA FORWARDING PUMP E OUTLET PRESSURE	AMMONIA	1	27	55	17.5	30	0 - 40	1/2" NPT(M)

NOTE:
 1. Pressure Gauges in Ammonia Process Lines shall be provided with Block & Bleed Valve with 1/2" NPT(M) End Connection.
 2. Pressure Gauges shall be Direct Mounting & Bottom Entry

Prepared & Checked : NR
 Approved :DK 

TECHNICAL CATALOGUE

Material Code	L173119728403001
Item Description	DPI RANGE: 0 - 1 KG/CM ²
Detailed Description	Differential Pressure Gauges, Diaphragm Seal Type with 5 m capillary Range: 0 - 1 Kg/cm ² 150 mm Dial as per spec ref: TCI:1731/101/00, Applicable Quality Plan ref: QA:CI:STD:QP:17/05, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:104/1731/00 Sl. nos:1 to 2. Applicable Tag nos: HJF59CP505 & HJF73CP503

TECHNICAL CATALOGUE

Material Code	L1731S9728403001
Item Description	DPI RANGE: 0 - 1 KG/CM ²
Detailed Description	Differential Pressure Gauges, Diaphragm Seal Type with 5 m capillary Range: 0 - 1 Kg/cm ² 150 mm Dial as per spec ref: TCI:1731/101/00, Applicable Quality Plan ref: QA:CI:STD:QP:17/05, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:104/1731-S/00 Sl. no: 1

TECHNICAL CATALOGUE

Material Code	L173119728401001
Item Description	PI BOURDON RANGE: 0 - 10 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 10 Kg/cm ² 150 mm Dial as per spec ref: TCI:1731/101/00, Applicable Quality Plan ref: QA:CI:STD:QP:01/09, Applicable packing procedure ref:QA:CI:STD:PR:04/04 Datasheet ref: DSH:101/1731/00 Sl. nos: 1 to 3. Applicable Tag nos: HAG27CP501, HJN01CP501 & HAG27CP502

TECHNICAL CATALOGUE

Material Code	L173119728401002
Item Description	PI BOURDON RANGE: 0 - 25 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 25 Kg/cm ² 150 mm Dial as per spec ref: TCI:1731/101/00, Applicable Quality Plan ref: QA:CI:STD:QP:01/09, Applicable packing procedure ref:QA:CI:STD:PR:04/04 Datasheet ref: DSH:101/1731/00 Sl. nos: 4 to 23. Applicable Tag nos: HJF51CP503, HJM01CP501, HJM01CP502, HJM03CP501, HJM03CP502, HJM03CP503, HJM03CP504, HJM04CP501, HJM04CP502, HJM04CP503, HJM04CP504, HJM05CP501, HJM05CP502, HJM05CP503, HJM05CP504, HJM06CP501, HJM06CP502, HJM06CP503, HJM06CP504 & HJT43CP501

TECHNICAL CATALOGUE

Material Code	L173119728401003
Item Description	PI BOURDON RANGE: 0 - 40 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 40 Kg/cm ² 150 mm Dial as per spec ref: TCI:1731/101/00, Applicable Quality Plan ref: QA:CI:STD:QP:01/09, Applicable packing procedure ref:QA:CI:STD:PR:04/04 Datasheet ref: DSH:101/1731/00 Sl. nos: 24 to 25. Applicable Tag nos: HJF51CP501 & HJF51CP502

TECHNICAL CATALOGUE

Material Code	L173119728401004
Item Description	PI BOURDON RANGE: 0 - 60 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 60 Kg/cm ² 150 mm Dial as per spec ref: TCI:1731/101/00, Applicable Quality Plan ref: QA:CI:STD:QP:01/09, Applicable packing procedure ref:QA:CI:STD:PR:04/04 Datasheet ref: DSH:101/1731/00 Sl. nos: 26 to 32. Applicable Tag nos: HCB01CP501, HCB02CP501, HCB03CP501, HCB04CP501, HCB05CP501, HCB06CP501 & LCR25CP501

TECHNICAL CATALOGUE

Material Code	L173119728401005
Item Description	PI BOURDON RANGE: 0 - 250 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 250 Kg/cm ² 150 mm Dial as per spec ref: TCI:1731/101/00, Applicable Quality Plan ref: QA:CI:STD:QP:01/09, Applicable packing procedure ref:QA:CI:STD:PR:04/04 Datasheet ref: DSH:101/1731/00 Sl. nos: 33 to 34. Applicable Tag nos: LAE21CP501 & LAE22CP501

TECHNICAL CATALOGUE

Material Code	L173119728401006
Item Description	PI BOURDON RANGE: 0 - 400 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 400 Kg/cm ² 150 mm Dial as per spec ref: TCI:1731/101/00, Applicable Quality Plan ref: QA:CI:STD:QP:01/09, Applicable packing procedure ref:QA:CI:STD:PR:04/04 Datasheet ref: DSH:101/1731/00 Sl. nos: 35 to 39. Applicable Tag nos: HCB00CP501, LAE71CP501, LAE72CP501, LAE91CP501 & LAE92CP501

TECHNICAL CATALOGUE

Material Code	L173119728401007
Item Description	PI BOURDON RANGE: 0 - 600 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 600 Kg/cm ² 150 mm Dial as per spec ref: TCI:1731/101/00, Applicable Quality Plan ref: QA:CI:STD:QP:01/09, Applicable packing procedure ref:QA:CI:STD:PR:04/04 Datasheet ref: DSH:101/1731/00 Sl. nos: 40 to 42. Applicable Tag nos: HAC10CP501, HAG15CP501 & HAG25CP501

TECHNICAL CATALOGUE

Material Code	L173119728401008
Item Description	PI Draft Range: (-)250 - 250 mmWC
Detailed Description	Pressure Gauges, Draft Type Range: (-)250 - 250 mmWC 150 mm Dial as per spec ref: TCI:1731/101/00, Applicable Quality Plan ref: QA:CI:STD:QP:01/09, Applicable packing procedure ref:QA:CI:STD:PR:04/04 Datasheet ref: DSH:101A/1731/00 Sl. nos:1. Applicable Tag nos: HBK15CP501

TECHNICAL CATALOGUE

Material Code	L173119728401009
Item Description	PI Draft Range: 0 - 800 mmWC
Detailed Description	Pressure Gauges, Draft Type Range: 0 - 800 mmWC 150 mm Dial as per spec ref: TCI:1731/101/00, Applicable Quality Plan ref: QA:CI:STD:QP:01/09, Applicable packing procedure ref:QA:CI:STD:PR:04/04 Datasheet ref: DSH:101A/1731/00 Sl. nos:2. Applicable Tag nos: HHQ20CP501

TECHNICAL CATALOGUE

Material Code	L173119728401010
Item Description	PI DIAPHRAGM RANGE: (-)1 - 1 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: (-)1 - 1 Kg/cm ² 150 mm Dial as per spec ref: TCI:1731/101/00, Applicable Quality Plan ref: QA:CI:STD:QP:01/09, Applicable packing procedure ref:QA:CI:STD:PR:04/04 Datasheet ref: DSH:102/1731/00 Sl. nos:1. Applicable Tag nos: HJF73CP501

TECHNICAL CATALOGUE

Material Code	L173119728401011
Item Description	PI DIAPHRAGM RANGE: 0 - 10 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: 0 - 10 Kg/cm ² 150 mm Dial as per spec ref: TCI:1731/101/00, Applicable Quality Plan ref: QA:CI:STD:QP:01/09, Applicable packing procedure ref:QA:CI:STD:PR:04/04 Datasheet ref: DSH:102/1731/00 Sl. nos:2. Applicable Tag nos: HJF64CP501

TECHNICAL CATALOGUE

Material Code	L173119728401012
Item Description	PI DIAPHRAGM RANGE: 0 - 25 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: 0 - 25 Kg/cm ² 150 mm Dial as per spec ref: TCI:1731/101/00, Applicable Quality Plan ref: QA:CI:STD:QP:01/09, Applicable packing procedure ref:QA:CI:STD:PR:04/04 Datasheet ref: DSH:102/1731/00 Sl. nos:3 to 19. Applicable Tag nos: HJF59CP504, HJF67CP501, HJF67CP502, HJF67CP503, HJF67CP504, HJF68CP501, HJF68CP502, HJF68CP503, HJF68CP504, HJF69CP501, HJF69CP502, HJF69CP503, HJF69CP504, HJF70CP501, HJF70CP502, HJF70CP503 & HJF70CP504

TECHNICAL CATALOGUE

Material Code	L173119728401013
Item Description	PI DIAPHRAGM RANGE: 0 - 40 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: 0 - 40 Kg/cm ² 150 mm Dial as per spec ref: TCI:1731/101/00, Applicable Quality Plan ref: QA:CI:STD:QP:01/09, Applicable packing procedure ref:QA:CI:STD:PR:04/04 Datasheet ref: DSH:102/1731/00 Sl. nos:20 to 24. Applicable Tag nos: HJF28CP501, HJF59CP501, HJF59CP502, HJF59CP503 & HJF73CP502

TECHNICAL CATALOGUE

Material Code	L1731S9728401001
Item Description	PI BOURDON RANGE: 0 - 10 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 10 Kg/cm ² 150 mm Dial as per spec ref: TCI:1731/101/00, Applicable Quality Plan ref: QA:CI:STD:QP:01/09, Applicable packing procedure ref:QA:CI:STD:PR:04/04 Datasheet ref: DSH:101/1731-S/00 Sl. nos: 1

TECHNICAL CATALOGUE

Material Code	L1731S9728401002
Item Description	PI BOURDON RANGE: 0 - 25 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 25 Kg/cm ² 150 mm Dial as per spec ref: TCI:1731/101/00, Applicable Quality Plan ref: QA:CI:STD:QP:01/09, Applicable packing procedure ref:QA:CI:STD:PR:04/04 Datasheet ref: DSH:101/1731-S/00 Sl. nos: 2

TECHNICAL CATALOGUE

Material Code	L1731S9728401003
Item Description	PI BOURDON RANGE: 0 - 40 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 40 Kg/cm ² 150 mm Dial as per spec ref: TCI:1731/101/00, Applicable Quality Plan ref: QA:CI:STD:QP:01/09, Applicable packing procedure ref:QA:CI:STD:PR:04/04 Datasheet ref: DSH:101/1731-S/00 Sl. nos: 3

TECHNICAL CATALOGUE

Material Code	L1731S9728401004
Item Description	PI BOURDON RANGE: 0 - 60 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 60 Kg/cm ² 150 mm Dial as per spec ref: TCI:1731/101/00, Applicable Quality Plan ref: QA:CI:STD:QP:01/09, Applicable packing procedure ref:QA:CI:STD:PR:04/04 Datasheet ref: DSH:101/1731-S/00 Sl. nos: 4

TECHNICAL CATALOGUE

Material Code	L1731S9728401005
Item Description	PI BOURDON RANGE: 0 - 250 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 250 Kg/cm ² 150 mm Dial as per spec ref: TCI:1731/101/00, Applicable Quality Plan ref: QA:CI:STD:QP:01/09, Applicable packing procedure ref:QA:CI:STD:PR:04/04 Datasheet ref: DSH:101/1731-S/00 Sl. nos: 5

TECHNICAL CATALOGUE

Material Code	L1731S9728401006
Item Description	PI BOURDON RANGE: 0 - 400 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 400 Kg/cm ² 150 mm Dial as per spec ref: TCI:1731/101/00, Applicable Quality Plan ref: QA:CI:STD:QP:01/09, Applicable packing procedure ref:QA:CI:STD:PR:04/04 Datasheet ref: DSH:101/1731-S/00 Sl. nos: 6

TECHNICAL CATALOGUE

Material Code	L1731S9728401007
Item Description	PI BOURDON RANGE: 0 - 600 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 600 Kg/cm ² 150 mm Dial as per spec ref: TCI:1731/101/00, Applicable Quality Plan ref: QA:CI:STD:QP:01/09, Applicable packing procedure ref:QA:CI:STD:PR:04/04 Datasheet ref: DSH:101/1731-S/00 Sl. nos: 7

TECHNICAL CATALOGUE

Material Code	L1731S9728401008
Item Description	PI Draft Range: (-)250 - 250 mmWC
Detailed Description	Pressure Gauges, Draft Type Range: (-)250 - 250 mmWC 150 mm Dial as per spec ref: TCI:1731/101/00, Applicable Quality Plan ref: QA:CI:STD:QP:01/09, Applicable packing procedure ref:QA:CI:STD:PR:04/04 Datasheet ref: DSH:101A/1731/00 Sl. nos: 8

TECHNICAL CATALOGUE

Material Code	L1731S9728401009
Item Description	PI Draft Range: 0 - 800 mmWC
Detailed Description	Pressure Gauges, Draft Type Range: 0 - 800 mmWC 150 mm Dial as per spec ref: TCI:1731/101/00, Applicable Quality Plan ref: QA:CI:STD:QP:01/09, Applicable packing procedure ref:QA:CI:STD:PR:04/04 Datasheet ref: DSH:101A/1731/00 Sl. nos: 9

TECHNICAL CATALOGUE

Material Code	L1731S9728401010
Item Description	PI DIAPHRAGM RANGE: (-)1 - 1 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: (-)1 - 1 Kg/cm ² 150 mm Dial as per spec ref: TCI:1731/101/00, Applicable Quality Plan ref: QA:CI:STD:QP:01/09, Applicable packing procedure ref:QA:CI:STD:PR:04/04 Datasheet ref: DSH:102/1731/00 Sl. nos: 10

TECHNICAL CATALOGUE

Material Code	L1731S9728401011
Item Description	PI DIAPHRAGM RANGE: 0 - 10 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: 0 - 10 Kg/cm ² 150 mm Dial as per spec ref: TCI:1731/101/00, Applicable Quality Plan ref: QA:CI:STD:QP:01/09, Applicable packing procedure ref:QA:CI:STD:PR:04/04 Datasheet ref: DSH:102/1731/00 Sl. nos: 11

TECHNICAL CATALOGUE

Material Code	L1731S9728401012
Item Description	PI DIAPHRAGM RANGE: 0 - 25 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: 0 - 25 Kg/cm ² 150 mm Dial as per spec ref: TCI:1731/101/00, Applicable Quality Plan ref: QA:CI:STD:QP:01/09, Applicable packing procedure ref:QA:CI:STD:PR:04/04 Datasheet ref: DSH:102/1731/00 Sl. nos: 12

TECHNICAL CATALOGUE

Material Code	L1731S9728401013
Item Description	PI DIAPHRAGM RANGE: 0 - 40 KG/CM ²
Detailed Description	Pressure Gauges, Diaphragm Type Range: 0 - 40 Kg/cm ² 150 mm Dial as per spec ref: TCI:1731/101/00, Applicable Quality Plan ref: QA:CI:STD:QP:01/09, Applicable packing procedure ref:QA:CI:STD:PR:04/04 Datasheet ref: DSH:102/1731/00 Sl. nos: 13

TECHNICAL CATALOGUE

Material Code	L17311SC30001001
Item Description	PI BOURDON RANGE: 0 - 10 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 10 Kg/cm ² 150 mm Dial as per spec ref: TCI:1731/101/00, Applicable Quality Plan ref: QA:CI:STD:QP:01/09, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1731-SCR/00 Sl. nos: 1 to 2. Applicable Tag nos: HSF20CP501 & HSF30CP501

TECHNICAL CATALOGUE

Material Code	L17311SC30001002
Item Description	PI BOURDON RANGE: 0 - 25 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 25 Kg/cm ² 150 mm Dial as per spec ref: TCI:1731/101/00, Applicable Quality Plan ref: QA:CI:STD:QP:01/09, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1731-SCR/00 Sl. nos: 3. Applicable Tag nos: HSU11CP501

TECHNICAL CATALOGUE

Material Code	L17311SC30001003
Item Description	PI NH3 BOURDON RANGE: 0 - 25 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon, Ammonia Type Range: 0 - 25 Kg/cm ² 150 mm Dial as per spec ref: TCI:1731/101/00, Applicable Quality Plan ref: QA:CI:STD:QP:01/09, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1731-SCR/00 Sl. nos: 4 to 9. Applicable Tag nos: HSJ10CP501, HSJ11CP501, HSJ15CP501, HSJ15CP502, HSJ16CP501 & HSJ16CP502

TECHNICAL CATALOGUE

Material Code	L17311SC30001004
Item Description	PI NH3 BOURDON RANGE: 0 - 40 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon, Ammonia Type Range: 0 - 40 Kg/cm ² 150 mm Dial as per spec ref: TCI:1731/101/00, Applicable Quality Plan ref: QA:CI:STD:QP:01/09, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1731-SCR/00 Sl. nos: 10 to 13. Applicable Tag nos: HSJ20CP501, HSJ21CP501, HSK32CP501 & HSK40CP501

TECHNICAL CATALOGUE

Material Code	L1731SSC30001001
Item Description	PI BOURDON RANGE: 0 - 25 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon Type Range: 0 - 25 Kg/cm ² 150 mm Dial as per spec ref: TCI:1731/101/00, Applicable Quality Plan ref: QA:CI:STD:QP:01/09, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1731-SCR-S/00 Sl. nos:1

TECHNICAL CATALOGUE

Material Code	L1731SSC30001002
Item Description	PI NH3 BOURDON RANGE: 0 - 25 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon, Ammonia Type Range: 0 - 25 Kg/cm ² 150 mm Dial as per spec ref: TCI:1731/101/00, Applicable Quality Plan ref: QA:CI:STD:QP:01/09, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1731-SCR-S/00 Sl. nos: 2

TECHNICAL CATALOGUE

Material Code	L1731SSC30001003
Item Description	PI NH3 BOURDON RANGE: 0 - 40 KG/CM ²
Detailed Description	Pressure Gauges, Bourdon, Ammonia Type Range: 0 - 40 Kg/cm ² 150 mm Dial as per spec ref: TCI:1731/101/00, Applicable Quality Plan ref: QA:CI:STD:QP:01/09, Applicable packing procedure ref:QA:CI:STD:PR:04/03 Datasheet ref: DSH:101/1731-SCR-S/00 Sl. nos: 3

Sl. No.	Instrument Type	Range	Pressure Units	Quantity (Nos.)
1	Bourdon	0 - 10	kg/cm ²	1
2	Bourdon	0 - 25	kg/cm ²	2
3	Bourdon	0 - 40	kg/cm ²	1
4	Bourdon	0 - 60	kg/cm ²	1
5	Bourdon	0 - 250	kg/cm ²	1
6	Bourdon	0 - 400	kg/cm ²	1
7	Bourdon	0 - 600	kg/cm ²	1
8	Draft	(-)250 - 250	mmWC	1
9	Draft	0 - 800	mmWC	1
10	Diaphragm Seal	(-)1 - 1	kg/cm ²	1
11	Diaphragm Seal	0 - 10	kg/cm ²	1
12	Diaphragm Seal	0 - 25	kg/cm ²	2
13	Diaphragm Seal	0 - 40	kg/cm ²	1

Note :

1. Pressure Gauges shall be Direct Mounting & Bottom Entry with Stainless Steel Casing.

Sl. No.	Instrument Tag no	Description	Medium	Qty/ Blr	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.
1	HSF20CP501	SONIC HORN SYSTEM OF SCR REACTOR A- RECEIVER TANK PRESSURE	AIR	1	27	50	7	7	0 - 10	1/2" NPT(M)
2	HSF30CP501	SONIC HORN SYSTEM OF SCR REACTOR B- RECEIVER TANK PRESSURE	AIR	1	27	50	7	7	0 - 10	1/2" NPT(M)
3	HSU11CP501	AUX STEAM SUPPLY LINE PRESSURE TO DILUTION AIR HEATER - AFTER CONTROL VALVE	STEAM	1	350	350	16	20	0 - 25	1/2" NPT(M)
4	HSJ10CP501	ANHYDROUS AMMONIA PRESSURE IN LIQUID LINE FROM CARGO TANK TO STORAGE TANK	AMMONIA	1	27	50	11.5	19.7	0 - 25	1/2" NPT(M)
5	HSJ11CP501	ANHYDROUS AMMONIA PRESSURE IN VAPOUR LINE FROM CARGO TANK TO STORAGE TANK & VICE VERSA	AMMONIA	1	27	50	12	19.7	0 - 25	1/2" NPT(M)
6	HSJ15CP501	COMPRESSOR TANK A PRESSURE	AMMONIA	1	27	50	12	19.7	0 - 25	1/2" NPT(M)
7	HSJ15CP502	COMPRESSOR A OUTLET PRESSURE	AMMONIA	1	27	50	12	19.7	0 - 25	1/2" NPT(M)
8	HSJ16CP501	COMPRESSOR TANK B PRESSURE	AMMONIA	1	27	50	12	19.7	0 - 25	1/2" NPT(M)
9	HSJ16CP502	COMPRESSOR B OUTLET PRESSURE	AMMONIA	1	27	50	12	19.7	0 - 25	1/2" NPT(M)
10	HSJ20CP501	ANHYDROUS AMMONIA TANK A PRESSURE	AMMONIA	1	27	50	10	23	0 - 40	1/2" NPT(M)
11	HSJ21CP501	ANHYDROUS AMMONIA TANK B PRESSURE	AMMONIA	1	27	50	10	23	0 - 40	1/2" NPT(M)
12	HSK32CP501	AMMONIA INJECTION SKID A PRESSURE	AMMONIA	1	27	53	17.8	30	0 - 40	1/2" NPT(M)
13	HSK40CP501	AMMONIA INJECTION SKID B PRESSURE	AMMONIA	1	27	53	17.8	30	0 - 40	1/2" NPT(M)

NOTE:

- Pressure Gauges in Ammonia Process Lines shall be provided with Block & Bleed Valve with 1/2" NPT(M) End Connection.
- Pressure Gauges shall be Direct Mounting & Bottom Entry

Sl. No.	Instrument Type	Range	Pressure Units	Quantity (Nos.)
1	Bourdon	0 - 25	kg/cm ²	1
2	Bourdon, Ammonia Type	0 - 25	kg/cm ²	1
3	Bourdon, Ammonia Type	0 - 40	kg/cm ²	1

NOTE:

1. Ammonia Type Pressure Gauges shall be provided with Block & Bleed Valve with 1/2" NPT(M) End Connection.
2. Pressure Gauges shall be Direct Mounting & Bottom Entry with Stainless Steel Casing.

Sl. No.	Instrument Tag no	Description	Medium	Qty/ Blr	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.
1	HAG27CP501	BCP COOLING WATER LINE PRESSURE	WATER	1	39	--	6	--	0 - 10	1/2" NPT(M)
2	HJM01CP501	ATOMISING AIR HEADER PRESSURE	ATOM. AIR	1	35	--	6	7	0 - 10	1/2" NPT(M)
3	HAG27CP502	BCP COOLING WATER RETURN LINE PRESSURE	WATER	1	45	--	6	--	0 - 10	1/2" NPT(M)
4	HJF51CP503	LDO HEADER PRESSURE	LDO	1	35	--	4	16.2	0 - 25	1/2" NPT(M)
5	HJM01CP501	ATOMISING STEAM PRESSURE BEFORE ASPRV	ATM. STEAM	1	210	--	13	13	0 - 25	1/2" NPT(M)
6	HJM01CP502	ATOMISING STEAM HEADER PRESSURE	ATM. STEAM	1	210	--	7.5	13	0 - 25	1/2" NPT(M)
7	HJM03CP501	ATM. AIR/STEAM PRESSURE INDICATORS - EL AB CORNER 1	ATM. STEAM	1	40 - 210	--	6	13	0 - 25	1/2" NPT(M)
8	HJM03CP502	ATM. AIR/STEAM PRESSURE INDICATORS - EL AB CORNER 2	ATM. STEAM	1	40 - 210	--	6	13	0 - 25	1/2" NPT(M)
9	HJM03CP503	ATM. AIR/STEAM PRESSURE INDICATORS - EL AB CORNER 3	ATM. STEAM	1	40 - 210	--	6	13	0 - 25	1/2" NPT(M)
10	HJM03CP504	ATM. AIR/STEAM PRESSURE INDICATORS - EL AB CORNER 4	ATM. STEAM	1	40 - 210	--	6	13	0 - 25	1/2" NPT(M)
11	HJM04CP501	ATM. STEAM PRESSURE INDICATORS - EL CD CORNER 1	ATM. STEAM	1	210	--	6	13	0 - 25	1/2" NPT(M)
12	HJM04CP502	ATM. STEAM PRESSURE INDICATORS - EL CD CORNER 2	ATM. STEAM	1	210	--	6	13	0 - 25	1/2" NPT(M)
13	HJM04CP503	ATM. STEAM PRESSURE INDICATORS - EL CD CORNER 3	ATM. STEAM	1	210	--	6	13	0 - 25	1/2" NPT(M)
14	HJM04CP504	ATM. STEAM PRESSURE INDICATORS - EL CD CORNER 4	ATM. STEAM	1	210	--	6	13	0 - 25	1/2" NPT(M)
15	HJM05CP501	ATM. STEAM PRESSURE INDICATORS - EL EF CORNER 1	ATM. STEAM	1	210	--	6	13	0 - 25	1/2" NPT(M)
16	HJM05CP502	ATM. STEAM PRESSURE INDICATORS - EL EF CORNER 2	ATM. STEAM	1	210	--	6	13	0 - 25	1/2" NPT(M)

Project: Sagardhighi 1x660 MW
Cust No: 1731

List of Pressure gauges (Bourdon)
150 mm Dial

Datasheet Ref.: DSH:101/1731/00
Date:21-06-2023

Sl. No.	Instrument Tag no	Description	Medium	Qty/Blr	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.
17	HJM05CP503	ATM. STEAM PRESSURE INDICATORS - EL EF CORNER 3	ATM. STEAM	1	210	--	6	13	0 - 25	1/2" NPT(M)
18	HJM05CP504	ATM. STEAM PRESSURE INDICATORS - EL EF CORNER 4	ATM. STEAM	1	210	--	6	13	0 - 25	1/2" NPT(M)
19	HJM06CP501	ATM. STEAM PRESSURE INDICATORS - EL GH CORNER 1	ATM. STEAM	1	210	--	6	13	0 - 25	1/2" NPT(M)
20	HJM06CP502	ATM. STEAM PRESSURE INDICATORS - EL GH CORNER 2	ATM. STEAM	1	210	--	6	13	0 - 25	1/2" NPT(M)
21	HJM06CP503	ATM. STEAM PRESSURE INDICATORS - EL GH CORNER 3	ATM. STEAM	1	210	--	6	13	0 - 25	1/2" NPT(M)
22	HJM06CP504	ATM. STEAM PRESSURE INDICATORS - EL GH CORNER 4	ATM. STEAM	1	210	--	6	13	0 - 25	1/2" NPT(M)
23	HJT43CP501	AUX STEAM TO DRAIN OIL TANK PRESSURE	STEAM	1	210	--	13	--	0 - 25	1/2" NPT(M)
24	HJF51CP501	PRESSURE BEFORE LOTV	LDO	1	35	--	20.5	25	0 - 40	1/2" NPT(M)
25	HJF51CP502	PRESSURE AFTER LOTV	LDO	1	35	--	20.5	25	0 - 40	1/2" NPT(M)
26	HCB01CP501	SB STEAM PRESSURE AFTER SBPRV	STEAM	1	452	500	40	50	0 - 60	1/2" NPT(M)
27	HCB02CP501	SB RETRACTS STEAM PRESSURE - RIGHT	STEAM	1	452	500	40	50	0 - 60	1/2" NPT(M)
28	HCB03CP501	AH SB LINE COMMON HEADER PRESSURE	STEAM	1	452	500	40	50	0 - 60	1/2" NPT(M)
29	HCB04CP501	WALL BLOWER STEAM PRESSURE - RIGHT & REAR	STEAM	1	452	500	40	50	0 - 60	1/2" NPT(M)
30	HCB05CP501	SB RETRACTS STEAM PRESSURE - LEFT	STEAM	1	452	500	40	50	0 - 60	1/2" NPT(M)
31	HCB06CP501	WALL BLOWER STEAM PRESSURE - LEFT & FRONT	STEAM	1	452	500	40	50	0 - 60	1/2" NPT(M)
32	LCR25CP501	BOILER RECIRCULATING PUMP MOTOR LP FILL WATER PRESSURE BEFORE FILTER	WATER	1	60	--	47	--	0 - 60	1/2" NPT(M)

Sl. No.	Instrument Tag no	Description	Medium	Qty/ Bkr	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (kg/cm ²)	Max. Press. (kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.
33	LAE21CP501	RH/DSH SPRAY WATER PRESSURE AFTER CONTROL VALVE - A	WATER	1	188.9	191	141	155.6	0 - 250	1/2" NPT(M)
34	LAE22CP501	RH/DSH SPRAY WATER PRESSURE AFTER CONTROL VALVE - B	WATER	1	188.9	191	141	155.6	0 - 250	1/2" NPT(M)
35	HCB00CP501	SB STEAM PRESSURE BEFORE SBPRV	STEAM	1	525	541.0	284.1	302	0 - 400	1/2" NPT(M)
36	LAE71CP501	SH DSH-1 SIDE-A SPRAY WATER PRESSURE AFTER CONTROL VALVE	WATER	1	310	496	293	309.7	0 - 400	1/2" NPT(M)
37	LAE72CP501	SH DSH-1 SIDE-B SPRAY WATER PRESSURE AFTER CONTROL VALVE	WATER	1	310	496	293	309.7	0 - 400	1/2" NPT(M)
38	LAE91CP501	SH DSH-2 SIDE-A SPRAY WATER PRESSURE AFTER CONTROL VALVE	WATER	1	310	533	285.7	302	0 - 400	1/2" NPT(M)
39	LAE92CP501	SH DSH-2 SIDE-B SPRAY WATER PRESSURE AFTER CONTROL VALVE	WATER	1	310	533	285.7	302	0 - 400	1/2" NPT(M)
40	HAC10CP501	ECO. INLET LINK PRESSURE BEFORE FLOW NOZZLE	WATER	1	309.7	347	323.3	344.2	0 - 600	1/2" NPT(M)
41	HAG15CP501	BWCP INLET PRESSURE	WATER	1	309.7	348	324.6	350.1	0 - 600	1/2" NPT(M)
42	HAG25CP501	BWCP OUTLET PRESSURE	WATER	1	309.7	348	339.4	364.9	0 - 600	1/2" NPT(M)

NOTES:

1. Pressure Gauges shall be Direct Mounting & Bottom Entry with Stainless Steel Casing.

Project: Sagardhighi 1x660 MW
Cust No: 1731

List of Pressure gauges (Draft)
150 mm Dial

Datasheet Ref.: DSH:101A/1731/00
Date:21-06-2023

Sl. No.	Instrument Tag no	Description	Medium	Qty/ Blr	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (mmWC)	Max. Press. (mmWC)	Range (mmWC)	Inst. End Conn.
1	HBK15CP501	FURNACE PRESSURE - RIGHT- FRAME MOUNTED GAUGE	FLUE GAS	1	1199	1300	-5	-10	(-)250 - 250	1/2" NPT(M)
2	HHQ20CP501	SCANNER AIR FAN OUTLET PRESSURE	SCA. AIR	1	30	53	477	614	0 - 800	1/2" NPT(M)

NOTES:
1. Pressure Gauges shall be Direct Mounting & Bottom Entry with Stainless Steel Casing.

Sl. No.	Instrument Tag no	Description	Medium	Qty/Blr	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.
1	HJF73CP501	DRAIN OIL PUMP INLET PRESSURE	HFO	1	55	--	0	--	(-1 - 1	1/2" NPT(M)
2	HJF64CP501	HFO RETURN HEADER PRESSURE	HFO	1	120	--	3	5.5	0 - 10	1/2" NPT(M)
3	HJF59CP504	HFO HEADER PRESSURE	HFO	1	120	--	5.5	15	0 - 25	1/2" NPT(M)
4	HJF67CP501	HFO/LDO PRESSURE INDICATORS - EL AB CORNER 1	HFO	1	120	--	14.2	16.2	0 - 25	1/2" NPT(M)
5	HJF67CP502	HFO/LDO PRESSURE INDICATORS - EL AB CORNER 2	HFO	1	120	--	14.2	16.2	0 - 25	1/2" NPT(M)
6	HJF67CP503	HFO/LDO PRESSURE INDICATORS - EL AB CORNER 3	HFO	1	120	--	14.2	16.2	0 - 25	1/2" NPT(M)
7	HJF67CP504	HFO/LDO PRESSURE INDICATORS - EL AB CORNER 4	HFO	1	120	--	14.2	16.2	0 - 25	1/2" NPT(M)
8	HJF68CP501	HFO PRESSURE INDICATORS - EL CD CORNER 1	HFO	1	120	--	10.3	15	0 - 25	1/2" NPT(M)
9	HJF68CP502	HFO PRESSURE INDICATORS - EL CD CORNER 2	HFO	1	120	--	10.3	15	0 - 25	1/2" NPT(M)
10	HJF68CP503	HFO PRESSURE INDICATORS - EL CD CORNER 3	HFO	1	120	--	10.3	15	0 - 25	1/2" NPT(M)
11	HJF68CP504	HFO PRESSURE INDICATORS - EL CD CORNER 4	HFO	1	120	--	10.3	15	0 - 25	1/2" NPT(M)
12	HJF69CP501	HFO PRESSURE INDICATORS - EL EF CORNER 1	HFO	1	120	--	10.3	15	0 - 25	1/2" NPT(M)
13	HJF69CP502	HFO PRESSURE INDICATORS - EL EF CORNER 2	HFO	1	120	--	10.3	15	0 - 25	1/2" NPT(M)

Sl. No.	Instrument Tag no	Description	Medium	Qty/Blr	Op. Temp. (°C)	Max. Temp. (°C)	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.
14	HJF69CP503	HFO PRESSURE INDICATORS - EL EF CORNER 3	HFO	1	120	--	10.3	15	0 - 25	1/2" NPT(M)
15	HJF69CP504	HFO PRESSURE INDICATORS - EL EF CORNER 4	HFO	1	120	--	10.3	15	0 - 25	1/2" NPT(M)
16	HJF70CP501	HFO PRESSURE INDICATORS - EL GH CORNER 1	HFO	1	120	--	10.3	15	0 - 25	1/2" NPT(M)
17	HJF70CP502	HFO PRESSURE INDICATORS - EL GH CORNER 2	HFO	1	120	--	10.3	15	0 - 25	1/2" NPT(M)
18	HJF70CP503	HFO PRESSURE INDICATORS - EL GH CORNER 3	HFO	1	120	--	10.3	15	0 - 25	1/2" NPT(M)
19	HJF70CP504	HFO PRESSURE INDICATORS - EL GH CORNER 4	HFO	1	120	--	10.3	15	0 - 25	1/2" NPT(M)
20	HJF28CP501	PRESSURE AT HFO PUMP OUTLET	HFO	1	55	--	30	--	0 - 40	1/2" NPT(M)
21	HJF59CP501	PRESSURE BEFORE OP. FLOOR STRAINER	HFO	1	120	--	22.5	30	0 - 40	1/2" NPT(M)
22	HJF59CP502	PRESSURE BEFORE FLOW METER	HFO	1	120	--	22.5	30	0 - 40	1/2" NPT(M)
23	HJF59CP503	PRESSURE AFTER HOTV	HFO	1	120	--	22.5	30	0 - 40	1/2" NPT(M)
24	HJF73CP502	DRAIN OIL PUMP OUTLET PRESSURE	HFO	1	55	--	10	--	0 - 40	1/2" NPT(M)

NOTES:

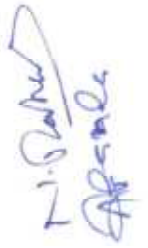
1. Pressure Gauges shall be Direct Mounting & Bottom Entry with Stainless Steel Casing.

a Site Conditions:														
i		Altitude above mean sea level												
ii		Ambient temperature condition												
iii		Relative humidity												
		34 m above MSL												
		5 to 50 °C												
		60 - 84 %												
b Technical Data:														
Sl. No.	Instrument Tag no	Description	Medium	Qty./ Blr.	Op. Press. (Kg/cm ²)	Max. Press. (Kg/cm ²)	Op. Temp. (°C)	Max. Temp. (°C)	Op. DP (Kg/cm ²)	Max. DP (Kg/cm ²)	Range (Kg/cm ²)	Inst. End Conn.	Mounting	Entry
1	HJF59CP505	DIFF. PRESSURE ACROSS OP. FLOOR STRAINER	HFO	1	22.5	30	120	--	DP= <0.3	--	0 - 1	1/2" NPT(M)	Capillary	Bottom
2	HJF73CP503	DIFF. PRESSURE ACROSS STRAINER AT DRAIN OIL PUMP INLET	HFO	1	0	--	55	--	--	--	0 - 1	1/2" NPT(M)	Capillary	Bottom

NOTES:

1. Vendor shall offer diaphragm sealed DP gauges with 5 metre capillary.

Prepared & Checked : NR
Approved : AKP



a Site Conditions:													
i	Altitude above mean sea level 34 m above MSL.												
ii	Ambient temperature condition 5 to 50 °C												
iii	Relative humidity 60 - 84 %												
b Technical Data:													
SL No.	Description	Medium	Qty./Blr.	Op. Press. (kg/cm ²)	Max. Press. (kg/cm ²)	Op. Temp. (°C)	Max. Temp. (°C)	Op. Dp (kg/cm ²)	Max. DP (kg/cm ²)	Range (kg/cm ²)	Inst. End Conn.	Mounting	Entry
1	Diaphragm Seal DP Gauge with 5 m Capillary	HFO	1	22.5	30	120	--	DP<= <0.3	--	0 - 1	1/2" NPT(M)	Capillary	Bottom

N. P. Das
A. K. P.

Prepared & Checked : NR
Approved :AKP



Bharat Heavy Electricals Limited
Piping Centre Chennai-17

ENGINEERING DEPARTMENT

Rev.No	Specification No.	Sheet No.
05	PC : TSP : 81008	1 of 6

TECHNICAL SPECIFICATION FOR BOURDON PRESSURE GAUGES

09					
08					
07					
06					
05	09.01.07	Clause 3.13 & 6.1 Altered	E.Loganathan	R.Prabha	GR.Srinivasan
04	27.08.02	Generally revised	-sd- E.Loganathan	-sd- R.Prabha	-sd- GR.Srinivasan
03	02.06.95	NTPC's comments Incorporated	-sd- E.Loganathan	-sd- R.Prabha	-sd- GR.Srinivasan
02	09.11.94	Format pattern altered	-sd- E.Loganathan	-sd- R.Prabha	-sd- GR.Srinivasan
01	23.02.94	Clause 3.6 altered	-sd- E.Loganathan	-sd- GR.Srinivasan	-sd- GR.Srinivasan
00	04.08.93	Fresh issue	-sd- E.Loganathan	-sd- GR.Srinivasan	-sd- GR.Srinivasan
REV.	DATE	ALTERATION	PREPARED	CHECKED	APPROVED



Bharat Heavy Electricals Limited
Piping Centre Chennai-17

ENGINEERING DEPARTMENT

Rev.No	Specification No.	Sheet No.
05	PC : TSP : 81008	2 of 6

TECHNICAL SPECIFICATION FOR BOURDON PRESSURE GAUGES

1.0 SCOPE

- 1.1 This standard specifies the requirement of bourdon pressure gauges for use in Utility/Captive Power Plants.

2.0 DATA SHEET

- 2.1 In addition to the general specification, specific data sheet is enclosed indicating special requirements of each instrument/group of instruments.
- 2.2 Wherever the specification/data sheet requires information to be furnished by the tenderer / Supplier, the same shall be furnished in the offer.

3.0 TECHNICAL REQUIREMENTS

- 3.1 Applicable Standards : IS 3624 / BS 1760 / National Standard / BHEL Corporate Standard AA 731 04 35 and AA 731 04 05.
- 3.2 Principle of operation : Bourdon
- 3.3 Application : Pressure Vessel / Piping (Refer data sheet).
- 3.4 Medium : Water/Saturated steam as per data sheet.
- 3.5 Type : Direct reading
- 3.6 Mounting : Direct / flush panel / surface projection as per data sheet.
- 3.7 Scale : Industrial Concentric (270 Deg.) linear graduated in kg/cm².
- 3.8 Dial size : As per data sheet.
- 3.9 Accuracy : As per data sheet.
- 3.10 Over range protection : As per clause 12.2 of IS:3624



Bharat Heavy Electricals Limited
Piping Centre Chennai-17

ENGINEERING DEPARTMENT

Rev.No	Specification No.	Sheet No.
05	PC : TSP : 81008	3 of 6

TECHNICAL SPECIFICATION FOR BOURDON PRESSURE GAUGES

- 3.11 Withstandability to : Shall withstand thermal power mechanical shock and plant vibrations.
- 3.12 Zero adjustment : Adjustable from outside (Micrometer adjuster type)
- 3.13 Construction : Weather proof, water tight and dust tight as per IBA:RP B.1 / IP55 / NEMA-4 solid front construction preferred.
- 3.14 Case
- 3.14.1 Finish : As per data sheet
- 3.14.2 Material : As per data sheet
- 3.15 Bezel Ring (not applicable for solid front construction)
- 3.15.1 Material : Non-corrosive material (Bidder to specify)
- 3.15.2 Type : Screwed type with neoprene O' ring gasket
- 3.16 Bourdon
- 3.16.1 Material : AISI 316 SS
- 3.16.2 Arc dia : Min. 110mm
- 3.16.3 Joint : Argon arc welding
- 3.16.4 Movement assembly : AISI 316 SS movements
- 3.17 Socket (with spigot)
- 3.17.1 Material : AISI 316 SS
- 3.17.2 Process connection : As per data sheet
- 3.17.3 Location : As per data sheet
- 3.17.4 Threaded length : Min. 25mm
- 3.18 Blow out disc
- 3.18.1 Material : Neoprene
- 3.18.2 Location : Back/Bottom
- 3.18.3 Dia - aperture : Min. 25mm
- 3.18.4 Outer dia : 45mm



ENGINEERING DEPARTMENT

Rev.No	Specification No.	Sheet No.
05	PC : TSP : 81008	4 of 6

TECHNICAL SPECIFICATION FOR BOURDON PRESSURE GAUGES

3.19	<u>Accessories</u>	<u>Designation</u>	<u>Description</u>
	To be provided wherever specified in data sheet	A	Mounting accessories for flush panel mounted gauges
		B	Syphon - 304SS (steam medium)
		C	Tail piece, nut and union - 304SS
		D	Pulsation dampener (snubber) - SS 304
		E	Antivibration spring SS 304 (connection, capillary & spring.
		F	Chemical seal

4.0 INSPECTION & TESTING

4.1 Please refer BHEL/Piping Centre's Document No.

5.0 DOCUMENTS

5.1 The following documents in ENGLISH shall be supplied in triplicate along with the offer.

5.1.1 Detailed catalogue and drawings of instrument and all accessories along with O&M manual.

5.1.2 Detailed drawing of the instrument and accessories and mounting arrangement drawing.

5.1.3 Quality Plan.

5.2 Tenderer shall provide a note of commitment that the offer complies in all respects with the specification or a deviation list with reasons, if any.



Bharat Heavy Electricals Limited
Piping Centre Chennai-17

ENGINEERING DEPARTMENT

Rev.No	Specification No.	Sheet No.
05	PC : TSP : 81008	5 of 6

TECHNICAL SPECIFICATION FOR BOURDON PRESSURE GAUGES

5.3 Within one month after placement of order, vendor shall submit the following documents in ENGLISH (15 sets each)

- 5.3.1 Catalogue
- 5.3.2 Data Sheet
- 5.3.3 O & M Manual
- 5.3.4 Certified Dimensional Drawings

6.0 PACKING

- 6.1 Each instrument and its accessories shall be packed individually in a Thermo Cole box / Bubbled Polythine Bag and placed in a carton or case with adequate cushioning material to avoid transit damage. For instruments, which are to be shipped by sea, the packing shall be seaworthy.
- 6.2 A suitable preservative shall be included for withstanding one-year storage contingencies.
- 6.3 The package shall be clearly and legibly marked in a suitable manner with following information in addition to destination details.
 - 6.3.1 Purchaser's Order Number
 - 6.3.2 Number of pieces in shipment

7.0 GENERAL

- 7.1 Whenever the information furnished in the enclosed data sheet contradicts that furnished in the general specification, the information furnished in the data sheet shall be applicable.
- 7.2 It is not the intent to specify completely herein all aspects of design and construction of equipment. Nevertheless the equipment shall conform in all respects to high standards of engineering, design and workmanship and shall be capable of performing in continuous commercial operation in a manner acceptable to the owner who will interpret the meaning of specification for the purpose of which the owner reserves the right to alter the specification even during the contract execution stage for which commercial implications will not be entertained.



Bharat Heavy Electricals Limited
Piping Centre Chennai-17

ENGINEERING DEPARTMENT

Rev.No	Specification No.	Sheet No.
05	PC : TSP : 81008	6 of 6

TECHNICAL SPECIFICATION FOR BOURDON PRESSURE GAUGES

- 7.3 Routine Test Certificate detailing test results of each instrument along with reports of type tests shall be furnished.
- 7.4 Each gauge shall have a tag plate permanently fixed with following inscription.
- 7.4.1 Tag Number
 - 7.4.2 Model Number
 - 7.4.3 Service

8.0 GUARANTEE

This shall cover 24 months from the date of shipment or 18 months from the date of commissioning whichever is later.

Bharat Heavy Electricals Limited

HIGH PRESSURE BOILER PLANT, TIRUCHIRAPPALLI 620 014.


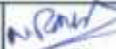


TECHNICAL DELIVERY CONDITIONS

FOR SUB - DELIVERY COMPONENTS OF
CONTROLS AND INSTRUMENTATION

TDC: TCI: 101 / REV 08

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PRESSURE GAUGE

08	04-02-2017	General Revision	 (AB)	 (NR)	 (RMV)	 (TK)
07	29-03-2004	Revised based on revisiting of the spec (TCI 103 - Draft Gauge Spec is merged with revised TCI 101)	Sd/- (TAM)	Sd/- (KAK)	Sd/- (SSM)	Sd/- (KCM)
06	16-06-1997	General revisions	Sd/-	Sd/-	Sd/-	Sd/-
05	09-07-1993	Page number added	Sd/-	Sd/-	Sd/-	Sd/-
01, 02, 03, 04	---	General Revisions	Sd/-	Sd/-	Sd/-	Sd/-
Rev. No.	DATE	DESCRIPTION	PREPARED	Engg REVIEWED	QAC REVIEWED	APPROVED

CL No.	CHARACTERISTICS	REQUIREMENT	VENDOR COMPLIANCE (Refer Note: 2)
1.0	<u>SITE CONDITIONS</u>		
1.1	Altitude above mean sea level	} Refer to Data Sheet	
1.2	Ambient temperature condition		
1.3	Relative humidity		
1.4	Atmosphere	Tropical, Dusty, salty, corrosive and highly polluted.	
2.0	<u>GENERAL</u>		
2.1	Reference standard	IS 3624 / EN 837 – 1, 2, 3 / ASME B40.100	
2.2	Type	Direct reading	
2.3	Scale	Industrial concentric 270° linear	
2.4	Sensing element	Bourdon - for Pressure Gauges. Diaphragm / Bellows / Capsule - for Draft Gauges.	
2.5	Nominal Dial Size	As specified in data sheet.	
2.6	Accuracy	± 1% of FSD for Pressure ranges ± 1.6% of FSD for Draft ranges	
2.7	Over range protection	125% of maximum range.	
2.8	Dial graduation	Graduated in Kg / Sq.cm (g) / mmWC.	
2.9	Zero adjustment	Micrometer adjustable from the front after opening the bezel	
2.10	Enclosure protection	Weather proof, water tight and dust tight IP 65 of IS / IEC:60529 / NEMA Equivalent	
2.11	Painting	Stoved enameled anti – corrosive black painting or Epoxy powder coated. (Not applicable for SS 304 casing)	
2.12	Identification	Separate SS Tag plate with Tag No. and Service legend.	
3.0	<u>PROCESS CONDITIONS</u>		
3.1	Tag No.	} Refer to Data Sheet	
3.2	Medium		
3.3	Application		
3.4	Operating parameter		
3.5	Range	} Refer to Data Sheet	
3.6	Mounting & Entry		
3.7	Process Connection		
3.8	Special Requirement		

CL No.	CHARACTERISTICS	REQUIREMENT	VENDOR COMPLIANCE (Refer Note: 2)
4.0	<u>MATERIAL</u>		
4.1	Case	Die cast aluminium or SS 304	
4.2	Sensor	Bourdon / Diaphragm / Bellows : SS 316	
4.3	Bezel	Cast aluminium with screwed ring type / SS 304 with Snap Action Bayonet type	
4.4	Blow out disc	Neoprene	
4.5	Socket	AISI SS 316 / SS 316L	
4.6	Movement assembly	AISI SS 304	
4.7	Window	Shatter proof glass.	
5.0	<u>INSPECTION & TESTING</u>	As per quality plan QA:CI:STD:QP:01 (Latest Revision)	
6.0	<u>DOCUMENTS</u>		
6.1	To be submitted along with offer in 2 sets.	1. Catalogues.	
		2. Filled in data sheets	
6.2	To be submitted during inspection	1. T.C. for routine test for each gauge.	
		2. T.C. for type test	
		3. Material certificate	
		4. Guarantee certificate	
		5. Calibration certificate	
6.3	To be submitted after inspection: 2 sets of Original & 1 CD.	1. Catalogues	
		2. O & M manuals	
7.0	<u>PACKING</u>	Material shall be packed as per Packing procedure QA: CI: STD: PR: 04. (Latest Revision)	
NOTE:			
<ol style="list-style-type: none"> 1. Refer current valid list for revision status of Quality Plan, Drawing No & Packing Procedure. 2. In Vendor Compliance column - vendor shall indicate 'YES', 'NO' or 'NOT APPLICABLE'. 3. GA drawings in AutoCAD and Datasheet in MS WORD/EXCEL shall be prepared and submitted in pdf 4. The entire system and accessories should not contain any asbestos material. 			

Bharat Heavy Electricals Limited

HIGH PRESSURE BOILER PLANT, TIRUCHIRAPPALLI 620 014.

TECHNICAL DELIVERY CONDITIONS FOR SUB - DELIVERY COMPONENTS OF CONTROLS AND INSTRUMENTATION

TDC: TCI: 102 / REV 08

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PRESSURE GAUGE - DIAPHRAGM SEALED

08	04-02-2017	General Revision	<i>AB</i> (AB)	<i>NR</i> (NR)	<i>RMV</i> (RMV)	<i>TK</i> (TK)
07	29-03-2004	Revised based on revisiting of the specification	Sd/- (TAM)	Sd/- (KAK)	Sd/- (SSM)	Sd/- (KCM)
06	16-06-1997	General revisions	Sd/-	Sd/-	Sd/-	Sd/-
05	09-07-1993	Page number added	Sd/-	Sd/-	Sd/-	Sd/-
01,02, 03,04	---	General Revisions	Sd/-	Sd/-	Sd/-	Sd/-
Rev. No.	DATE	DESCRIPTION	PREPARED	REVIEWED		APPROVED
				Engg	QAC	

CL NO.	CHARACTERISTICS	REQUIREMENT	VENDOR COMPLIANCE (Refer Note : 2)
1.0	<u>SITE CONDITIONS</u>		
1.1	Altitude above mean sea level	} Refer to Data Sheet	
1.2	Ambient temperature condition		
1.3	Relative humidity		
1.4	Atmosphere	Tropical, Dusty, salty, corrosive and highly polluted.	
2.0	<u>GENERAL</u>		
2.1	Reference standard	IS 3624 / EN 837 – 1, 2, 3 / ASME B40.100	
2.2	Type	Direct reading	
2.3	Scale	Industrial concentric 270 Degree linear	
2.4	Sensing element	Diaphragm	
2.5	Nominal Dial Size	As specified in data sheet.	
2.6	Accuracy	± 1% of FSD	
2.7	Over range protection	125% of maximum range.	
2.8	Dial graduation	Graduated in Kg / Sq.cm (g)	
2.9	Zero adjustment	Micrometer adjustable from the front after opening the bezel	
2.10	Enclosure protection	Weather proof, water tight and dust tight IP 65 of IS / IEC:60529 / NEMA Equivalent	
2.11	Painting	Stoved enameled anti – corrosive black painting or epoxy power coated. (Not applicable for SS 304 casing)	
2.12	Identification	Separate SS tag. Plate with tag. no.and service legend.	
3.0	<u>PROCESS CONDITIONS</u>		
3.1	Tag No.	} Refer to Data Sheet	
3.2	Medium		
3.3	Application		
3.4	Operating parameter		
3.5	Range		
3.6	Mounting & Entry		
3.7	Process Connection		
3.8	Special Requirement		
4.0	<u>MATERIAL</u>		
4.1	Case	Die cast aluminium / SS 304	

CL NO.	CHARACTERISTICS	REQUIREMENT	VENDOR COMPLIANCE (Refer Note : 2)
4.2	Bezel	Cast Aluminium with screwed ring type / SS 304 with snap action bayonet type	
4.3	Blow out disc	Neoprene	
4.4	Bourdon	SS 316 / SS 316L	
4.5	Socket	SS 316 / SS 316L	
4.6	Movement assembly	SS 304	
4.7	Window	Shatter proof glass	
4.8	<u>Diaphragm Chamber:</u>		
4.8.1	Sensing Element	SS 316 Teflon coated / Sheathed and welded type diaphragm	
4.8.2	Top Chamber	AISI SS 304	
4.8.3	Bottom Chamber	SS 316 / SS 316L Teflon coated / Sheathed	
4.8.4	Sealing Liquid	Silicone oil.	
5.0	<u>INSPECTION & TESTING</u>	As per quality plan QA:CI:STD:QP:01 (Latest revision)	
6.0	<u>DOCUMENTS</u>		
6.1	To be submitted along with offer in 2 sets.	1. Catalogues.	
		2. Filled in data sheets	
6.2	To be submitted during inspection	1. T.C. for routine test for each gauge.	
		2. T.C. for type test	
		3. Material certificate	
		4. Guarantee certificate	
		5. Calibration certificate	
6.3	To be submitted after inspection: 2 sets of Original & 1 CD.	1. Catalogues	
		2. O & M manuals	
7.0	<u>PACKING</u>	Material shall be packed as per Packing procedure QA:CI:STD:PR:04. (Latest revision)	
NOTE:			
<ol style="list-style-type: none"> 1. Refer current valid list for revision status of Quality Plan, Drawing No & Packing Procedure. 2. In Vendor Compliance column - vendor shall indicate 'YES' or 'NO' or 'NOT APPLICABLE'. 3. GA drawings in AutoCAD and Datasheet in MS WORD/EXCEL shall be prepared and submitted in pdf format for BHEL's approval. 4. The entire system and accessories should not contain any asbestos material. 			

Bharat Heavy Electricals Limited
HIGH PRESSURE BOILER PLANT, TIRUCHIRAPPALLI 620 014.

TECHNICAL DELIVERY CONDITIONS
FOR SUB - DELIVERY COMPONENTS OF
CONTROLS AND INSTRUMENTATION

TDC: TCI: 104 / REV 08

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DIFFERENTIAL PRESSURE GAUGE

08	04-02-2017	General Revision	<i>Sharan</i> (AB)	<i>N. Raju</i> (NR)	<i>SRSS</i> (RMV)	<i>T. K. Manjunath</i> (TK)
07	29-03-2014	Revised based on revisiting of the specification	Sd/- (TAM)	Sd/- (KAK)	Sd/- (SSM)	Sd/- (KCM)
06	16-06-1997	General revisions	Sd/-	Sd/-	Sd/-	Sd/-
05	09-07-1993	Page number added	Sd/-	Sd/-	Sd/-	Sd/-
01, 02, 03, 04	---	General Revisions	Sd/-	Sd/-	Sd/-	Sd/-
Rev. No.	DATE	DESCRIPTION	PREPARED	Engg	QAC	APPROVED
				REVIEWED		

CI No.	CHARACTERISTICS	REQUIREMENT	VENDOR COMPLIANCE (Refer Note : 2)
1.0	<u>SITE CONDITIONS</u>		
1.1	Altitude above mean sea level	} Refer to Data Sheet	
1.2	Ambient temperature condition		
1.3	Relative humidity		
1.4	Atmosphere	Tropical, Dusty, salty, corrosive and highly polluted.	
2.0	<u>GENERAL</u>		
2.1	Reference standard	IS 3624 / EN 837 – 1, 2, 3 / ASME B40.100	
2.2	Type	Direct reading	
2.3	Scale	Black lettering in white background, Industrial concentric 270° linear	
2.4	Sensing element	Diaphragm / Bellows	
2.5	Nominal Dial Size	As specified in data sheet.	
2.6	Accuracy	± 2 % of FSD	
2.7	Over range protection	The HP and LP side of the pressure chamber shall have unilaterally over load proof of 1.3 times the full scale value.	
2.8	Dial graduation	Graduated in mmWC or Kg/cm ² (g)	
2.9	Zero adjustment	Micrometer adjustable from the front after opening the bezel	
2.10	Enclosure protection	Weather proof, water tight and dust tight IP 65 of IS / IEC:60529 / NEMA Equivalent	
2.11	Painting	Stoved enameled & anti – corrosive black painting or Epoxy powder coated. (Not applicable for SS 304 casing)	
2.12	Identification	Separate SS Tag plate with Tag No. and Service legend.	
3.0	<u>PROCESS CONDITIONS</u>		
3.1	Tag No.	} Refer to Datasheet	
3.2	Medium		
3.3	Application		
3.4	Operating parameter		
3.5	Range		
3.6	Mounting & Entry		
3.7	Process Connection		
3.8	Maximum Static Pressure		
3.9	Special Requirement		
4.0	<u>MATERIAL</u>		
4.1	Case	Die cast aluminium / SS 304	

CI No.	CHARACTERISTICS	REQUIREMENT	VENDOR COMPLIANCE (Refer Note : 2)
4.2	Bezel	Cast aluminium with screwed ring type / SS 304 with Snap Action Bayonet type	
4.3	Diaphragm	SS 316	
4.4	Measuring chamber	Stainless steel	
4.5	Movement assembly	SS 304	
4.6	Window	Shatter proof glass.	
4.7	Blow out disc	Neoprene	
5.0	<u>ACCESSORIES</u>		
5.1	Three Valve Manifold	1. one no of three Valve manifold with port size:1/2" NPT(F) & drain port size: 1/4" NPT(F) with SS plug. 2. Manifold Pressure rating to match the process pressure. 3. 1/2" SS tube - 0.5 meters , 1/2" NPT(M) X 1/2" OD Connector - 4 nos shall be supplied along with manifold.	
5.2.0	<u>Material</u>		
5.2.1	Body	SS 304	
5.2.2	Handle	Carbon steel – ASTM 105.	
5.2.3	Stem, Gland nut & Gland bush	SS 304	
5.2.4	Packing & Seal ring	Teflon.	
5.2.5	Plug	SS 304	
6.0	<u>INSPECTION & TESTING</u>	As per quality plan QA:CI:STD:QP:17 (Latest Revision)	
7.0	<u>DOCUMENTS</u>		
7.1	To be submitted along with offer in 2 sets.	1. Catalogues. 2. Filled in data sheets	
7.2	To be submitted during inspection	1. T.C. for routine test for each gauge. 2. T.C. for type test 3. Material certificate 4. Guarantee certificate 5. Calibration certificate	
7.3	To be submitted after inspection: 2 sets of Original & 1 CD.	1. Catalogues 2. O & M manuals	
8.0	<u>PACKING</u>	Material shall be packed as per Packing procedure QA: CI: STD: PR: 04. (Latest Revision)	

CI No.	CHARACTERISTICS	REQUIREMENT	VENDOR COMPLIANCE (Refer Note : 2)
<p>NOTE:</p> <ol style="list-style-type: none">1. Refer current valid list for revision status of Quality Plan, Drawing No & Packing Procedure.2. In 'Vendor Compliance' column - vendor shall indicate 'YES', 'NO' or 'NOT APPLICABLE'.3. GA drawings in AutoCAD and Datasheet in MS WORD/EXCEL shall be prepared and submitted in pdf format for BHEL's approval.4. The entire system and accessories should not contain any asbestos material.			

BHARAT HEAVY ELECTRICALS LIMITED

HIGH PRESSURE BOILER PLANT, TIRUCHIRAPPALLI 620 014

TECHNICAL DELIVERY CONDITIONS for Sub-Delivery Components of CONTROLS & INSTRUMENTATION



TCI:1731/101

PAGE 01 OF 03

Pressure & Differential Pressure Gauges for

Project: Sagardighi TPP Extn-5, 1 x 660 MW
Customer Nos.: 1731

REVISION HISTORY

Rev. No.	DATE	Description	Prepared	Checked	Approved
0	21-06-2023	Initial Release			

**Technical Specification of
Pressure & Differential Pressure Gauges**

Cl. No.	Characteristics	Requirement	Vendor Compliance (ref. Note-2)
1.0	Site Conditions		
1.1	Altitude above mean sea level	34 m above MSL	
1.2	Ambient temperature condition	5 - 50 °C	
1.3	Relative humidity	60 - 84 %	
2.0	General		
2.1	Reference standard	IS 3624 / EN 837 - 1, 2, 3	
2.2	Type	Direct reading	
2.3	Scale	Black lettering on white background in 270° arc.	
2.4	Sensing element	Bourdon Tube - Bourdon Pressure Gauges. Diaphragm / Bellows - Draft Pressure & Differential Pressure Gauges Diaphragm - Diaphragm Seal Pressure Gauges.	
2.5	Nominal Dial Size	150 mm	
2.6	Accuracy	± 1.0% of FSD for Bourdon & Diaphragm Seal Pressure ranges ± 1.6% of FSD for Draft ranges & Differential Pressure Gauges	
2.7	Over range protection	125% of maximum range by internal stop. External stop at zero	
2.8	Dial graduation	Graduated in Kg/cm ² (g) / mmWC.	
2.9	Adjustment	Micrometer screw for zero adjustment. Internal micrometer screw for range adjustment.	
2.10	Enclosure protection	IP65	
2.11	Identification	1. Pressure Gauges for ammonia process Medium shall bear the inscription "AMMONIA" or "NH3" on the dial. 2. Separate SS Tag plate with Tag No. and Service legend.	
2.12	Safety Feature	Blow Out Disc/ Diaphragm at the back.	
3.0	Material		
3.1	Case	SS 304 or better	
3.2	Sensor	Bourdon / Diaphragm / Bellows : SS 316	
3.3	Bezel	SS 304 of better	
3.5	Socket	SS 316 / SS 316L	
3.6	Movement assembly	SS 304	
3.7	Window	Shatter proof glass.	
3.8	Diaphragm Chamber (Applicable for Diaphragm Seal Pressure Gauges)		
3.8.1	Sensing Element	Diaphragm - SS 316	
3.8.2	Top Chamber	SS 304	
3.8.3	Bottom Chamber	SS 316 / SS 316L	
3.8.4	Sealing Liquid	Silicon DC 200	
4.0	Documents		
4.1	To be submitted along with offer in 2 sets.	1. Catalogues.	
4.2	To be submitted during inspection	2. Filled in data sheets 1. T.C. for routine test for each gauge. 2. T.C. for type test 3. Material certificate 4. Guarantee certificate 5. Calibration certificate	
4.3	To be submitted after inspection: 2 sets of Original & 1 CD.	1. Catalogues 2. O & M manuals	

**Technical Specification of
Pressure & Differential Pressure Gauges**

Cl. No.	Characteristics	Requirement	Vendor Compliance (ref. Note-2)
5.0	<u>Packing</u>	Material shall be packed as per Packing procedure QA:CI:STD:PR:04. (Latest Revision)	
NOTE: 1. Refer current valid list for revision status of Quality Plan, Drawing No & Packing Procedure. 2. In Vendor Compliance column - vendor shall indicate 'YES', 'NO' or 'NOT APPLICABLE'. 3. GA drawings in AutoCAD and Datasheet in MS WORD/EXCEL shall be prepared and submitted in pdf 4. The entire system and accessories should not contain any asbestos material.			

BHARAT HEAVY ELECTRICALS LIMITED

HIGH PRESSURE BOILER PLANT, TIRUCHIRAPALLI - 620 014

TECHNICAL DELIVERY CONDITIONS FOR SUB - DELIVERY COMPONENTS OF CONTROLS AND INSTRUMENTATION



TCI:1823-SCR/101

PAGE 1 OF 4


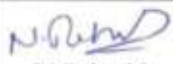

PRESSURE GAUGES

for

Project: Yadadri TPS, 5 x 800 MW

Customer Nos.: 1823 - 1827

REVISION HISTORY

REV. No.	DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED
00	16-09-2022	Initial Release	 (N.Rakesh)	 (N.Rakesh)	 (D. Kavitha)



Cl No.	Characteristics	Requirement
1.0	Site Conditions	
1.1	Altitude above mean sea level	Refer Datasheet
1.2	Ambient temperature condition	
1.3	Relative humidity	
1.4	Atmosphere	Tropical, Dusty, salty, corrosive and highly polluted.
2.0	General	
2.1	Reference standard	IS 3624 / EN 837 - 1, 2, 3 / ASME B40.100
2.2	Type	Direct reading
2.3	Scale	Industrial concentric 270° linear
2.4	Sensing element	Bourdon - for Pressure Gauges. Diaphragm / Bellows / Capsule - for Draft Gauges.
2.5	Nominal Dial Size	As specified in data sheet.
2.6	Accuracy	± 1% of FSD for Pressure ranges ± 1.6% of FSD for Draft ranges
2.7	Over range protection	125% of maximum range.
2.8	Dial graduation	Graduated in Kg / Sq.cm (g) / mmWC.
2.9	Zero adjustment	Micrometer adjustable from the front after opening the bezel
2.10	Enclosure protection	Weather proof, water tight and dust tight IP 65 of IS / IEC:60529 / NEMA Equivalent
2.11	Identification	1. Pressure gauges for ammonia process medium shall bear the inscription "AMMONIA" or "NH3" on the dial. 2. Separate SS tag. Plate with tag. no. and service legend.
3.0	Process Conditions	
3.1	Tag No.	Refer Datasheet
3.2	Medium	
3.3	Application	
3.4	Operating parameter	
3.5	Range	
3.6	Mounting & Entry	
3.7	Process Connection	
3.8	Special Requirement	



TCI:1823-SCR/101/00

CI No.	Characteristics	Requirement
4.0	Material	
4.1	Case	SS 304
4.2	Sensor	Bourdon / Diaphragm / Bellows : SS 316
4.3	Bezel	SS 304 with screwed or Snap Action Bayonet type
4.4	Blow out disc	Neoprene
4.5	Socket	SS 316 / SS 316L
4.6	Movement assembly	SS 316
4.7	Window	Shatter proof glass.
5.0	Inspection & Testing	QA:CI:STD:QP:01/08
6.0	Documents	
6.1	To be submitted along with offer in 2 sets.	1. Catalogues. 2. Filled in data sheets
6.2	To be submitted during inspection	1. T.C. for routine test for each gauge. 2. T.C. for type test 3. Material certificate 4. Guarantee certificate 5. Calibration certificate
6.3	To be submitted after inspection: 2 sets of Original & 1 CD.	1. Catalogues 2. O & M manuals
7.0	Packing	QA:CI:STD:PR:04/03

NOTE:

1. Refer current valid list for revision status of Quality Plan, Drawing No & Packing Procedure.
2. In Vendor Compliance column - vendor shall indicate 'YES', 'NO' or 'NOT APPLICABLE'.
3. GA drawings and Datasheet shall be prepared and submitted in PDF
4. The entire system and accessories should not contain any asbestos material.



SL NO.	COMPONENT & OPERATION	CHARACTERISTICS	CLASSIFICATION	TYPE OF CHECK	QUANTUM OF CHECK IN %		REFERENCE DOCUMENT	ACCEPTANCE CRITERIA	TYPE OF RECORD	AGENCY			REMARKS
					M	B/C				M	B	C	

A FINISHED PRODUCT INSPECTION													
01	Routine test	a. Physical verification of type, scale marking, range, tag number	Major	Visual	100%	30%	Purchase specification		TR	P	W		
		b. Dimensional check up	Major	Measurement	100%	30%	-do-		TR	P	W		
		c. Body materials, sensing element	Major	Chemical	Sample		-do-		TC	P	V		
		d. Calibration test (accuracy) at 5 points before and after pressure test	Critical	Measurement	100%	10% or 1 no of each range	Purchase specification IS3624/EN837, data sheet		TR	P	W		
		e. Over range protection test	Major	Physical	100%	100%	-do-		TR	P	V		
		f. Zero adjustment	Major	Mechanical	100%	100%	-do-		TR	P	V		
		g. Mounting, entry and process connection	Major	Physical	100%	100%	-do-		TR	P	V		
		h. Blow out disc	Major	Mechanical	Sample	Sample	Purchase spec. manufacturer standard		TR	P	V		
		i. Over pressure test	Major	Mechanical	Sample	Sample	Purchase spec. manufacturer std.		TR	P	V		
		j. Hysteresis, Repeatability	Major	Mechanical	Sample	Sample	Purchase spec. IS3624/EN837, data sheet		TR	P	V		
		k. Bourdon arc dia	Major	Measurement	Sample	Sample	-do-		TR	P	V		

LEGENDS: M-MANUFACTURER/SUB-VENDOR B-BHEL/BHEL NOMINATED INSPECTION AGENCY C- CUSTOMER/CUSTOMER NOMINATED INSPECTION AGENCY P- PERFORM W- WITNESS V- VERIFICATION

PREPARED BY:

M. N. Srinivasan

APPROVED BY:

[Signature]



SL NO.	COMPONENT & OPERATION	CHARACTERISTICS	CLASSIFICATION	TYPE OF CHECK	QUANTUM OF CHECK IN %		REFERENCE DOCUMENT	ACCEPTANCE CRITERIA	TYPE OF RECORD	AGENCY			REMARKS
					M	B/C				M	B	C	

02	Type test	a. Degree of enclosure protection for housing	Critical	ENVI	One of design	One of design	IS 12063, IS 13947, IEC 60529		TC	V	V	
		b. Endurance test	Critical	Mechanical	-do-	-do-	IS3624,EN837		TC	V	V	
		c. Thermal stability test	Critical	Mechanical	-do-	-do-	Note D		TC	V	V	
		d. Vibration test	Critical	Mechanical	-do-	-do-	EN837		TC	V	V	
03	Accessories(as applicable)	1)2 way Gauge cock a) Material b) Performance 2) Diaphragm seal a) Material b) Performance 3)Pulsation Demper a) Material b) Performance	Major	Verification	-do-	-do-	Purchase specification		TC	V	V	

LEGENDS: M-MANUFACTURER/SUB-VENDOR B-BHEL/BHEL NOMINATED INSPECTION AGENCY C- CUSTOMER/CUSTOMER NOMINATED INSPECTION AGENCY P-PERFORM W- WITNESS V- VERIFICATION

PREPARED BY:

M. N. 28/4/10

APPROVED BY:

[Signature]
28/4



SL NO.	COMPONENT & OPERATION	CHARACTERISTICS	CLASSIFICATION	TYPE OF CHECK	QUANTUM OF CHECK IN %		REFERENCE DOCUMENT	ACCEPTANCE CRITERIA	TYPE OF RECORD	AGENCY			REMARKS
					M	B/C				M	B	C	
					M	B/C							

B. NOTES:

1. LEGENDS:

ENVL : Environmental MEAS : Measurement
 ELEC : Electrical LGB : Log Book
 CHEM : Chemical TC : Test Certificate
 VISU : Visual TR : Test Report

- The vendor at their works shall arrange all testing facilities. Tests for which facilities are not available are to be carried out at recognized National Test Houses like SPC/CHL/NPL/ERTL etc., at vendor cost.
- Through Log Book/any other documents available at the vendor's works, it shall be possible to correlate the finished product with inspection carried out.
- All measuring and testing instruments shall be periodically calibrated from recognized test houses & certificates made available during inspection for verification.
- Test Certificates for routine tests are to be furnished by the vendor.
- Type test certificate shall not be earlier than 5 years from the date of purchase enquiry.
- Vendor to give tentative inspection program in advance and confirm exact date two weeks in advance for arranging BHEL's inspection.
- Packing shall be as per "PACKING PROCEDURE" indicated in the specification.

C. REFERENCE STANDARDS: (For indicated standard refer the latest version)

IEC 60529 : Specification for Degree of protection provided by enclosure
 BS 1780 : Specification for Bourdon tube pressure and vacuum gauge
 IS 3624 : Specification for pressure and vacuum gauges
 IS 12063 : Classification of Degrees of protection provided by enclosure for electrical equipment.
 IS 13947-1 : Specification for general rules for low voltage switch gear

D. THERMAL STABILITY TEST:

A cyclic temperature test shall be performed in a suitable test chamber by elevating the temperature to the maximum rated temperature within two hours. The instrument case shall be held at the maximum temperature for 10 hours. The case temperature shall then be lowered to the specified minimum temperature over a 2 hours period. The minimum temperature shall also be held for 10 hours.

2 cycles at third party lab (Govt. approved/NABL accredited) or 5 cycles at MQCD is acceptable. Maximum and minimum temperature are as per manufacturer's catalog. At the end of this period, there shall be no visible deterioration of the gaskets, seals, protective coating or any significant distortion of the case.

LEGENDS: M-MANUFACTURER/SUB-VENDOR B-BHEL/BHEL NOMINATED INSPECTION AGENCY C- CUSTOMER/CUSTOMER NOMINATED INSPECTION AGENCY F- PERFORM W- WITNESS V- VERIFICATION

PREPARED BY:

M. N. S. 28/4/10

APPROVED BY:

[Signature]

28/4



BHARAT HEAVY ELECTRICALS LIMITED
TIRUCHIRAPPALLI - 620014

QA:CI:STD:QP:17
Rev: 05 Page: 1 of 3

CONTROLS AND INSTRUMENTATION/QA/FB

STANDARD QUALITY PLAN FOR

DP GAUGE

REV	DATE	PREPARED	REVIEWED	APPROVED	REVISION HISTORY
00-03	21/03/2002	Sd/-	Sd/-	Sd/-	Dept. name changed CTQ requirements added & General revision.
04	08/01/2004	Sd/-	Sd/-	Sd/-	Revised to include the comments / Feedback of internal discussion / Vendors meet.
05	28/12/2016	AVINASH V 	RM VAIRAVAN 	S DAKSHINAMOORTHY 	Reference standards revised. Format changed



B. NOTES:

1.LEGENDS:

ENVI	: Environmental;	MEAS	: Measurement
ELEC	: Electrical	LGB	: Log Book
CHEM	: Chemical	TC	: Test certificate
VISU	: Visual	TR	: Test Report

2. The vendor at their works shall arrange all testing facilities. Tests for which facilities are not available are to be carried out at recognized National Test Houses like ETDC/CIL/NPL/ERTL etc., at vendor cost.
3. Through Log Book / any other documents available at the vendor's works, it shall be possible to correlate the finished product with inspection carried out.
4. All Measuring and Testing Instruments shall be periodically calibrated from recognized test houses & certificates made available during inspection for verification.
5. Test certificates for routine type tests are to be furnished by the vendor.
6. Type test certificate shall not be earlier than 5 years from the date of Purchase enquiry.
7. Vendor to give tentative inspection program in advance and confirm exact date two weeks in advance for arranging BHEL's inspection.
8. Packing shall be as per "PACKING PROCEDURE" indicated in the specification.

C. REFERENCE STANDARDS: (For Indicated Standards Refer the latest Version)

- IS 3624 : Specification for pressure and vacuum gauges
- EN 837 : Bourdon tube pressure gauges
- ASME B40.100 : Pressure gauges and gauge attachments

D. THERMAL STABILITY TEST:

A cyclic temperature test shall be performed in a suitable test chamber by elevating the temperature to the maximum rated temperature within two hours. The instrument case shall be held at the maximum temperature for 10 hours. The case temperature shall then be lowered to the specified minimum temperature over a 2 hours period. The minimum temperature shall also be held for 10 hours.

2 cycles at third party lab (Govt. approved / NABL accredited) or 5 cycles at Manufacturer work is acceptable. Maximum and minimum temperatures are as per manufacturer's catalog. At the end of this period, there shall be no visible deterioration of the gaskets, seals, protective coating or any significant distortion of the case.



BHARAT HEAVY ELECTRICALS LIMITED
TIRUCHIRAPPALLI - 620014

QA:CI:STD:QP:01
Rev: 09 Page: 1 of 3

CONTROLS AND INSTRUMENTATION/QA/FB

STANDARD QUALITY PLAN FOR PRESSURE GAUGE (BOURDON, DIAPHRAM AND DRAFT)

REV	DATE	PREPARED	REVIEWED	APPROVED	REVISION HISTORY
00-04	21/03/2002	Sd/-	Sd/-	Sd/-	Dept. name changed CTQ requirements added & General revision.
05	08/01/2004	Sd/-	Sd/-	Sd/-	Revised to include the comments / Feedback of internal discussion / Vendors meet.
06	20/01/2009	Sd/-	Sd/-	Sd/-	Quantum of check included. Format changed
07	01/10/2009	Sd/-	Sd/-	Sd/-	Based on Inspection feedback, Quantum of check by BHEL is revised.
08	23/12/2016	AVINASH V	RM VAIRAVAN	S DAKSHINAMOORTHY	Reference Standards updated.
09	21/04/23	ARUNKUMAR B B. Arunkumar.	N RAKESH G V CHILAMBARASAN G. Arunkumar	B MUTHUKUMARAN B Muthukumar	Tests and reference standards revised.



B.NOTES:

1.LEGENDS:

- ENVI : Environmental; MEAS : Measurement
- ELEC : Electrical LGB : Log Book
- CHEM : Chemical TC : Test certificate
- VISU : Visual TR : Test Report

2. The vendor at their works shall arrange all testing facilities. Tests for which facilities are not available are to be carried out at recognized National Test Houses like ETDC/CIL/NPL/ERTL etc., at vendor cost.
3. Through Log Book / any other documents available at the vendor's works, it shall be possible to correlate the finished product with inspection carried out.
4. All Measuring and Testing Instruments shall be periodically calibrated from recognized test houses & certificates made available during inspection for verification.
5. Test certificates for routine & type tests are to be furnished by the vendor.
6. Type test certificate shall not be earlier than 5 years from the date of Purchase enquiry.
7. Vendor to give tentative inspection program in advance and confirm exact date two weeks in advance for arranging BHEL's inspection.
8. Packing shall be as per "PACKING PROCEDURE" indicated in the specification.

C. REFERENCE STANDARDS: (For Indicated Standards Refer the Latest Version)

- IS 3624 : Specification for pressure and vacuum gauges
- EN 837 : Bourdon tube pressure gauges

D. THERMAL STABILITY TEST:

A cyclic temperature test shall be performed in a suitable test chamber by elevating the temperature to the maximum rated temperature within two hours. The instrument case shall be held at the maximum temperature for 10 hours. The case temperature shall then be lowered to the specified minimum temperature over a 2 hours period. The minimum temperature shall also be held for 10 hours.

2 cycles at third party lab (Govt. approved / NABL accredited) or 5 cycles at Manufacturer work is acceptable. Maximum and minimum temperatures are as per data sheet. At the end of this period, there shall be no visible deterioration of the gaskets, seals, protective coating or any significant distortion of the case.

**BHARAT HEAVY ELECTRICALS LIMITED
TIRUCHIRAPPALLI**

**CONTROLS AND INSTRUMENTATION / FB
QUALITY ASSURANCE**

**STANDARD PACKING PROCEDURE
FOR
ALL INSTRUMENTS AND MISCELLENEOUS ITEMS
(ELECTRICAL, ELECTRONIC AND PNEUMATIC)**

Rev	Date	Prepared	Checked	Approved	Revision History
00	01.01.96	Sd/-	Sd/-	Sd/-	Initial History
01	28.03.02	Sd/-	Sd/-	Sd/-	Department name changed
02	26.02.07	Sd/-	Sd/-	Sd/-	Revised after discussion with Shipping Dept.
03	17.12.16	A.SRIHARI RAO <i>A. Srihari Rao</i>	RM.VAIRAVAN <i>RM. Vairavan</i>	S.DAKSHINAMOORTHY <i>S. Dakshinamoorthy</i>	Revised to suit all type of instruments.

1. Scope

This procedure gives minimum guidelines to be complied with for packing of Electrical, Electronic and pneumatic Instruments. This packing shall be suitable for different handling operations and for the adverse conditions during transportation and during indoor / outdoor storage for period more than one year.

2. Material for packing

The individual instrument shall be packed in carton box (specifically made for particular instrument) and grouped together inside a box made of wood or plywood as per National / International standard.

3. Packing

- Items shall be inspected for cleanliness immediately before packaging. Dirt, oil, residue, metal chips or other forms of contamination shall be removed.
- Adequate protection shall be provided against mechanical damage and atmospheric corrosion in transit and, for equipment suitable for outside storage, for prolonged storage at the site prior to installation.
- Water proof barrier material – high density polythene shall be used as a resistant to grease and water; it shall protect items from airborne and windblown soils.
- Desiccants like silica gel to be used inside the carton box. Silica gel shall conform to IS 3401. The gel is to be packed in sachets placed at different positions inside the components for absorbing moisture. The quantity of silica gel shall be adequate for storage period of one year.
- All tapped openings in equipment shall be plugged with plastic plugs to protect internal / external threads.
- Use a sturdy cardboard shipping carton, large enough for at least 3 inch foam padding around the instrument.
- Do not use loose plastic foam pieces, which can shift during transport.
- Secure the box flaps with packaging tape or box staples.

3.1) Marking & Labelling:

- Components and their containers shall be identified by marking. Shipping marks shall be on all sides of package. The shipping marks shall be at least 3 inches high where space permits. Markings are to be in black paint or ink depending on shade of the package surface.
- Cautionary symbols to be stenciled in red waterproof paint or ink.

QA:CI:STD:PR:04 / Rev 03

- The gap between job and the box shall be filled with suitable material like jute, coir, thermo coal, etc.
- For export packing additional care shall be taken as per contract requirements if applicable. Otherwise, suitable box made of seasoned wood and / or plywood sheets of required thickness shall be used with suitable sea worthy packing protection.

4. Marking

- After completing the packing, Stencil marking, as per dispatch instructions and symbol marking as per Annexure – I shall be made. Please ensure the box is stenciled with “FRAGILE ITEM”, “HANDLE WITH CARE”.

5. Packing Slip

- A copy of the packing slip, kept in a polythene cover shall be kept inside the box. Another copy of the packing slip, kept in a polythene cover shall be kept outside the box and firmly fixed to the case.

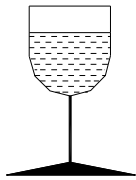
6. Caution

- Do not pack any other Mechanical items with this case.

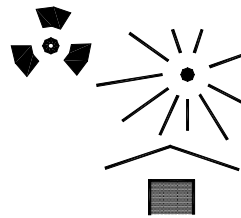
7. General

- These packing procedures are the minimum requirements in addition to the standard instructions mentioned in the Purchase Order and Specification.
- Deviation to meet the packing procedure requirements / non-clarity in packing approach in any quotation will be liable for rejection of offer.

ANNEXURE - 1



FRAGILE, HANDLE WITH CARE



PROTECT FROM HEAT AND RADIOACTIVE SOURCES



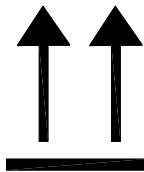
USE NO HOOKS

NOTE: The design of heavy goods packages cannot always resist top lifting by grabhooks.



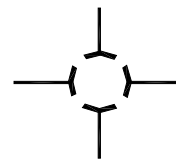
KEEP DRY

NOTE: Not all cases have waterproof internal liners: plywood used in the construction may not have a waterproof glue-line.



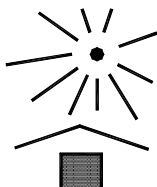
THIS WAY UP

NOTE: Certain designs of small cases make it difficult to distinguish top from bottom.



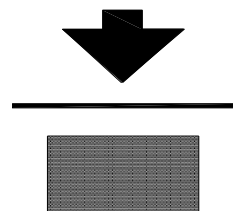
CENTRE OF GRAVITY

NOTE: This should be stencilled as a minimum on the two longest case sides (this information will normally be supplied by the manufacturer of the item(s) packed).



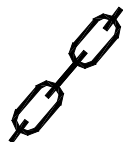
KEEP AWAY FROM HEAT

... kg max



STACKING LIMITATION

NOTE: The maximum load in kilograms should be marked above the arrow.



INTERNATIONAL "SLING HERE" SYMBOL