

Bharat Heavy Electricals Limited
Ramachandrapuram : : Hyderabad – 502032

M&S - DIVISION

SCOPE OF WORK (ANNEXURE – I)

TENDER No.M&S/P&C/2021/83, Dt.: 28.02.2022

NAME OF WORK: Rubber lining for Acid/alkali measuring tanks, SAC bottoms and DM Plant streams inter connected pipelines in Boiler House.

DESCRIPTION OF WORK:

1. ACID AND ALKALI MEASURING TANKS (Total 4 numbers)

Rubber lining 5mm thickness with Natural rubber for Acid and Alkali measuring tanks (for inside surface area including pipes, flanges, top plate) - Total area – 10 sq.mtr.

Rubber lining 3mm thickness with Natural rubber for Acid and Alkali measuring tanks (for outside surface area including pipes, flanges, top plate) - Total area – 10 sq.mtr.

2. STRONG ACID CATION EXCHANGER (SAC) BOTTOM HEMISPHERES-2NUMBERS

Rubber lining 5mm thickness with Natural rubber for SAC tanks bottom portion-2 Nos (for bottom hemispheres-removal of existing material & Repair)

3. TWO STREAMS OF SAC, SBA, MB VESSELS INTER CONNECTED PIPELINES RUBBER LINING

Following pipelines of different sizes with bends, Tee, reducers, Flanges are to be rubber lined with 3 mm thick natural rubber.

S.No.	65NB Size	Length in Mtr.	No. of Flanges
1	END PIPE	1	1
2	T PIPE	0.15	2
3	T PIPE	0.15	2
4	PIPE	0.05	2
5	PIPE	0.05	2
6	T PIPE	0.16	2
7	PIPE(T PIPE)	0.15	2
8	PIPE(T PIPE)	0.15	2
9	PIPE	0.2	2
10	PIPE	0.36	4
11	PIPE	0.5	4
12	BEND	0.57	4
13	BEND	0.57	4
14	BEND	0.57	4
15	BEND	0.6	4
16	BEND	0.6	4
17	BEND	0.6	4
18	BEND	0.6	4
19	BEND	0.6	4
20	T PIPE	0.62	6
21	PIPE	0.64	4
22	BEND	0.66	4
23	T PIPE	0.68	6
24	BEND	0.7	4
25	BEND	0.7	4
26	BEND	0.7	4
27	BEND	0.7	4
28	BEND	0.7	4
29	BEND	0.7	4

30	BEND	0.7	4
31	T REDUCER	0.74	6
32	T REDUCER	0.74	6
33	T REDUCER	0.74	6
34	T PIPE	0.75	4
35	T PIPE	0.75	4
36	T REDUCER	0.78	6
37	PIPE	0.8	4
38	PIPE	0.8	4
39	PIPE	0.8	4
40	PIPE	0.85	4
41	PIPE	0.85	4
42	T REDUCER	0.85	6
43	T REDUCER	0.87	6
44	T REDUCER	0.88	6
45	T REDUCER	0.93	6
46	PIPE	1	4
47	4 WAYT REDUCER	1.05	8
48	PIPE	1.12	4
49	4 WAYT REDUCER	1.26	8
50	T PIPE	1.53	6
51	END T	1.6	4
52	PIPE	1.7	4
53	PIPE	2.12	4
54	PIPE	2.2	4
55	PIPE	2.2	4
56	T PIPE	2.35	6
57	PIPE	2.35	4
58	PIPE	2.36	4
59	PIPE	2.76	4
60	PIPE	3.1	4
61	END PIPE	3.4	2
S.No.	40NB Size	Length in Mtr.	No. of Flanges
1	T PIPE	0.05	1
2	REDUCER	0.3	4
3	REDUCER	0.3	4
4	BEND	0.32	4
5	BEND	0.32	4
6	BEND	0.4	4
7	BEND	0.4	4
8	BEND	0.4	4
9	BEND	0.4	4
10	BEND	0.45	4
11	BEND	0.55	4
12	PIPE	0.55	4
13	PIPE	1.5	4
14	PIPE	2	4
15	END PIPE	2.8	2
16	PIPE	2.85	4
17	PIPE	3.1	4
18	END PIPE	3.4	2
19	PIPE	4.4	4

S.No.	20NB Size	Length in Mtr.	No. of Flanges
1	PIPE	0.08	1
2	PIPE	0.08	1
3	PIPE	0.25	2
4	PIPE	0.25	2
S.No.	2" Size	Length in Mtr.	No. of Flanges
1	BEND	0.23	2
2	T PIPE	0.98	3
3	T REDUCER	0.76	6
S.No.	3" Size	Length in Mtr.	No. of Flanges
1	PIPE	0.1	4
2	PIPE	0.1	4
3	BEND	0.32	4
4	REDUCER	0.52	4
5	REDUCER	0.52	4
6	BEND	0.58	4
7	BEND	0.58	4
8	BEND	0.6	4
9	4 WAY	0.6	8
10	T REDUCER	0.79	6
11	5 WAY	0.92	10
12	T PIPE	1.28	6
13	PIPE	1.45	4
14	END T	2.2	4
S.No.	4" Size	Length in Mtr.	No. of Flanges
1	5 WAY PIPE	0.2	2
2	T PIPE	1.94	3
3	BEND	0.3	2
4	BEND	0.3	2
5	PIPE	3.8	2
6	REDUCER	0.08	2
7	REDUCER	0.08	2
8	REDUCER	0.08	2
9	REDUCER	0.08	2
10	T PIPE	1.55	2
11	T PIPE	0.65	2
12	REDUCER	0.55	4
13	REDUCER	0.55	4
14	REDUCER	0.56	4
15	REDUCER	0.56	4
16	BEND	0.7	4
17	BEND	0.7	4
18	BEND	0.7	4
19	BEND	0.7	4
20	BEND	0.7	4
21	BEND	0.7	4
22	PIPE(T PIPE)	2.2	4
23	PIPE	2.3	4
24	PIPE	2.4	4
25	4 WAY PIPE	3.3	8
26	PIPE	4	4
27	PIPE	4.8	4

28	PIPE	5.6	4
29	PIPE(T PIPE)	5.9	4
S.No.	6" Size	Length in Mtr.	No. of Flanges
1	5 WAY PIPE	1.63	3
2	PIPE	1.06	2
3	BEND	0.4	2
4	BEND	0.4	2
5	PIPE	1.7	2
6	T PIPE	0.65	3
7	4 WAY PIPE	0.55	4

Note:

1. Above mentioned work is to be done with required men, material and tools. All the required men, material and tools will be in the scope of contractor.
2. Removal of existing damaged rubber lining will be in the scope of contractor.
3. New rubber lining is to be done in the areas as given in the above scope of work.
4. Required steam supply, Air & power supply will be provided by BHEL.
5. Spark test is to be done after completing the work and if any problem is there it is to be rectified immediately.
6. Manpower should have been covid vaccinated and follow covid precautions.