BEML LIMITED

(A Govt. of India Mini Rathna Company under Ministry of Defence)
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EOI Ref: BEML/CMRM/TUBES Date: 07/11/2024

EOI (Expression of Interest) is invited from steel suppliers for the items as shown at table below:-

Sl No	Family	BEML Stock No	OD	ID	WT	Cut Length	GRADE/Nearest grade (normalised condition)	Average qty	Unit
			MM	MM	MM	MM			
1	Tubes	130020030424-R	273	248	12.5	805	DIN 1630 St.52.4	47.500	NO
2	Tubes	130020030894	267	252	7.5	900	DIN 1630 St.52.4	3.750	NO
3	Tubes	130020031014R	267	252	7.5	740	DIN 1630 St.52.4	57.000	NO
4	Tubes	130020031024R	267	252	7.5	1415	DIN 1630 St.52.4	27.000	NO
5	Tubes	130020031124	267	252	7.5	1035	DIN 1630 St.52.4	6.000	NO
6	Tubes	130020032104-R	273	248	12.5	1005	DIN 1630 St.52.4	2.000	NO
7	Tubes	470ID13011	267	252	7.5	2215	DIN 1630 St.52.4	64.436	M
8	Tubes	175HCB9404	240	200	20	404	C1111-33	35.863	M
9	Tubes	1KT118150800	118	88	15	800	STKM13A	93.375	M
10	Tubes	1KT160200095	160	120	20	095	DIN 2391 St.52	12.030	M
11	Tubes	1NT10210	102	82	10	210	C1111-33	219.363	M
13	Tubes	1NT124070525	124	110	07	525	C1111-33	71.314	M
14	Tubes	1NT13608	136	120	08	608	C1111-33	80.336	M
15	Tubes	1NT136080550	136	120	08	550	C1111-33	49.421	M
16	Tubes	1NT136111020	136	114	11	020	C1111-33	0.380	M
17	Tubes	1NT136111150	136	114	11	150	C1111-33	17.985	M
18	Tubes	1NT145180095	145	109	18	095	C1111-33	10.888	M
19	Tubes	1NT153120183	153	129	12	183	C1111-33	21.960	M
20	Tubes	1NT153120448	153	129	12	448	C1111-33	174.000	M
21	Tubes	1NT153121540	153	129	12	540	C1111-33	2.160	M
22	Tubes	1NT164120403	164	140	12	403	C1111-33	4.030	M
23	Tubes	1NT17119	171	133	19	119	STKM20A	8.383	M
25	Tubes	1NT180130378	180	154	13	378	C1111-33	2.268	M
26	Tubes	1NT180200890	180	140	20	890	C1111-33	37.591	M
27	Tubes	1NT180250105	180	130	25	105	C1111-33	0.630	M
28	Tubes	1NT180250680	180	130	25	680	C1111-33	69.133	M
29	Tubes	1NT191160220	191	159	16	220	STKM16A	2.000	M
30	Tubes	1NT191160510	191	159	16	510	STKM16A	2.040	M
31	Tubes	1NT206160700	206	174	16	700	STKM20A	20.708	M
32	Tubes	1NT21417	214	180	17	417	C1111-33	31.647	M
33	Tubes	1NT240201671	240	200	20	671	C1111-33	9.398	M
34	Tubes	1NT25317	253	219	17	317	C1111-33	43.471	M
35	Tubes	1NT26719	267	229	19	719	C1111-33	10.500	M
36	Tubes	1NT267190750	267	229	19	750	C1111-33	53.576	M
37	Tubes	1NT26721	267	225	21	721	C1111-33	192.076	M
38	Tubes	1NT27025	270	220	25	025	C1111-33	7.005	M
39	Tubes	1NT281180355	281	245	18	355	C1111-33	31.497	M
40	Tubes	1NT29925	299	249	25	925	C1111-33	63.471	M
41	Tubes	1NT34030	340	280	30	030	C1111-33	17.250	M
42	Tubes	1NT34335	343	273	35	335	C1111-33	13.500	M
43	Tubes	1PT101090472	101	83	09	472	C1111-33	155.382	M
44	Tubes	1PT102160610	102	70	16	610	LW320-03	32.025	M
45	Tubes	1PT102160615	102	70	16	615	LW5196	91.799	M
46	Tubes	1PT10220	102	62	20	220	C1111-33	203.267	M
47	Tubes	1PT116080182	116	100	08	182	C1111-33	0.910	M

48	Tubes	1PT116080935	116	100	08	935	C1111-33	5.143	M
49	Tubes	1PT116080962	116	100	08	962	C1111-33	4.810	M
50	Tubes	1PT116110025	116	94	11	025	C1111-33	1.058	M
51	Tubes	1PT116110575	116	94	11	575	LW5196	64.975	M
52	Tubes	1PT134220950	134	90	22	950	C1111-33	8.075	M
53	Tubes	1PT136141150	136	108	14	150	C1111-33	18.200	M
54	Tubes	1PT140130695	140	114	13	695	LW 321-03	27.065	M
55	Tubes	1PT140160540	140	108	16	540	LW321-03	66.000	M
56	Tubes	1PT140160680	140	108	16	680	SAE5196	207.627	M
57	Tubes	1PT140260945	140	88	26	945	LW5136	2.363	M
58	Tubes	1PT150120772	150	126	12	772	LW 5196	5.404	M
59	Tubes	1PT150251335	150	100	25	335	C1111-33	4.243	M
60	Tubes	1PT15312	153	129	12	312	C1111-33	55.023	M
61	Tubes	1PT16412	164	140	12	412	LW5136	83.068	M
62	Tubes	1PT16715	167	137	15	715	C1111-33	225.135	M
63	Tubes	1PT170160990	170	138	16	990	LW5136	21.285	M
64	Tubes	1PT17813	178	152	13	813	LW 322-03	316.591	M
65	Tubes	1PT180150530	180	150	15	530	C1111-33	143.411	M
66	Tubes	1PT19015	190	160	15	015	LW323-03	41.357	M
67	Tubes	1PT21518	215	179	18	518	LW5136	18.910	M
68	Tubes	1PT21816	218	186	16	816	LW5136	209.610	M
69	Tubes	1PT230200890	230	190	20	890	LW 5136	33.835	M
70	Tubes	1PT230230815	230	184	23	815	LW5136	77.629	M
71	Tubes	1PT230280815	230	174	28	815	LW5196	134.023	M
72	Tubes	1PT260290334	260	202	29	334	LW5196	23.839	M
73	Tubes	1PT260290338	260	202	29	338	LW5196	37.941	M
74	Tubes	1RT102100640	102	82	10	640	C1111-33	38.113	M
75	Tubes	1RT12407	124	110	07	407	CST52	163.026	M
76	Tubes	1RT15813	158	132	13	813	CST52	233.173	M
77	Tubes	1RT18010	180	160	10	010	CST52	306.739	M
78	Tubes	1RT245180810	245	209	18	810	CST52	25.380	M
79	Tubes	2AT083110403	083	61	11	403	C1101	4.970	M
80	Tubes	2AT125120242	125	101	12	242	IS 3074-65	15.972	M
81	Tubes	2AT152130480	152	126	13	480	STKM16A	27.888	M
82	Tubes	2AT153130480	153	127	13	480	STKM16A	31.770	M
83	Tubes	2AT19120	191	151	20	120	STKM16A	49.227	M
84	Tubes	2AT20823	208	162	23	823	STKM16A	26.695	M
85	Tubes	2AT210300351	210	150	30	351	STKM16A	75.816	M
86	Tubes	2AT216270660	216	162	27	660	STKM16A	88.836	M
87	Tubes	2AT216270785	216	162	27	785	STKM16A	72.585	M
88	Tubes	2AT299280335	299	243	28	335	STKM17A	52.452	M
89	Tubes	2AT299300335	299	239	30	335	STKM17A	38.358	M
90	Tubes	2AT299300490	299	239	30	490	STKM17A	24.378	M
91	Tubes	2AT299300725	299	239	30	725	STKM17A	21.779	M
92	Tubes	2GT187410950	187	105	41	950	LW4130H	182.785	M
93	Tubes	2GT20633	206	140	33	633	SAE4130H	10.860	M
94	Tubes	2GT20829	208	150	29	829	SAE4130H	89.396	M
95	Tubes	2GT210300351	208	150	29	351	SAE4130H	91.100	M
96	Tubes	2GT210300385	208	150	29	385	LW4130H	82.797	M
97	Tubes	2GT21633	216	150	33	633	SAE4130H	38.991	M
98	Tubes	2GT22623	226	181	22.5	623	SAE 4130H	24.445	M
99	Tubes	2GT260260350	260	209	25.5	350	SAE4130H	58.075	M
100	Tubes	2GT260260395	260	208	26	395	SAE4130H	113.879	M
101	Tubes	2GT26930	268.8	209	29.9	930	SAE 4130H	81.385	M
102	Tubes	2GT277211055	277	235	21	055	SAE 4130H	0.264	M
103	Tubes	2GT277211455	277	235	21	455	SAE4130H	3.943	M
104	Tubes	2GT28543	285	200	42.5	543	SAE4130H	35.355	M
105	Tubes	2GT29928	300.5	244	28.25	928	SAE4130H VD	310.750	M

106	Tubes	2GT310330400	310	240	35	400	SAE4130H VD	3.867	M
107	Tubes	2GT310350685	310	240	35	685	SAE4130H VD	11.303	M
108	Tubes	2GT31135	311	240	35.5	135	LW4130H	31.712	M
109	Tubes	2GT318941335	318	130	94	335	LW 4130H	2.010	M
110	Tubes	2GT373410402	373	291	41	402	LW4130H	22.286	M
111	Tubes	2GT373410440	373	291	41	440	LW4130H	47.520	M
112	Tubes	2GT373410636	373	291	41	636	SAE 4130H	46.795	M
113	Tubes	2GT373411090	373	292	40.5	090	SAE 4130H	0.675	M
114	Tubes	2GT373441490	373	285	44	490	SAE 4130H	3.103	M
115	Tubes	2GT406400380	406	326	40	380	LW 4130H	2.787	M
116	Tubes	2GT406400655	406	326	40	655	SAE4130H	4.148	M
117	Tubes	2GT406401370	406	326	40	370	SAE4130H	1.480	M
118	Tubes	2GT407560600	407	295	56	600	LW4130H	1.200	M
119	Tubes	2GT407561035	407	295	56	035	LW4130H	0.070	M
120	Tubes	2GT455581095	458	340	59	095	SAE4130H	0.950	M
121	Tubes	2HT172290350	172	114	29	350	SAE 4142H VD	55.582	M
122	Tubes	2HT174290365	174	116	29	365	SAE4142H VD	20.927	M
123	Tubes	2HT174290425	174	116	29	425	SAE4142H VD	89.314	M
124	Tubes	889550000014	216.3	165.5	25.4	014	STKM 13 A	188.301	M
125	Tubes	C101233001	12.2	10	1.1	001	C101233	5.151	M
126	Tubes	C101233002	14	9.2	2.4	002	C101233	190.877	M
127	Tubes	C101233004	21.8	15.4	3.2	004	C101233	239.777	M
128	Tubes	C101233005	24	8	8	005	C101233	63.317	M
129	Tubes	C101233006	27.3	21.7	2.8	006	C101233	1620.157	M
130	Tubes	C101233007	33.3	26.8	3.25	007	C101233	170.578	M
131	Tubes	C101233008	34	24	5	008	C101233	45.521	M
132	Tubes	C101233009	42.7	35.7	3.5	009	C101233	447.246	M
133	Tubes	C101233010	48	32	8	010	C101233	110.845	M
134	Tubes	C101233011	48.6	41.6	3.5	011	C101233	203.414	M
135	Tubes	C101233012	50	38	6	012	C101233	25.788	M
136	Tubes	C101233013	57	49.7	3.65	013	C101233	50.241	M
137	Tubes	C101233014	60.3	40.3	10	014	C101233	264.420	M
138	Tubes	C101233015	60.8	53.5	3.65	015	C101233	269.829	M
139	Tubes	C101233016	70	58	6	016	C101233	57.769	M
140	Tubes	C101233017	76	50.6	12.7	017	C101233	18.415	M
141	Tubes	C101233018	76.3	69.9	3.2	018	C101233	96.425	M
142	Tubes	C101233019	76.3	67.9	4.2	019	C101233	179.679	M
143	Tubes	C101233021	89	71	9	021	C101233	155.024	M
144	Tubes	C101233022	89.05	80.95	4.05	022	C101233	12.878	M
145	Tubes	C101233023	100	87	6.5	023	C101233	9.176	M
146	Tubes	C101233024	101.6	63.6	19	024	C101233	58.189	M
147	Tubes	C101233025	114	103.2	5.4	025	C101233	50.000	M
148	Tubes	C101233026	114.3	82.5	15.9	026	C101233	74.472	M
149	Tubes	C101233027	121	97	12	027	C101233	27.250	M
150	Tubes	C101233028	127	115.4	5.8	028	C101233	33.099	M
151	Tubes	C101233029	127	77	25	029	C101233	6.553	M
152	Tubes	C101233030	127	68	29.5	030	C101233	9.097	M
153	Tubes	C101233031	135	97.5	18.75	031	C101233	3.981	M
154	Tubes	C101233032	139	122	8.5	032	C101233	52.330	M
155	Tubes	C101233033	139	103	18	033	C101233	50.822	M
156	Tubes	C101233035	152	120	16	035	C101233	62.846	M
157	Tubes	C101233036	152.4	133.36	9.52	036	C101233	74.233	M
158	Tubes	C101233037	152.4	126.4	13	037	C101233	2.914	M
159	Tubes	C101233039	165	155.4	4.8	039	C101233	170.805	M
160	Tubes	C101233040	165	131	17	040	C101233	157.243	M
161	Tubes	C101233042	177.8	162	7.9	042	C101233	0.526	M
162	Tubes	C101233043	178	128	25	043	C101233	27.127	M
163	Tubes	C101233044	185	155	15	044	C101233	4.414	M

164	Tubes	C101233045	195	163	16	045	C101233	10.244	M
165	Tubes	C101233046	200	150	25	046	C101233	52.526	M
166	Tubes	C101233047	216.3	204.7	5.8	047	C101233	55.319	M
167	Tubes	C101233048	219	199	10	048	C101233	26.338	M
168	Tubes	C101233049	232	202	15	049	C101233	17.407	M
169	Tubes	C101233050	244.4	208.4	18	050	C101233	209.692	M
170	Tubes	C101233051	254	177.8	38.1	051	C101233	24.317	M
171	Tubes	C101233052	266.7	215.9	25.4	052	C101233	66.770	M
172	Tubes	C101233054	298.5	266.5	16	054	C101233	10.452	M
173	Tubes	C101233055	298.5	238.5	30	055	C101233	22.891	M
174	Tubes	C101233057	406.4	372.4	17	057	C101233	2.932	M
175	Tubes	C101233058	101.6	95.2	3.2	058	C101233	33902.500	M
176	Tubes	C101233059	146	116	15	059	C101233	1.691	M
177	Tubes	C101233062	19	16.6	1.2	062	C101233	1.539	M
178	Tubes	C101233064	27.3	20.8	3.25	064	C101233	135.822	M
179	Tubes	C101233065	42.5	37.2	2.65	065	C101233	25.288	M
180	Tubes	C101233066	60.2	54.4	2.9	066	C101233	46.330	M
181	Tubes	C101233067	60.8	51.8	4.5	067	C101233	773.150	M
182	Tubes	C101233067A	60.8	51.8	4.5	67A	C101233	1.873	M
183	Tubes	C101233069	89.5	79.8	4.85	069	C101233	635.930	M
184	Tubes	C101233071	115	106	4.5	071	C101233	0.107	M
185	Tubes	C101233073	146	54	46	073	C101233	26.233	M
186	Tubes	C101233075	165	126.9	19.05	075	C101233	3.743	M
187	Tubes	C101233076	275	237	19	076	C101233	20.175	M
188	Tubes	C101233078	21.8	16.6	2.6	078	C101233	977.938	M
189	Tubes	C101233079	33.3	25.2	4.05	079	C101233	5.569	M
190	Tubes	C101233080	42.9	34.8	4.05	080	C101233	95.621	M
191	Tubes	C101233083	48.08	39.98	4.05	083	C101233	1203.081	M
192	Tubes	C101233086	34	27.6	3.2	086	C101233	187.946	M
193	Tubes	C101233087	70	50	10	087	C101233	21.453	M
194	Tubes	C101233088	134	75	29.5	088	C101233	15.930	M
195	Tubes	C101233092	298.5	258.5	20	092	C101233	45.531	M
196	Tubes	C101233094	243	199	22	094	C101233	0.301	M
197	Tubes	C101233095	15.9	10.9	2.5	095	C101233	4.127	M
198	Tubes	C101233097	10.5	5.3	2.6	097	C101233	63.100	M
199	Tubes	C101233098	15.9	12.64	1.63	098	C101233	1.494	M
200	Tubes	C101233100	25.4	22.14	1.63	100	C101233	17.547	M
201	Tubes	C101233101	31.75	28.49	1.63	101	C101233	30.250	M
202	Tubes	C101233102	34.2	26.1	4.05	102	C101233	20.085	M
203	Tubes	C101233104	133	110	11.5	104	C101233	1.000	M
204	Tubes	C101233105	158	133	12.5	105	C101233	68.700	M
205	Tubes	C101233106	160	135	12.5	106	C101233	86.004	M
206	Tubes	C101233107	165.1	120.7	22.2	107	C101233	24.042	M
207	Tubes	C101233108	0	0	0	108	C101233	3007.589	M
208	Tubes	C101233109	14	8.2	2.9	109	C101233	24.233	M
209	Tubes	C101233112	17.5	11.7	2.9	112	C101233	656.500	M
210	Tubes	C101233114	180	100	40	114	C101233	1.399	M
211	Tubes	C101233116	165.1	154.3	5.4	116	C101233	23.934	M
212	Tubes	C101233117	101.6	93.5	4.05	117	C101233	24.895	M
213	Tubes	C101233120	10.6	6.6	2	120	C101233	2.183	M
214	Tubes	C101233126	31.75	27.69	2.03	126	C101233	48.493	M
215	Tubes	C101233129	76.1	67.1	4.5	129	C101233	181.157	M
216	Tubes	C101233130	139.7	114.3	12.7	130	C101233	258.253	M
217	Tubes	C101233138	101.6	92.08	4.76	138	C101233	1.120	M
218	Tubes	C101233142	114.3	95.3	9.5	142	C101233	46.417	M
219	Tubes	C101233143	190.5	114.3	38.1	143	C101233	1.669	M
220	Tubes	C101233144	304.8	240.8	32	144	C101233	3.713	M
221	Tubes	C101233146	305	254.2	25.4	146	C101233	4.053	M

222	Tubes	C101233150	15	13	1	150	C101233	89.458	M
223	Tubes	C101233157	38.1	33.1	2.5	157	C101233	7.809	M
224	Tubes	C101233158	40	35	2.5	158	C101233	0.975	M
225	Tubes	C101233162	50.8	43.8	3.5	162	C101233	22.303	M
226	Tubes	C101233163	50.8	42.8	4	163	C101233	40.130	M
227	Tubes	C101233164	51	45.8	2.6	164	C101233	24.697	M
228	Tubes	C101233165	55	50	2.5	165	C101233	62.146	M
229	Tubes	C101233166	60.2	53.7	3.25	166	C101233	47.512	M
230	Tubes	C101233167	60.45	53.09	3.68	167	C101233	30.079	M
231	Tubes	C101233169	70	63	3.5	169	C101233	1.340	M
232	Tubes	C101233170	73	61.4	5.8	170	C101233	17.095	M
233	Tubes	C101233173	76.3	65.3	5.5	173	C101233	0.000	M
234	Tubes	C101233177	101.6	91.9	4.85	177	C101233	3.190	M
235	Tubes	C101233183	457	409	24	183	C101233	6.571	M
236	Tubes	C101233184	318	284	17	184	C101233	6.493	M
237	Tubes	C101233185	275	230	22.5	185	C101233	0.640	M
238	Tubes	C101233186	140	88	26	186	C101233	5.073	M
239	Tubes	C101233188	139.8	99.8	20	188	C101233	6.121	M
240	Tubes	C101333001	6.40	3.2	1.60	001	C101333	7.700	M
241	Tubes	C101333002	6.35	4.75	0.80	002	C101333	309.811	M
242	Tubes	C101333003	7.93	6.15	0.89	003	C101333	721.153	M
243	Tubes	C101333005	9.52	6.32	1.60	005	C101333	908.934	M
244	Tubes	C101333006	9.53	7.75	0.89	006	C101333	71.673	M
245	Tubes	C101333007	10	7.6	1.2	007	C101333	451.718	M
246	Tubes	C101333008	10	6.4	1.80	008	C101333	66.754	M
247	Tubes	C101333009	12	9	1.50	009	C101333	91.862	M
248	Tubes	C101333010	12.7	8.5	2.1	010	C101333	328.012	M
249	Tubes	C101333011	15	13	1	011	C101333	86.067	M
250	Tubes	C101333012	15	11	2	012	C101333	1890.752	M
251	Tubes	C101333013	16	12.8	1.60	013	C101333	191.372	M
252	Tubes	C101333014	17.20	12.5	2.35	014	C101333	102.913	M
253	Tubes	C101333015	17.50	10.7	3.40	015	C101333	229.137	M
254	Tubes	C101333016	18	13	2.50	016	C101333	11.341	M
255	Tubes	C101333018	19.05	15.75	1.65	018	C101333	360.921	M
256	Tubes	C101333019	19.05	13.53	2.76	019	C101333	7.051	M
257	Tubes	C101333021	21.40	13.4	4	021	C101333	32.506	M
258	Tubes	C101333022	21.80	17.8	2	022	C101333	794.125	M
259	Tubes	C101333023	21.8	16.5	2.65	023	C101333	328.235	M
260	Tubes	C101333024	22	15.5	3.25	024	C101333	67.959	M
261	Tubes	C101333025	25.40	19.84	2.78	025	C101333	25.315	M
262	Tubes	C101333026	25.4	19.84	2.78	026	C101333	526.960	M
263	Tubes	C101333027	27.20	22.6	2.30	027	C101333	252.431	M
264	Tubes	C101333028	27.30	20.8	3.25	028	C101333	272.339	M
265	Tubes	C101333029	31.75	25.35	3.20	029	C101333	142.802	M
266	Tubes	C101333030	34	27.6	3.2	030	C101333	545.795	M
267	Tubes	C101333031	34.20	26.1	4.05	031	C101333	408.458	M
268	Tubes	C101333032	38	34	2	032	C101333	23.294	M
269	Tubes	C101333033	38.10	33.1	2.5	033	C101333	31.280	M
270	Tubes	C101333034	40	28	6	034	C101333	60.794	M
271	Tubes	C101333035	42.70	35.7	3.50	035	C101333	304.013	M
272	Tubes	C101333036	42.70	33.7	4.50	036	C101333	211.630	M
273	Tubes	C101333037	44.50	25.46	9.52	037	C101333	310.134	M
274	Tubes	C101333038	48.30	38.3	5	038	C101333	2.379	M
275	Tubes	C101333039	48.6	40.6	4	039	C101333	65.816	M
276	Tubes	C101333040	50.80	47.2	1.80	040	C101333	8.388	M
277	Tubes	C101333041	50.80	42.8	4	041	C101333	13.693	M
278	Tubes	C101333042	51	45.8	2.60	042	C101333	17.378	M
279	Tubes	C101333043	60.20	53.7	3.25	043	C101333	42.280	M

280	Tubes	C101333044	60.30	49.3	5.50	044	C101333	127.596	M
281	Tubes	C101333045	63.50	60.2	1.65	045	C101333	33.200	M
282	Tubes	C101333046	63.50	57	3.25	046	C101333	21.450	M
283	Tubes	C101333047	70	63	3.50	047	C101333	28.269	M
284	Tubes	C101333048	70	58	6	048	C101333	8.218	M
285	Tubes	C101333049	70	54	8	049	C101333	4.037	M
286	Tubes	C101333050	73	61.4	5.80	050	C101333	4.106	M
287	Tubes	C101333051	80	64	8	051	C101333	3.174	M
288	Tubes	C101333052	89	70	9.5	052	C101333	2.239	M
289	Tubes	C101333053	4.76	3.36	0.70	053	C101333	3.350	M
290	Tubes	C101333054	89	61	14	054	C101333	29.457	M
291	Tubes	C101333055	76.30	65.3	5.50	055	C101333	40.700	M
292	Tubes	C101333056	168	124	22	056	C101333	4.438	M
293	Tubes	C101333059	40	35	2.50	059	C101333	1.300	M
294	Tubes	C101333060	219.1	193.7	12.70	060	C101333	2.307	M
295	Tubes	C101333061	6	4	1	061	C101333	843.350	M
296	Tubes	C101333062	12	10	1	062	C101333	352.403	M
297	Tubes	C101333063	12	7.4	2.3	063	C101333	16.995	M
298	Tubes	C101333065	20	17	1.5	065	C101333	24.589	M
299	Tubes	C101333068	26.67	18.85	3.91	068	C101333	7.710	M
300	Tubes	C101333069	33.4	26.6	3.4	069	C101333	7.459	M
301	Tubes	C101333070	38	36	1	070	C101333	223.630	M
302	Tubes	C101333074	55	50	2.50	074	C101333	272.136	M
303	Tubes	C101333078	76	56.95	9.525	078	C101333	92.932	M
304	Tubes	C101333080	88.9	77.22	5.84	080	C101333	49.164	M
305	Tubes	C101333088	20	13	3.5	088	C101333	20.415	M
306	Tubes	C101333089	25	16	4.50	089	C101333	2.550	M
307	Tubes	C101333109	25	20	2.5	109	C101333	91.060	M
308	Tubes	C101333110	22.20	18	2.1	110	C101333	11.300	M
309	Tubes	C101333113	18	14	2	113	C101333	23.235	M
310	Tubes	C101333114	80	76.4	1.8	114	C101333	2.436	M
311	Tubes	C101333115	15	11.8	1.60	115	C101333	12.992	M
312	Tubes	C101333125	21.80	15.4	3.20	125	C101333	1.777	M
313	Tubes	C101333130	34	24	5	130	C101333	170.983	M
314	Tubes	C101333131	48	32	8	131	C101333	11.360	M
315	Tubes	C101333134	15.87	12.67	1.60	134	C101333	494.940	M
316	Tubes	C101333137	355.6	325.6	15.0	137	C101333	0.430	M
317	Tubes	C101333141	285.75	247.65	19.05	141	C101333	0.076	M
318	Tubes	C101333143	168.28	154.06	7.11	143	C101333	5730.000	M
319	Tubes	C110133001	60.3	30.3	15	001	C110133	7.410	M
320	Tubes	C110133002	70	40	15	002	C110133	198.822	M
321	Tubes	C110133005	80	45	17.5	005	C110133	1.657	M
322	Tubes	C110133006	83	62	10.5	006	C110133	48.564	M
323	Tubes	C110133007	94	62	16	007	C110133	60.575	M
324	Tubes	C110133008	100	60	20	008	C110133	64.982	M
325	Tubes	C110133010	105	75	15	010	C110133	42.866	M
326	Tubes	C110133011	110	85	12.5	011	C110133	31.407	M
327	Tubes	C110133012	110	67	21.5	012	C110133	0.007	M
328	Tubes	C110133013	127	97	15	013	C110133	504.282	M
329	Tubes	C110133014	130	78	26	014	C110133	40.901	M
330	Tubes	C110133015	139	101	19	015	C110133	203.910	M
331	Tubes	C110133016	140	90	25	016	C110133	75.732	M
332	Tubes	C110133017	150	100	25	017	C110133	70.640	M
333	Tubes	C110133018	168	98	35	018	C110133	9.305	M
334	Tubes	C110133019	168.3	114.3	27	019	C110133	1.235	M
335	Tubes	C110133021	190.7	120.7	35	021	C110133	8.739	M
336	Tubes	C110133022	216.3	156.3	30	022	C110133	13.485	M
337	Tubes	C110133023	220	190	15	023	C110133	15.003	M

338	Tubes	C110133029	168.3	128.3	20	029	C110133	0.850	M
339	Tubes	C110133033	152.4	88.4	32	033	C110133	76.200	M
340	Tubes	C110133035	340	215	62.5	035	C110133	1.024	M
341	Tubes	C120433001	60	32	14	001	C120433	3.362	M
342	Tubes	C120433002	76	41	17.5	002	C120433	2.020	M
343	Tubes	C120433003	85	43	21	003	C120433	17.181	M
344	Tubes	C120433004	90	65	12.5	004	C120433	1.526	M
345	Tubes	C120433005	92	50	21	005	C120433	23.406	M
346	Tubes	C120433006	100	75	12.5	006	C120433	50.947	M
347	Tubes	C120433007	110	78	16	007	C120433	67.445	M
348	Tubes	C120433008	127	90	18.5	008	C120433	51.884	M
349	Tubes	C120433009	135	95	20	009	C120433	2.925	M
350	Tubes	C120433010	140	106	17	010	C120433	19.326	M
351	Tubes	C120433011	110	67	21.5	011	C120433	15.747	M
352	Tubes	C120433014	166	132	17	014	C120433	33.393	M
353	Tubes	C120933001	232	156	38	001	C120933	56.676	M
354	Tubes	C123733001	60	36	12	001	C123733	1180.644	M
355	Tubes	C123733002	75	40	17.5	002	C123733	1495.291	M
356	Tubes	C123733003	82	47	17.5	003	C123733	2430.785	M
357	Tubes	C123733004	92	53	19.5	004	C123733	3477.121	M
358	Tubes	C123733005	98	50	24	005	C123733	837.236	M
359	Tubes	C123733006	122	61	30.5	006	C123733	74.173	M

QAP is attached herewith.

EOI publishing Date: 07/11/2024
EOI closing date: 07/12/2024 Time 5:00 PM (30 Days)

Subject EOI to be submitted to email id: **bemleoi@beml.co.in**

3. This tender is bound by all Government guidelines attached in the Tender document.

For any clarification, point of contact is given below;
Purushothama G
Deputy General Manager – Corporate Materials
BEML Limited
Telephone: +91-80-22963179
Mail Id: purushothama.g@bemlltd.in
tirthabharati.samal@bemlltd.in

4. Terms and conditions as per Annexure-A.

Terms & Conditions Annexure-A

Sl. No.	Particulars	Terms	Bidder Confirmation (Yes/No)
Mandatory Terms & Conditions			
1	Material Grade	As per the material (TDC/STD) indicated at table above.	
2	Quote	Rate (F.O.R beml div inclusive gst)to be quoted as per tendering unit only. Quarterly Pricing based on index published in website like eaindusty.nic.in can be considered	
3	Delivery Terms	F.o.R Beml. (KGF, Mysore, Palakkad,Bengaluru) EXW is not acceptable.	
4	Delivery Schedule	Jan'2025 till Dec' 2025	
5	Payment terms	Payment terms is 60 days from receipt and acceptance of material / LC -90 days can be considered subject to approval by beml management. For MSME firms, as per MSME act. MSE vendors payment through TReDs. Advance payment terms are not acceptable.	
6	MOQ	Buyer may quote MOQ, however, final qty is on BEML discretion. BEML reserves right for reduction in qty post tender.	
7	Local content	Firm shall submit the local content 50% as per Make in India for Class I and 20% for Class II Supplier	
8	Supplier Mill TC/ NABL TC	EOI is invited only from OE/MILL Supplier. Bidder should submit Mill /LAB/ NABL TC. Mill should have testing facility to ensure supplies are as per BEML TDC. Stockist and traders are not eligible. In case agents are quoting mill authorisation is mandatory. Format MA is attached herewith. Only Class-1 Indian mills with ISO certification and quality management systems are eligible. In case of class-2 source vendor should disclose the raw material source and Indian works address where value addition	

		is done.	
9	Supply condition	Bidder should supply each size from one heat only and supply should be with both MILL and NABL TC. Mandatory. Vendors who do not have beml vendor code will be evaluated by visit of our quality assurance team and developmental order will be placed thorough a separate tender. Post allotment of permanent vendor code these vendors will be allowed to participate in beml regular tenders in GeM/SRM portal. Vendor having BEML Vendor Code need not to quote for this EOI.	
10	Deferent Clause	PO is subject to deferment, re-scheduling, cancellation, Short / Pre-closure based on equipment sales order	
11	PBG	Successful bidder should submit Bank Guarantee @ 5% of PO/ contract Value.	
12	LD Clause	LD Applicable for late deliveries.	
13	Offer validity	90 days from tender opening date	
14	PAST PERFORMANCE	PO copies of Supplies to other PSUs	

Note: Invoice to be generated at delivery plant GST only.

Bidder's declaration

I hereby confirm to supply as per above terms & conditions. _____ Seal & Signature

बी ई एम एल beml	**BEML LIMITED, PALAKKAD - QUALITY ENGG.**						**DOC NO:**	P-QP-QAP-1071-1023		
	QAP FOR BACK BONE TUBE RAW MATERIAL						**DATE OF ISSUE :**	15/05/2021		
PART NO:	130020030424-R,130020032104-R,130020030894,130020031014R,130020031024R,130020031124,470ID13011						**REVISION NO:**	0		
DESCRIPTION:	BACK BONE TUBE RAW MATERIAL.		**SIZE:**	Ø273X12.5 W/T & Ø267X7.5 W/T mm			**MATERIAL SPECIFICATION:**	SEAMLESS TUBE to DIN 1630(1984) - Grade St 52.4N		
Sl. No	**Component**	**Characteristics**	**Type/ Method of check**	**Quantum of check**	**Refernce Document**	**Acceptance Standrad**	**Recording format**	**Inspection Agency**		**Remarks**
								Vendor	**BEML**	
1	Chemical Test	Ladle analysis	Mill TC/Check test at NABL lab	For every heat	As per Specification DIN 1630 St.52.4 & PO	As per Specification DIN 1630 St.52.4 & PO	Test Certificate	P	R	
2	Mechanical Tests	Tensile Test (Longitudinal & Transverse direction)	Mill TC/Check test at NABL lab	As per Specification DIN 1630	As per Specification DIN 1630	As per Specification DIN 1630	Test Certificate	P	R	
		Elongation (Longitudinal & Transverse direction)						P	R	
		Ring Tensile						P	R	
		Impact Test (Longitudinal & Transverse direction)						P	R	
3	Heat treatment (Normalizing)	Time and Temp	Mill TC	100%	As per Specification & PO	As per Specification & PO	Heat Treatment Report	P	R	
4	Pressure Test	Hydro Test (At 80 BAR pressure)	Mill TC	100%	As per Specification DIN 1630	As per Specification DIN 1630	Test Certificate	P	R	
5	NDT	Leakage flux	Mill TC	100%	As per Specification DIN 1630	As per Specification DIN 1630	Test Certificate	P	R	
6	Dimension Check	1) Straightness 2) Dimension - OD, W/T & Length. 3) Circularity	Visual, Dimensions	100%	As per Specification DIN 1630 St.52.4 & PO	As per Specification DIN 1630 St.52.4 & PO	Inspection Report	P	R	
7	Visual Inspection	1) Tube shall be have a smooth outside & Inside surface. 2) Tube ends shall be free from burr.	Visual	100%	As per Specification DIN 1630 St.52.4 & PO	As per Specification DIN 1630 St.52.4 & PO	Inspection Report	P	R	Tube ends shall be cut perpendicular to the Tube Axle and
8	Markings / Identification	Manufactures Trade Mark, Material Spec./ Gr., Normalizing code, Heat No., Tube Size code, BEML P/N.	Visual	100%	As per Specification & PO	As per Specification & PO	Inspection Report	P	R	
9	Preservation	The inner & Outer surface of the Tube to be provided with an anti-corrosive agent.	Visual	100%	As per Specification & PO	As per Specification & PO	Inspection Report	P	R	

NOTE: Ink signed original copy of Test Certificates, Inspection Reports/Check sheets and other Quality documents are to be submitted to BEML

PREPARED BY
Sd/-
GANAPATHY N M
MANAGER - QUALITY

APPROVED BY
Sd/-
SURESH P
DGM-QUALITY

UDC 669.14.018.298-462

JIS

JAPANESE INDUSTRIAL STANDARD

Carbon Steel Tubes for Machine Structural Purposes

JIS G 3445–1988

Translated and Published

by

Japanese Standards Association

Printed in Japan

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In the event of any doubt arising,
the original Standard in Japanese is to be final authority.

UDC 669.14.018.298-462

JAPANESE INDUSTRIAL STANDARD J I S

Carbon Steel Tubes for Machine Structural Purposes

G 3445-1988
(Reaffirmed: 1994)

1. Scope

This Japanese Industrial Standard specifies the carbon steel tubes, hereinafter referred to as the "tubes", used for machinery, automobiles, bicycles, furniture, appliances and other machine parts.

Remark: The units and numerical values given in { } in this Standard are based on the International System of Units (SI) and are appended for informative reference.

Further, the traditional units accompanied by numerical values in this Standard shall be converted to the SI units and numerical values on January 1, 1991.

2. Grade and Designation

The grade and designation of the tube shall be as given in Table 1.

The subclassification letter symbols A, B and C are used to indicate distinction of method of manufacturing the tube, cold working process, heat treatment, etc.

Applicable Standards: See page 14.

Table 1. Grade and Designation

Grade		Designation
Grade 11	A	STKM 11 A
Grade 12	A	STKM 12 A
	B	STKM 12 B
	C	STKM 12 C
Grade 13	A	STKM 13 A
	B	STKM 13 B
	C	STKM 13 C
Grade 14	A	STKM 14 A
	B	STKM 14 B
	C	STKM 14 C
Grade 15	A	STKM 15 A
	C	STKM 15 C
Grade 16	A	STKM 16 A
	C	STKM 16 C
Grade 17	A	STKM 17 A
	C	STKM 17 C
Grade 18	A	STKM 18 A
	B	STKM 18 B
	C	STKM 18 C
Grade 19	A	STKM 19 A
	C	STKM 19 C
Grade 20	A	STKM 20 A

3. Chemical Composition

The tube shall be tested in accordance with 8.1 and the resulting ladle analysis values shall conform to Table 2.

Table 2. Chemical Composition

Unit: %

Grade		Designation	C	Si	Mn	P	S	Nb or V
Grade 11	A	STKM 11 A	0.12 max.	0.35 max.	0.60 max.	0.040 max.	0.040 max.	–
Grade 12	A	STKM 12 A	0.20 max.	0.35 max.	0.60 max.	0.040 max.	0.040 max.	–
	B	STKM 12 B						
	C	STKM 12 C						
Grade 13	A	STKM 13 A	0.25 max.	0.35 max.	0.30 to 0.90	0.040 max.	0.040 max.	–
	B	STKM 13 B						
	C	STKM 13 C						
Grade 14	A	STKM 14 A	0.30 max.	0.35 max.	0.30 to 1.00	0.040 max.	0.040 max.	–
	B	STKM 14 B						
	C	STKM 14 C						
Grade 15	A	STKM 15 A	0.25 to 0.35	0.35 max.	0.30 to 1.00	0.040 max.	0.040 max.	–
	C	STKM 15 C						
Grade 16	A	STKM 16 A	0.35 to 0.45	0.40 max.	0.40 to 1.00	0.040 max.	0.040 max.	–
	C	STKM 16 C						
Grade 17	A	STKM 17 A	0.45 to 0.55	0.40 max.	0.40 to 1.00	0.040 max.	0.040 max.	–
	C	STKM 17 C						
Grade 18	A	STKM 18 A	0.18 max.	0.55 max.	1.50 max.	0.040 max.	0.040 max.	–
	B	STKM 18 B						
	C	STKM 18 C						
Grade 19	A	STKM 19 A	0.25 max.	0.55 max.	1.50 max.	0.040 max.	0.040 max.	–
	C	STKM 19 C						
Grade 20	A	STKM 20 A	0.25 max.	0.55 max.	1.60 max.	0.040 max.	0.040 max.	0.15 max.

Remarks 1. When the purchaser requires product analysis for the tubes made of killed steel, the tolerances for the values given above shall be as specified in Table 2 in JIS G 0321 for seamless steel tubes and in Table 1 for electric resistance welded or butt welded steel tubes.

2. For the tubes of Grade 15 made by electric resistance welding process, the lower limit of carbon content may be altered by agreement between the parties concerned.

3. For the tubes of Grade 20, Nb in combination with V may be added. In this case, the maximum content of Nb + V shall be 0.15 %.

4. Mechanical Properties

4.1 Tensile Strength, Yield Point or Proof Stress, and Elongation The tube shall be tested in accordance with 8.2 and the resulting tensile strength, yield point or proof stress, and elongation shall comply with Table 3-1 or Table 3-2.

4.2 Bending Strength or Flattening Strength The tube shall be tested in accordance with 8.3 or 8.4 and shall be free from flaws or cracks on their wall surfaces. The bending test, however, shall be applied to the tubes 50 mm or under in outside diameter in lieu of flattening test when especially specified by the purchaser.

Table 3-1. Mechanical Property (Applicable till the end of 1990)

Grade		Designation	Tensile strength kgf/mm² {N/mm²}	Yield point or proof stress kgf/mm² {N/mm²}	Elongation %		Flattening strength	Bending strength	
					No. 4, No. 11, No. 12 test pieces Longitudinal direction	No. 4, No. 5 test pieces Transverse direction	Distance between flat plates (H) (D is outside dia. of the tube)	Bend angle	Inside radius (D is outside dia. of the tube)
Grade 11	A	STKM 11 A	30 min. {294} min.	—	35 min.	30 min.	$\frac{1}{2}D$	180°	4 D
Grade 12	A	STKM 12 A	35 min. {343} min.	18 min. {177} min.	35 min.	30 min.	$\frac{2}{3}D$	90°	6 D
	B	STKM 12 B	40 min. {392} min.	28 min. {275} min.	25 min.	20 min.	$\frac{2}{3}D$	90°	6 D
	C	STKM 12 C	48 min. {471} min.	36 min. {353} min.	20 min.	15 min.	—	—	—
Grade 13	A	STKM 13 A	38 min. {373} min.	22 min. {216} min.	30 min.	25 min.	$\frac{2}{3}D$	90°	6 D
	B	STKM 13 B	45 min. {441} min.	31 min. {304} min.	20 min.	15 min.	$\frac{3}{4}D$	90°	6 D
	C	STKM 13 C	52 min. {510} min.	39 min. {382} min.	15 min.	10 min.		—	—
Grade 14	A	STKM 14 A	42 min. {412} min.	25 min. {245} min.	25 min.	20 min.	$\frac{3}{4}D$	90°	6 D
	B	STKM 14 B	51 min. {500} min.	36 min. {353} min.	15 min.	10 min.	$\frac{7}{8}D$	90°	8 D
	C	STKM 14 C	56 min. {549} min.	42 min. {412} min.	15 min.	10 min.	—	—	—
Grade 15	A	STKM 15 A	48 min. {471} min.	28 min. {275} min.	22 min.	17 min.	$\frac{3}{4}D$	90°	6 D
	C	STKM 15 C	59 min. {579} min.	44 min. {431} min.	12 min.	7 min.	—	—	—
Grade 16	A	STKM 16 A	52 min. {510} min.	33 min. {324} min.	20 min.	15 min.	$\frac{7}{8}D$	90°	8 D
	C	STKM 16 C	63 min. {618} min.	47 min. {461} min.	12 min.	7 min.	—	—	—
Grade 17	A	STKM 17 A	56 min. {549} min.	35 min. {343} min.	20 min.	15 min.	$\frac{7}{8}D$	90°	8 D
	C	STKM 17 C	66 min. {647} min.	49 min. {481} min.	10 min.	5 min.	—	—	—
Grade 18	A	STKM 18 A	45 min. {441} min.	28 min. {275} min.	25 min.	20 min.	$\frac{7}{8}D$	90°	6 D
	B	STKM 18 B	50 min. {490} min.	32 min. {314} min.	23 min.	18 min.	$\frac{7}{8}D$	90°	8 D
	C	STKM 18 C	52 min. {510} min.	39 min. {382} min.	15 min.	10 min.	—	—	—
Grade 19	A	STKM 19 A	50 min. {490} min.	32 min. {314} min.	23 min.	18 min.	$\frac{7}{8}D$	90°	6 D
	C	STKM 19 C	56 min. {549} min.	42 min. {412} min.	15 min.	10 min.	—	—	—
Grade 20	A	STKM 20 A	55 min. {539} min.	40 min. {392} min.	23 min.	18 min.	$\frac{7}{8}D$	90°	6 D

Remarks

1. When the tensile test is carried out on No. 12 or No. 5 test piece for the tube under 8 mm in wall thickness, the minimum value of elongation shall be calculated by subtracting 1.5 % from the values of elongation given in Table 3-1 for each 1 mm decrease in wall thickness and rounding off to an integer in accordance with JIS Z 8401. Examples of calculation are given in Reference Table.
2. The values of elongation in Table 3-1 shall not be applied to the tubes 40 mm or smaller in outside diameter. However, it may be agreed upon by the purchaser and the manufacturer, when especially required.
3. For electric resistance welded steel tubes and butt-welded steel tubes, the tensile test pieces shall be No. 12 or No. 5, and they shall be taken from a portion not involving welded seams.
4. For the flattening test, the minimum distance between the flat plates (H) shall be 5 times the plate thickness.

Table 3-2. Mechanical Property (Applicable on and after Jan. 1, 1991)

Grade		Designation	Tensile strength N/mm²	Yield point or proof stress N/mm²	Elongation %		Flattening strength	Bending strength	
					No. 4, No. 11, No. 12 test pieces Longitudinal direction	No. 4, No. 5 test pieces Transverse direction	Distance between flat plates (H) (D is outside dia. of the tube)	Bend angle	Inside radius (D is outside dia. of the tube)
Grade 11	A	STKM 11 A	290 min.	—	35 min.	30 min.	$\frac{1}{2}D$	180°	4 D
Grade 12	A	STKM 12 A	340 min.	175 min.	35 min.	30 min.	$\frac{2}{3}D$	90°	6 D
	B	STKM 12 B	390 min.	275 min.	25 min.	20 min.	$\frac{2}{3}D$	90°	6 D
	C	STKM 12 C	470 min.	355 min.	20 min.	15 min.	—	—	—
Grade 13	A	STKM 13 A	370 min.	215 min.	30 min.	25 min.	$\frac{2}{3}D$	90°	6 D
	B	STKM 13 B	440 min.	305 min.	20 min.	15 min.	$\frac{3}{4}D$	90°	6 D
	C	STKM 13 C	510 min.	380 min.	15 min.	10 min.	–	—	—
Grade 14	A	STKM 14 A	410 min.	245 min.	25 min.	20 min.	$\frac{3}{4}D$	90°	6 D
	B	STKM 14 B	500 min.	355 min.	15 min.	10 min.	$\frac{7}{8}D$	90°	8 D
	C	STKM 14 C	550 min.	410 min.	15 min.	10 min.	—	—	—
Grade 15	A	STKM 15 A	470 min.	275 min.	22 min.	17 min.	$\frac{3}{4}D$	90°	6 D
	C	STKM 15 C	580 min.	430 min.	12 min.	7 min.	—	—	—
Grade 16	A	STKM 16 A	510 min.	325 min.	20 min.	15 min.	$\frac{7}{8}D$	90°	8 D
	C	STKM 16 C	620 min.	460 min.	12 min.	7 min.	—	—	—
Grade 17	A	STKM 17 A	550 min.	345 min.	20 min.	15 min.	$\frac{7}{8}D$	90°	8 D
	C	STKM 17 C	650 min.	480 min.	10 min.	5 min.	—	—	—
Grade 18	A	STKM 18 A	440 min.	275 min.	25 min.	20 min.	$\frac{7}{8}D$	90°	6 D
	B	STKM 18 B	490 min.	315 min.	23 min.	18 min.	$\frac{7}{8}D$	90°	8 D
	C	STKM 18 C	510 min.	380 min.	15 min.	10 min.	—	—	—
Grade 19	A	STKM 19 A	490 min.	315 min.	23 min.	18 min.	$\frac{7}{8}D$	90°	6 D
	C	STKM 19 C	550 min.	410 min.	15 min.	10 min.	—	—	—
Grade 20	A	STKM 20 A	540 min.	390 min.	23 min.	18 min.	$\frac{7}{8}D$	90°	6 D

Remarks

1. When the tensile test is carried out on No. 12 or No. 5 test piece for the tube under 8 mm in wall thickness, the minimum value of elongation shall be calculated by subtracting 1.5 % from the values of elongation given in Table 3-2 for each 1 mm decrease in wall thickness and rounding off to an integer in accordance with JIS Z 8401. Examples of calculation are given in Reference Table.
2. The values of elongation in Table 3-2 shall not be applied to the tubes 40 mm or smaller in outside diameter. However, it may be agreed upon by the purchaser and the manufacturer, when especially required.
3. For electric resistance welded steel tubes and butt-welded steel tubes, the tensile test pieces shall be No. 12 or No. 5, and they shall be taken from a portion not involving welded seams.
4. For the flattening test, the minimum distance between the flat plates (H) shall be 5 times the plate thickness.

Reference Table. Calculated Examples of Elongation Applied to No. 5 Test Piece (Transverse Direction) and No. 12 Test Piece (Longitudinal Direction) for Tubes under 8 mm in Wall Thickness

Grade		Designation	Type of test piece	Elongation for each division of wall thickness %							
				Over 7 mm to and excl. 8 mm	Over 6 mm up to and incl. 7 mm	Over 5 mm up to and incl. 6 mm	Over 4 mm up to and incl. 5 mm	Over 3 mm up to and incl. 4 mm	Over 2 mm up to and incl. 3 mm	Over 1 mm up to and incl. 2 mm	1 mm or under
Grade 11	A	STKM 11 A	No. 5	30	28	27	26	24	22	21	20
			No. 12	35	34	32	30	29	28	26	24
Grade 12	A	STKM 12 A	No. 5	30	28	27	26	24	22	21	20
			No. 12	35	34	32	30	29	28	26	24
	B	STKM 12 B	No. 5	20	18	17	16	14	12	11	10
			No. 12	25	24	22	20	19	18	16	14
	C	STKM 12 C	No. 5	15	14	12	10	9	8	6	4
			No. 12	20	18	17	16	14	12	11	10
Grade 13	A	STKM 13 A	No. 5	25	24	22	20	19	18	16	14
			No. 12	30	28	27	26	24	22	21	20
	B	STKM 13 B	No. 5	15	14	12	10	9	8	6	4
			No. 12	20	18	17	16	14	12	11	10
	C	STKM 13 C	No. 5	10	8	7	6	4	2	1	—
			No. 12	15	14	12	10	9	8	6	4
Grade 14	A	STKM 14 A	No. 5	20	18	17	16	14	12	11	10
			No. 12	25	24	22	20	19	18	16	14
	B	STKM 14 B	No. 5	10	8	7	6	4	2	1	—
			No. 12	15	14	12	10	9	8	6	4
	C	STKM 14 C	No. 5	10	8	7	6	4	2	1	—
			No. 12	15	14	12	10	9	8	6	4
Grade 15	A	STKM 15 A	No. 5	17	16	14	12	11	10	8	6
			No. 12	22	20	19	18	16	14	13	12
	C	STKM 15 C	No. 5	7	6	4	2	1	—	—	—
			No. 12	12	10	9	8	6	4	3	2
Grade 16	A	STKM 16 A	No. 5	15	14	12	10	9	8	6	4
			No. 12	20	18	17	16	14	12	11	10
	C	STKM 16 C	No. 5	7	6	4	2	1	—	—	—
			No. 12	12	10	9	8	6	4	3	2
Grade 17	A	STKM 17 A	No. 5	15	14	12	10	9	8	6	4
			No. 12	20	18	17	16	14	12	11	10
	C	STKM 17 C	No. 5	5	4	2	—	—	—	—	—
			No. 12	10	8	7	6	4	2	1	—
Grade 18	A	STKM 18 A	No. 5	20	18	17	16	14	12	11	10
			No. 12	25	24	22	20	19	18	16	14
	B	STKM 18 B	No. 5	18	16	15	14	12	10	9	8
			No. 12	23	22	20	18	17	16	14	12
	C	STKM 18 C	No. 5	10	8	7	6	4	2	1	—
			No. 12	15	14	12	10	9	8	6	4
Grade 19	A	STKM 19 A	No. 5	18	16	15	14	12	10	9	8
			No. 12	23	22	20	18	17	16	14	12
	C	STKM 19 C	No. 5	10	8	7	6	4	2	1	—
			No. 12	15	14	12	10	9	8	6	4
Grade 20	A	STKM 20 A	No. 5	18	16	15	14	12	10	9	8
			No. 12	23	22	20	18	17	16	14	12

Remark: The symbol "-" indicates a case where elongation is not specified.

5. Dimensional Tolerances

(1) The tolerances on outside diameter and wall thickness for the tubes shall be as given in Table 4 and Table 5, respectively.

Table 4. Tolerances on Outside Diameter

Division	Tolerances on outside diameter	
No. 1	Under 50 mm	± 0.5 mm
	50 mm or over	± 1 %
No. 2	Under 50 mm	± 0.25 mm
	50 mm or over	± 0.5 %
No. 3	Under 25 mm	± 0.12 mm
	25 mm or over to and excl. 40 mm	± 0.15 mm
	40 mm or over to and excl. 50 mm	± 0.18 mm
	50 mm or over to and excl. 60 mm	± 0.20 mm
	60 mm or over to and excl. 70 mm	± 0.23 mm
	70 mm or over to and excl. 80 mm	± 0.25 mm
	80 mm or over to and excl. 90 mm	± 0.30 mm
	90 mm or over to and excl. 100 mm	± 0.40 mm
	100 mm or over	± 0.5 %

Remarks 1. For hot finished seamless steel tube, the outside diameter tolerances No. 1 shall be applied.

2. The tolerances on outside diameter of quenched and tempered tubes shall be as agreed upon by the purchaser and the manufacturer.

Table 5. Tolerances on Wall Thickness

Division	Tolerances on wall thickness	
No. 1	Under 4 mm	+ 0.6 mm - 0.5 mm
	4 mm or over	+ 15 % - 12.5 %
No. 2	Under 3 mm	± 0.3 mm
	3 mm or over	± 10 %
No. 3	Under 2 mm	± 0.15 mm
	2 mm or over	± 8 %

Remark: For hot finished seamless steel tubes, the tolerances No. 1 shall be applied.

(2) The tolerances on the tube length shall be in the range of 0 to + 50 mm. However, when tolerances outside this range are especially required, agreement shall be made between the purchaser and the manufacturer.

6. Appearance

(1) The tubes shall be practically straight, and the two ends shall be at right angles to the axis of the tube.

(2) The tubes shall be free from defects detrimental to practical use.

(3) The surface finish of the tubes, when especially specified shall be agreed upon by the purchaser and the manufacturer.

7. Method of Manufacture

Method of manufacturer shall be as follows:

(1) The tubes of Grades 11, 12 and 13 shall be manufactured by seamless process, electric resistance welding process, or butt welding process, and those of other grades shall be manufactured by seamless process or electric resistance welding process.

(2) The tube shall be as manufactured or as cold-finished condition, or they shall be subjected to appropriate heat treatment.

8. Test

8.1 Chemical Analysis

8.1.1 Chemical Analysis The general requirements for chemical analysis and method of sampling specimens for analysis shall be in accordance with the 3. in JIS G 0303.

8.1.2 Analytical Method The analytical method shall be in accordance with one of the following Standards.

JIS G 1211
JIS G 1212
JIS G 1213
JIS G 1214
JIS G 1215
JIS G 1221
JIS G 1237
JIS G 1253
JIS G 1256
JIS G 1257

8.2 Tensile Test

8.2.1 Test Piece The test piece shall be No. 11, No. 12 A, No. 12 B, No. 12 C, No. 4 or No. 5 test piece specified in JIS Z 2201 and shall be cut off from the tube. The gauge length for No. 4 test piece, however, shall be 50 mm.

8.2.2 Test Method The test method shall be in accordance with JIS Z 2241.

8.3 Bending Test

8.3.1 Test Piece A suitable length of a tube shall be cut off from one end of the tube to be made into a test piece.

8.3.2 Test Method The test piece shall be bent, at ordinary temperature, around a cylinder with the bend angle and inside radius specified in Table 3-1 or Table 3-2, and checked for the occurrence of flaws or cracks. In the case of electric resistance welded steel tubes and butt-welded steel tubes, the weld shall be placed in the outermost part of the bent portion.

8.4 Flattening Test

8.4.1 Test Piece A test piece 50 mm or over in length shall be cut off from one end of a tube. For the tube of wall thickness 15 % or over of its outside diameter, a test piece made into C-shape by removing part of the circumference of a full-section test piece may be used.

8.4.2 Test Method The test piece shall be placed between two flat plates, flattened by compression at ordinary temperature until the distance between the plates comes to the value specified in Table 3, and checked for the occurrence of flaws or cracks on its wall surface. In the case of electric resistance welded steel tubes and butt-welded steel tubes, the weld shall be placed at right angles to the direction of compression as shown in Fig. 1. Further, a C-shape test piece shall be placed as shown in Fig. 2.

Fig. 1. Flattening Test (for Full-section Test Piece)

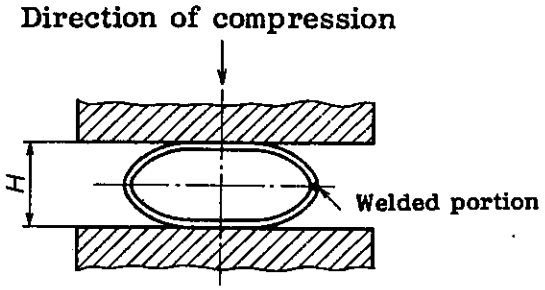
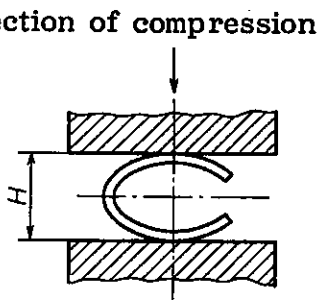


Fig. 2. Flattening Test (for C-shape Test Piece)



9. Inspection

9.1 Inspection Inspection shall be as follows:

(1) The general requirements for inspection shall be in accordance with JIS G 0303.

(2) The chemical composition, mechanical properties, dimensions and appearance shall conform to the requirements specified in 3., 4., 5. and 6. The bending test and the flattening test, however, may be omitted when approved by the purchaser.

(3) The purchaser may specify a flaring test, hydrostatic test, etc., in addition to those specified in (2). In this case, the test items, sampling method, test method and acceptance criteria shall be previously agreed upon by the manufacturer.

(4) The number of specimens for product analysis shall be as agreed upon by the purchaser and the manufacturer.

(5) The method of sampling specimens and the number of test pieces for tensile test, bending test and flattening test shall be as given in Table 6.

Table 6. Method of Sampling Specimens and Number of Test Pieces

Grade	Designation	Division of outside diameter	Method of sampling specimens and number of test pieces
A and B of 11 to 20	STKM 11 A STKM 12 A STKM 12 B STKM 13 A STKM 13 B	100 mm or under	Take one specimen from each 1000 m or its fraction of the tubes of the same dimensions. From the specimen, take one flattening or bend test piece for the tubes 50 mm or under in outside diameter, and one flattening test piece for the tubes over 50 mm in outside diameter, in addition to each one tensile test piece in either case.
	STKM 14 A STKM 14 B STKM 15 A STKM 16 A STKM 17 A	Over 100 mm up to and incl. 200 mm	Take one specimen from each 500 m or its fraction of the tubes of the same dimensions. From the specimen, take one tensile test piece and one flattening test piece.
	STKM 18 A STKM 18 B STKM 19 A STKM 20 A	Over 200 mm	Take one specimen from each 250 m or its fraction of the tubes of the same dimensions. From the specimen, take one tensile test piece and one flattening test piece.
C of 12 to 19	STKM 12 C STKM 13 C STKM 14 C	100 mm or under	Take one specimen from each 1000 m or its fraction of the tubes of the same dimensions. From the specimen, take one tensile test piece.
	STKM 15 C STKM 16 C	Over 100 mm up to and incl. 200 mm	Take one specimen from each 500 m or its fraction of the tubes of the same dimensions. From the specimen, take one tensile test piece.
	STKM 17 C STKM 18 C STKM 19 C	Over 200 mm	Take one specimen from each 250 m or its fraction of the tubes of the same dimensions. From the specimen, take one tensile test piece.

9.2 Reinspection The tube may be retested in accordance with 4.4 in JIS G 0303.

10. Marking

Each tube having passed the inspection shall be legibly marked with the following items. The order of arranging the items is not specified. However, for smaller tubes or on a request from the purchaser, tubes may be bundled together and marked for each bundle by suitable means.

When approved by the purchaser, part of the items may be omitted.

(1) Designation of grade

(2) Letter symbol indicating the manufacturing process([1])

(3) Dimensions

(4) Manufacturer's name or its abbreviation

Note ([1]) The letter symbol indicating the manufacturing process shall be as follows. However, the sign - may be replaced by a blank.

Hot finished seamless steel tube	-S-H
Cold finished seamless steel tube	-S-C
Electric resistance welded steel tube other than hot finished or cold finished ones	-E-G
Hot finished electric resistance welded steel tube	-E-H
Cold finished electric resistance welded steel tube	-E-C
Butt-welded steel tube	-B
Cold finished butt-welded steel tube	-B-C

11. Report

The manufacturer shall, as a rule, submit to the purchaser a report on the test results, manufacturing process, ordered dimensions, quantity and work lot number traceable to the history of manufacture, etc.

Applicable Standards:

JIS G 0303-General Rules for Inspection of Steel

JIS G 0321-Product Analysis and its Tolerance for Wrought Steel

JIS G 1211-Methods for Determination of Carbon in Iron and Steel

JIS G 1212-Methods for Determination of Silicon in Iron and Steel

JIS G 1213-Methods for Determination of Manganese in Iron and Steel

JIS G 1214-Methods for Determination of Phosphorus in Iron and Steel

JIS G 1215-Methods for Determination of Sulfur in Iron and Steel

JIS G 1221-Methods for Determination of Vanadium in Iron and Steel

JIS G 1237-Methods for Determination of Niobium in Steel

JIS G 1253-Method for Photoelectric Emission Spectrochemical Analysis of Iron and Steel

JIS G 1256-Method for X-Ray Fluorescence Spectrometric Analysis of Iron and Steel

JIS G 1257-Methods for Atomic Absorption Spectrochemical Analysis of Iron and Steel

JIS Z 2201-Test Pieces for Tensile Test for Metallic Materials

JIS Z 2241-Method of Tensile Test for Metallic Materials

JIS Z 8401-Rules for Rounding Off of Numerical Values

G 3445-1988
Edition 5

Japanese Text

Established by Minister of International Trade and Industry

Date of Establishment: 1961-02-01

Date of Revision: 1988-07-01

Date of Reaffirmation: 1994-06-01

Date of Public Notice in Official Gazette: 1994-06-07

Investigated by: Japanese Industrial Standards Committee

Divisional Council on Iron and Steel

This English translation is published by:
Japanese Standards Association
1-24, Akasaka 4, Minato-ku,
Tokyo 107 Japan
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Printed in Tokyo by
Hohbunsha Co., Ltd.

QUALITY PLAN FOR C1111-33 TUBES

DOC NO : HP-QH-REC-QP-RM-011 /Rev 00 Dtd 23.11.2023

Sl No	Description / Component	Characteristics / Parameters / Type of check	Quantum of Check	Testing Standards	Accepted standards / Specs	Format of Record	Inspection	
							M	BEML
1	Material	Composition	1/Heat	Standard	C1111-33 / HST 55 of KES: 07.154	NABL Report	P	V / P
2	Mechanical Properties	Tensile, Elongation & Yield strength	1/ Heat	Standard	Tensile Strength -540N/mm2(min) Yield Strength -390N/mm2(min) Elongation - 20%(min)	NABL Report	P	V
		Flattening Test > Ø50mm OD *	1/ Heat	Standard	Free from flaws and cracks	Test Report	P	V
3	Surface condition	Visual Inspection	100%	Standard	Free from flaws, cracks, uncleared patches, bends, burrs, sharp edges and any other visual defects.	Visual Report	P	A
4	Dimensions	Measure	100%	Standard	Shall confirm to standard / TDC requirements	Check sheet	P	P
5	Preservation	Surface Coating	100%	Standard	Tubes should supply along with rust preventive oil at inner and outer surface and tube ends should be closed with suitable end caps to prevent igress of foreign material	-	P	V
6	Identification Marks	Visual Inspection	100%	-	Part number, Heat Number, Material, Vendor code shall be provided on item. BEML Colour coding [Black-Green-Yellow] at both ends as per PR1002-C	-	P	V

LEGEND - M -Manufacturer, P - Perform, V- Verification of documents, A- Audit checking, *- If applicable

TABLE 1 (Ref: IS 2500-Part 1:2000)		
LOT SIZE	**General Inspection level I**	**SAMPLE SIZE**
2 ~ 90	C	5
91~150	D	8
151~280	E	13
281~500	F	20
501~1200	G	32
1201~3200	H	50
3201~10000	J	80

Note:

1) This Quality plan will applicable only for all C1111-33 tubes

2) Warranty /Guarantee certificate shall be provided as per terms & conditions of Purchase order

Prepared by
Harika Reddy A

Reviewed by
Dinesh G

GANAPATI BHAT KOTI
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QA Dept. H & P Division
BEML Limited
Kolar Gold Fields - 563 115

Approved by
Ganapati Bhat

QUALITY PLAN FOR LW 4130H / SAE 4130H VD TUBES

बी ई एम एल
beml

DOC NO : HP-QH-REC-QP-RM-014 /Rev 00 Dtd 13.08.2024

Sl No	Description / Component	Characteristics / Parameters / Type of check	Quantum of Check	Testing Standards	Accepted standards / Specs	Format of Record	Inspection	
							M	BEML
1	Raw Material	Mill TC	100%	-	Ingot Cast / Continuous Cast and Hot Rolled, Hot finished or Forged Condition	Mill TC	P	V
2	Material Composition	Chemistry	1/Heat	Standard	LW 4130H / SAE 4130H VD	NABL Report / Mill TC	P	V / P
3	Delivery Condition	Heat Treatment	100%	Standard	Normalised Condition	Mill TC	P	V
4	Micro Examination	Jominy hardenability	1/Heat	ASTM A255	27~42 RC @ J 8/16	NABL Report / Mill TC	P	V
		Grain Size	1/Heat	standard	MCQuaid-EHN, Sixe 5~8 fine grain as per ASTM E112.	NABL Report / Mill TC	P	V
5	Surface condition	Visual Inspection	100%	Standard	Free from flaws, cracks, uncleared patches, bends, burrs, sharp edges and any other visual defects.	Visual Report	P	V
6	Dimensions	Measure	100%	Standard	Size Tolerance: ±2mm on OD Wall Thickness:±10%	Check sheet	P	P
7	Preservation	Surface Coating	100%	Standard	Tubes should supply along with rust preventive oil at inner and outer surface and tube ends should be closed with suitable end caps to prevent igress of foreign material	-	P	V
8	Identification Marks	Visual Inspection	100%	-	Part number, Heat Number, Material, Vendor code shall be provided on item.	-	P	V

LEGEND - M -Manufacturer, P - Perform, V- Verification of documents, A- Audit checking, *- If applicable

TABLE 1 (Ref: IS 2500-Part 1:2000)		
LOT SIZE	Inspection level I	SAMPLE SIZE
2 ~ 90	C	5
91~150	D	8
151~280	E	13
281~500	F	20
501~1200	G	32
1201~3200	H	50
3201~10000	J	80

Note:

1) This Quality plan will applicable only for all LW4130H / SAE 4130H VD tubes only

2) Warranty /Guarantee certificate shall be provided as per terms & conditions of Purchase order

Prepared by
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13/08/2024

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13/8/2024

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Gopinath M
Asst. General Manager
QA Dept. H&P Division
BEML Limited
Kolar Gold Fields - 563 115

Komatsu Dresser Company

SPECIFICATION

ENGINEERING STANDARD
ISSUANCE 6.04.132

STEEL SPECIFICATION

LW 4142H
DASH 09

Product: Tubing - Hot finished, seamless, round, mechanical, alloy, H Grade
Bars - Hot rolled, alloy, H Grade
Fine grain and produced by open hearth, basic oxygen, or electric furnace process

Haulpak Div. Designation: LW4142H

Steel Grade: AISI 4142H/UNS H41420

Scope: This specification covers a Cr-Mo through hardening alloy steel grade, hardenable to specified values in a standardized quench, and outlines general requirements for wrought steel deliveries, to Haulpak Division and its suppliers, forgers, and fabricators.

Intended Application: Heat treated, oil quenched and tempered parts requiring controlled surface and core hardness and microstructure. Manufacturing operations include sawing, hot forging and upsetting, machining, and heat treatment.

Mechanical Properties: Mechanical properties are waived.

Technical Requirements: Annealed or finished to 217 BHN maximum hardness

Product shall be made from ingot cast material or continuous cast material with a minimum reduction ratio of 18 to 1 of original as-cast cross-sectional area to the cross-sectional area of the final mill product.

Chemical Composition: (Heat) The material supplied shall be reported and shall conform to the following analysis unless otherwise specified.

C	Mn	Si	Cr	Mo	P	S
.39-.46	.65-1.10	.15-.35	.75-1.20	.15-.25	.035 Max	.04 Max

The composition supplied may be other than the above as agreed upon by the supplier and Haulpak Division.

Grain Size: McQuaid-EHN fine grain, Size 5-8 reported.

Hardenability: The material supplied shall be reported and must conform to the following on a rolled, forged or cast end quench test specimen:

50-60 Rc @ J 8/16

esser Company

SPECIFICATION

ENGINEERING STANDARD
ISSUANCE 6.04.132

2/2

'ICATION

LW 4142H
DASH 09

Standards:

Div.: Issuance 6.01.125 covering quality, testing, packaging, and reporting shall apply.

: ASTM A304 - Bars - Subject to hardenability requirements
ASTM A519 - Tubing, subject to hardenability requirements
ASTM A255 - End-quench hardenability test
ASTM E112 - Grain size determination
ASTM A29 - General requirements for bars

g: Red and brown, one end only, except sizes under 50mm (2 in.) cross section shall be painted in two stripes on bundled end.

lpak Div.
: Steel stamp code number is: 48

d	JULY	1990	
om	NOVEMBER	1986	

Komatsu Dresser Company
Haulpak Division
Peoria, Illinois

EM DIVISION	**QUALITY ASSURANCE PLAN**		**Sheet No: 1 of 3**
MODEL		DOC No.	**323 -QP -RM-C1012 Tubes**
PART NAME	**C1012 Steel tubes for structural & Low pressure Hydraulic application (Up to 98 BAR)**	ISSUE No.	**01**
		DATE	**25/07/2024**

Sl. No.	Components / Operation	Characteristics to be assessed	Type / method Of Check	Quantum of Check	Reference Standards or Documents	Acceptance Norms	Format of records	Inspection scope
							Supplier	BEML
1	C1012 Tube	Manufacturing route	Mill TC	100%	Seamless tubes cold drawn/Hot drawn . Above 100 mm OD ERW tubes also permitted . Cold drawn tubes to be Normalized at 880 deg C/920 deg C suitably. Manufacturing process& HT details to be reported suitably.	Mill TC	P	R
2		Chemical Composition (Suggested only)	Chemical composition	One sample per batch/heat	ELEMENTS / % Carbon (C) (Max.) 0.25 Silicon (Si) (Max.) 0.35 Manganese (Mn) 0.40 - 0.90 Phosphorus (P) (Max.) 0.035 Sulphur (S) (Max.) 0.035 Ni+Cr+Mo 0.25 Max	MillTC/ NABL REPORT	P	R
3		Carbon equivalent	Calculation from chemistry	One sample per batch/heat	Carbon equivalent to be calculated as follows C+ Mn/6 + (Cr+Mo+V)/5 + Ni/15 + Si/25. carbon equivalent obtained value shall be 0.40 Max	MillTC/ NABL REPORT	P	R
4		Mechanical properties	Mechanical properties testing on specimen	One sample per batch/heat	Mechanical properties to be tested for every batch & reports to be attached . Yield strength, N/mm2 205 Min Tensile Strength, N/mm2 330 Min % Elongation 25 Min	MillTC/ NABL REPORT	P	R

	QUALITY ASSURANCE PLAN			Sheet No: 2 of 3
EM DIVISION	MODEL		DOC No.	323 -QP -RM-C1012 Tubes
	PART NAME	C1012 Steel tubes for structural & Low pressure Hydraulic application (Up to 98 BAR)	ISSUE No.	01
			DATE	25/07/2024

Sl. No.	Components / Operation	Characteristics to be assessed	Type / method Of Check	Quantum of Check	Reference Standards or Documents	Acceptance Norms	Format of records	Inspection scope
							Supplier	BEML
5	C1012 Tube	Bend test	Bend test on specimen	One sample per batch/heat	Bend test to be carried out for tubes up to 50mm outside diameter. A test specimen of suitable length cut from the end of the tube shall be cold bend through 90 deg around a bending mandrel of radius 6 times the outside diameter of the tube& No flaws/cracks are permitted in tubes	Mill TC/NABL REPORT	P	R
6		Flattening Test	Flattening Test on specimen	One sample per batch/heat	Flattening test to be carried out for tubes having more than 50mm outside diameter.The test piece of 50 mm minimum length cut from one end of the tube shall be flattened between two flat plates by compression until the distance between flat plates is 2/3 times the outside diameter of the tube & No flaws/cracks are permitted in tubes	Mill TC/NABL REPORT	P	R
7		HYDRO TEST	Hydro test on tubes	One sample per batch/heat	Hydraulic test to be conducted on tubes suitably to a pressure of 147 bar for 5 seconds minimum.	Mill TC/NABL REPORT	P	R
8		Dimensions	Measurement	Dimension check as per sampling plan	Tube tolerances: For OD ≤ 50.0mm: OD = ± 0.5%; Wall Thickness = ± 5.0%. For OD > 50.0mm: OD = ± 1.0%; Wall Thickness = ± 12.5%	DIMENSION REPORT	P	R

	QUALITY ASSURANCE PLAN			Sheet No: 3 of 3
EM DIVISION	MODEL		DOC No.	323 -QP -RM-C1012 Tubes
	PART NAME	C1012 Steel tubes for structural & Low pressure Hydraulic application (Up to 98 BAR)	ISSUE No.	01
			DATE	25/07/2024

Slno	Components / Operation	Characteristics to be assessed	Type / method Of Check	Quantum of Check	Reference Standards or Documents	Acceptance Norms	Format of records	Inspection scope
							Supplier	BEML
9	C1012 Tube	Visual inspection	Visual check	100%	Visual inspection to be carried out on tubes and should be free from defects like cracks, pittings and corrosion. Also Tube surface both ID & OD should have only a temporary rust preventive soft film. No hard/Tar bitumen coating permitted on Tubes surface both ID & OD .Also Tubes ends shall be plugged with plastic caps	Final report	P	R

Note: Sampling Plan: As per IS: 2500- 2000, Part 1, Level -II. Details mentioned in below.

Lot Size in Nos.	Sample Size in Nos.	AQL
2 ~ 50	8	1.5%
51 ~ 90	13	1.0%
91~150	20	0.65%
151~280	32	0.40%
281~500	50	0.25%
501~1200	80	0.15%
1201~3200	125	0.10%
3201~10000	200	0.065%

P - Perform the Activity
W - Witnessing of Activity
R - Reviewing of QA Report
A – Audit check the activity

Prepared By :	Checked By :	Reviewed By :	Approved By :
C.VASANTHAKUMAR **Sr. Manager – Receiving Quality**	**MAHESH KULKARNI** **DGM – Receiving Quality**		Chief of Quality Engineering

BEML LTD	QUALITY PLAN	DOC NO	323 -QP -RM-C1013 Tubes
EM DIVISION	QUALITY PLAN FOR C1013 - TUBES - SUPPLIERS	ISSUE NO	1
		PAGE NO	2 OF 2

Table -1

SLNO	TEST DESCRIPTION	PERIODICITY OF TESTS		
1	Visual inspection	Visual inspection to be carried out on tubes and should be free from defects like cracks, pittings and corrosion. Also Tube surface both ID & OD should have only a temporary rust preventive soft film. No hard/Tar bitumen coating permitted on Tubes surface both ID & OD		
2	Manufacturing process	C1013 - Seamless tubes cold drawn up to 50 mm OD. Above 50 mm OD tubes shall be Seam less Cold drawn/Hot drawn . Cold drawn tubes to be Normalized at 880 deg C/920 deg C suitably. Manufacturing process& HT details to be reported suitably.		
2	Dimensions	Dimensional check shall be carried out on on typical tube as per sampling plan as mentioned below. *		
		Tube tolerances	For OD ≤ 50.0mm	OD = ± 0.5%
				Wall Thickness = ± 5.0%
			For OD > 50.0mm	OD = ± 1.0%
				Wall Thickness = ± 12.5%
3	Chemical Composition (Suggested only)	Chemical composistion to be tested for every batch & reports to be attached .		
		ELEMENTS	%	
		Carbon (C) (Max.)	0.25	
		Silicon (Si) (Max.)	0.35	
		Manganese (Mn)	0.60 - 1.20	
		Phosphorus (P) (Max.)	0.035	
		Sulphur (S) (Max.)	0.035	
		Ni+Cr+Mo	0.25 Max	
4	Carbon equivalent	Carbon equivalent to be calculated as follows C+ Mn/6 + (Cr+Mo+V)/5 + Ni/15 + Si/25. carbon equivalent obtaioned value shall be 0.45 Max		
5	Mechanical properties	Mechanical properties to be tested for every batch & reports to be attached .		
		Yield strength, N/mm2	245 Min	
		Tensile Strength, N/mm2	410 Min	
		% Elongation	25 Min	
6	Bend Test	Bend test to be carried out for tubes up to 50mm outside diameter. A test specimen of suitable length cut from the end of the tube shall be cold bend through 90 deg around a bending mandrel of radius 6 times the outside diameter of the tube.		
7	Flattening Test	Flattening test to be carried out for tubes having more than 50mm outside diameter.The test piece of 50 mm minimum length cut from one end of the tube shall be flattened between two flate plates by compression until the distance between flat plates is 2/3 times the outside diameter of the tube		
8	Hydro - Test	Hydraulic test to be conducted on tubes suitably to a pressure of 255 bar for 5 seconds minimum.		

NOTE : SAMPLING PLAN *

Sampling Plan : As per IS: 2500- 2000, Part 1, Level -II. Details mentioned in below.

Lot Size in Nos	Sample Size in Nos
2 ~ 50	8
51 ~ 90	13
91~150	20
151~280	32

BEML LTD	QUALITY PLAN	DOC NO	323 -QP -RM-C1013 Tubes
EM DIVISION	QUALITY PLAN FOR C1013 - TUBES - SUPPLIERS	ISSUE NO	1
		PAGE NO	2 OF 2

	281~500	50					
	501~1200	80					
	1201~3200	125					
	3201~10000	200					

	Name	Signature	Date
Prepared by	C.VASANTHAKUMAR	sd	06.04.2023
Approved by	MAHESH KULKARNI	sd	06.04.2023

	QUALITY ASSURANCE PLAN		Sheet No: 1 of 3
EM DIVISION	MODEL	DOC No.	323 -QP -RM-C1237 Tubes
	PART NAME: C123733 TUBES	ISSUE No.	01
		DATE	07/08/2024

Sl. No.	Components / Operation	Characteristics to be assessed	Type / method Of Check	Quantum of Check	Reference Standards or Documents	Acceptance Norms	Format of records	Inspection scope
							Supplier	BEML
1	C1237 Tube	Manufacturing route	Mill TC	100%	Tubes shall be Seam less Hot drawn/Cold drawn manufactured tubes.Manufacturing process of tube to be certified suitably in test reports.	Mill TC	P	R
2		Chemical Composition	Chemical composition	One sample per batch/heat	One sample per heat/cast batch shall be checked for chemical composition and shall conform to the company standard C1237 as below as mentioned in & reports to be submitted along with supply Elements: Requirement C: 0.17/0.22 Si: 0.15/0.35 Mn: 0.80/1.10 P: 0.035 Max S: 0.035 Max B: 0.001/0.004 Cr: 0.15/0.30 Ni: 0.25 Max Mo: 0.06 Max Cu: 0.35 Max	MillTC/ NABL REPORT	P	R
3		HEAT TREATMENT	HT CYCLE	100%	Steel tubes to be supplied in Normalized condition with hardness maximum of 229 BHN & shall be certified in test reports.	MillTC/ NABL REPORT	P	R
4		Jominy hardenability	Jominy hardenability	One sample per batch/heat	Jominy hardenability shall be tested on the test sample suitably as per folowing requirements & shall be reported along with every batch of supplies Distance from quenched end,mm: Hardness limit, HRc (Min / Max) 1.5: 42 / 47 7: 29 / -- 9: -- / 32	Mill TC/ NABL REPORT	P	R

EM DIVISION	QUALITY ASSURANCE PLAN			Sheet No: 2 of 3
	MODEL		DOC No.	**323 -QP -RM-C1237 Tubes**
	PART NAME	**C123733 TUBES**	ISSUE No.	**01**
			DATE	**07/08/2024**

Sl. No.	Components / Operation	Characteristics to be assessed	Type / method Of Check	Quantum of Check	Reference Standards or Documents	Acceptance Norms	Format of records	Inspection scope
							Supplier	BEML
5	C1237 Tube	INCLUSION RATING	Micro examination	One sample per batch/heat	Non metallic Inclusion rating (Sulphides, Alumina ,silicates or globular oxides)rating shall be less than severity level 3(thin & thick) of IS 4163:1982 & material shall be free from slag inclusions.	Mill TC/NABL REPORT	P	R
6		Grain size	METALLOGRAPHY	ONE SPECIMEN PER HEAT	Grain size of the material shall be in the range of ASTM Grain size 5 to 8 of latest issuance of IS4748 Methods of estimating average grain size in metals	MILL TC/ NABL LAB REPORT	P	R
7		Dimensions	Measurement	Dimension check as per sampling plan	Tube tolerances: For DIAMETER: ± 1% of Nominal OD; WALL THICKNESS: ±7.5% of wall thickness specified; LENGTH: + 10 mm/-0 of specified length	DIMENSION REPORT	P	R
8		Dimensions	Measurement	Straightness	Tubes shall not deviate in straightness by 1/600th of any length measured at centre of that length	DIMENSION REPORT	P	R
9		Visual inspection	Visual check	100%	Visual inspection to be carried out on tubes and should be free from defects like cracks, seams, pittings and other defects. Also Tube surface both ID & OD should have only a temporary rust preventive soft film. No hard/Tar bitumen coating permitted on Tubes surface both ID & OD .Also Tubes ends shall be plugged with plastic caps	Final report	P	R

	QUALITY ASSURANCE PLAN			Sheet No: 3 of 3
EM DIVISION	MODEL		DOC No.	323 -QP -RM-C1237 Tubes
	PART NAME	C123733 TUBES	ISSUE No.	01
			DATE	07/08/2024

Slno	Components / Operation	Characteristics to be assessed	Type / method Of Check	Quantum of Check	Reference Standards or Documents	Acceptance Norms	Format of records	Inspection scope
							Supplier	BEML

Note: Sampling Plan: As per IS: 2500- 2000, Part 1, Level -II. Details mentioned in below.

Lot Size in Nos.	Sample Size in Nos.	AQL	
2 ~ 50	8	1.5%	**P - Perform the Activity** **W - Witnessing of Activity** **R - Reviewing of QA Report** **A – Audit check the activity**
51 ~ 90	13	1.0%	
91~150	20	0.65%	
151~280	32	0.40%	
281~500	50	0.25%	
501~1200	80	0.15%	
1201~3200	125	0.10%	
3201~10000	200	0.065%	

Prepared By :	Checked By :	Reviewed By :	Approved By :
C.VASANTHAKUMAR **Sr. Manager – Receiving Quality**	**MAHESH KULKARNI** **DGM – Receiving Quality**		Chief of Quality Engineering

EM DIVISION	**QUALITY ASSURANCE PLAN**			**Sheet No: 1 of 3**
	MODEL		DOC No.	**323 -QP -RM-C1209 Tubes**
	PART NAME	**C1209 TUBES**	ISSUE No.	**01**
			DATE	**09/08/2024**

Sl. No.	Components / Operation	Characteristics to be assessed	Type / method Of Check	Quantum of Check	Reference Standards or Documents	Acceptance Norms	Format of records	Inspection scope
							Supplier	BEML
1	C1209 Tube	Manufacturing route	Mill TC	100%	Seamless tubes Hot or cold drawn & shall be suitably Normalized suitably	Mill TC	P	R
2		Chemical Composition (Suggested only)	Chemical composition	One sample per batch/heat	One sample per heat/cast batch shall be checked for chemical composition and shall conform to the company standard C1209 as below as mentioned in & reports to be submitted along with supply Elements / Requirement C 0.32/0.38 Si 0.15/0.30 Mn 0.60/1.00 S 0.04 Max P 0.035 Max Cr 0.75/1.20 Mo 0.15/0.25 Besides the percentage weight of all trace elements put together shall not exceed 0.25%	MillTC/ NABL REPORT	P	R
3		HEAT TREATMENT	HT CYCLE	100%	Normalizing suitably to achieve hardness of 200/240 BHN	MillTC/ NABL REPORT	P	R

Sl. No.	Components / Operation	Characteristics to be assessed	Type / method Of Check	Quantum of Check	Reference Standards or Documents	Acceptance Norms	Format of records	Inspection scope
							Supplier	BEML
4	C1209 Tube	INCLUSION RATING	Micro examination	One sample per batch/heat	Non metallic Inclusions (sulphide, Alumina, silicates. Globular oxides) rating shall be less than severity 3(thin & Thick series) of IS4163-1982	Mill TC/NABL REPORT	P	R
5		Grain size	METALLOGRAPHY	ONE SPECIMEN PER HEAT	Grain size of the material shall be in the range of ASTM Grain size 5 to 8(Or Equivalent size no as per IS2853 latest issuance)	MILL TC/ NABL LAB REPORT	P	R
6		JOMINY HARDENABILITY	JOMINY (TEST AS PER IS3448 - 1981)	ONE SPECIMEN PER HEAT	The Jominy end quench values shall be ensured (TEST AS PER IS3848 -1981) as follows Distance from quench end in mm / Hardness limits: Min / Max 1.5: 51 / 58 9.0: 45 / 55 19: 33 / 49	NABL LAB REPORT/ MILL TC	P	R
7		Dimensions	Measurement	Dimension check as per sampling plan	Tube tolerances: For DIAMETER ± 1% of Nominal OD; WALL THICKNESS ±12.5% of wall thickness specified	DIMENSION REPORT	P	R

	QUALITY ASSURANCE PLAN			Sheet No: 3 of 3
EM DIVISION	MODEL		DOC No.	323 -QP -RM-C1209 Tubes
	PART NAME	C1209 TUBES	ISSUE No.	01
			DATE	09/08/2024

Slno	Components / Operation	Characteristics to be assessed	Type / method Of Check	Quantum of Check	Reference Standards or Documents	Acceptance Norms	Format of records	Inspection scope
							Supplier	BEML
8	C1209 Tube	Dimensions	Measurement	Straightness	Tubes shall be machine straightened & supplied in length as per PO req with 1mm in 600 mm length	DIMENSION REPORT	P	R
9		Visual inspection	Visual check	100%	Visual inspection to be carried out on tubes and should be free from defects like cracks, pittings and corrosion. Also Tube surface both ID & OD should have only a temporary rust preventive soft film. No hard/Tar bitumen coating permitted on Tubes surface both ID & OD .Also Tubes ends shall be plugged with plastic caps	Final report	P	R

Note: Sampling Plan: As per IS: 2500- 2000, Part 1, Level -II. Details mentioned in below.

Lot Size in Nos.	Sample Size in Nos.	AQL	
2 ~ 50	8	1.5%	**P - Perform the Activity** **W - Witnessing of Activity** **R - Reviewing of QA Report** **A – Audit check the activity**
51 ~ 90	13	1.0%	
91~150	20	0.65%	
151~280	32	0.40%	
281~500	50	0.25%	
501~1200	80	0.15%	
1201~3200	125	0.10%	
3201~10000	200	0.065%	

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C.VASANTHAKUMAR **Sr. Manager – Receiving Quality**	**MAHESH KULKARNI** **DGM – Receiving Quality**		Chief of Quality Engineering

EM DIVISION	**QUALITY ASSURANCE PLAN**		**Sheet No: 1 of 3**
MODEL		DOC No.	**323 -QP -RM-C1204 Tubes**
PART NAME	**C1204 TUBES**	ISSUE No.	**01**
		DATE	**09/08/2024**

Sl. No.	Components / Operation	Characteristics to be assessed	Type / method Of Check	Quantum of Check	Reference Standards or Documents	Acceptance Norms	Format of records	Inspection scope
							Supplier	BEML
1	C1204 Tube	Manufacturing route	Mill TC	100%	Seamless tubes Hot or cold drawn & shall be suitably Normalized suitably	Mill TC	P	R
2		Chemical Composition (Suggested only)	Chemical composition	One sample per batch/heat	One sample per heat/cast batch shall be checked for chemical composition and shall conform to the company standard C1204 as below as mentioned in & reports to be submitted along with supply Elements / Requirement C 0.19/0.25 Si 0.15/0.30 Mn 0.60/0.95 S 0.04 Max P 0.035Max Cr 0.35/0.65 Ni 0.35/0.75 Mo 0.15/0.25 Cu 0.25 Max V 0.05 Max Ti Besides the percentage weight of all trace elements put together shall not exceed 0.8%	MillTC/ NABL REPORT	P	R
3		HEAT TREATMENT	HT CYCLE	100%	Normalizing suitably to achieve hardness of 180/229 BHN	MillTC/ NABL REPORT	P	R

Sl. No.	Components / Operation	Characteristics to be assessed	Type / method Of Check	Quantum of Check	Reference Standards or Documents	Acceptance Norms	Format of records	Inspection scope
							Supplier	BEML
4	C1204 Tube	INCLUSION RATING	Micro examination	One sample per batch/heat	Non metallic Inclusions (sulphide, Alumina, silicates. Globular oxides) rating shall be less than severity 3(thin & Thick series) of IS4163-1982	Mill TC/NABL REPORT	P	R
5		Grain size	METALLOGRAPHY	ONE SPECIMEN PER HEAT	Grain size of the material shall be in the range of ASTM Grain size 5 to 8(Or Equivalent size no as per IS2853 latest issuance)	MILL TC/ NABL LAB REPORT	P	R
6		JOMINY HARDENABILITY	JOMINY (TEST AS PER IS3448 - 1981)	ONE SPECIMEN PER HEAT	The Jominy end quench values shall be ensured (TEST AS PER IS3848 -1981) as follows Distance from quench end in mm / Hardness limits: Min / Max 1.5: 41 / 48 6.0: 28 / 42 9.0: 22 / 35 13.5: / 30 18.0: / 27	NABL LAB REPORT/ MILL TC	P	R
7		Dimensions	Measurement	Dimension check as per sampling plan	Tube tolerances: For DIAMETER: ± 1% of Nominal OD; WALL THICKNESS: ±12.5% of wall thickness specified	DIMENSION REPORT	P	R

	QUALITY ASSURANCE PLAN		Sheet No: 3 of 3
EM DIVISION	MODEL	DOC No.	323 -QP -RM-C1204 Tubes
	PART NAME: C1204 TUBES	ISSUE No.	01
		DATE	09/08/2024

Slno	Components / Operation	Characteristics to be assessed	Type / method Of Check	Quantum of Check	Reference Standards or Documents	Acceptance Norms	Format of records	Inspection scope
							Supplier	BEML
8	C1204 Tube	Dimensions	Measurement	Straightness	Tubes shall be machine straightened & supplied in length as per PO req with 1mm in 600 mm length	DIMENSION REPORT	P	R
9		Visual inspection	Visual check	100%	Visual inspection to be carried out on tubes and should be free from defects like cracks, pittings and corrosion. Also Tube surface both ID & OD should have only a temporary rust preventive soft film. No hard/Tar bitumen coating permitted on Tubes surface both ID & OD .Also Tubes ends shall be plugged with plastic caps	Final report	P	R

Note: Sampling Plan: As per IS: 2500- 2000, Part 1, Level -II. Details mentioned in below.

Lot Size in Nos.	Sample Size in Nos.	AQL
2 ~ 50	8	1.5%
51 ~ 90	13	1.0%
91~150	20	0.65%
151~280	32	0.40%
281~500	50	0.25%
501~1200	80	0.15%
1201~3200	125	0.10%
3201~10000	200	0.065%

P - Perform the Activity
W - Witnessing of Activity
R - Reviewing of QA Report
A – Audit check the activity

Prepared By :	Checked By :	Reviewed By :	Approved By :
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EM DIVISION	QUALITY ASSURANCE PLAN			Sheet No: 1 of 3
	MODEL		DOC No.	323 -QP -RM-C1101 Tubes
	PART NAME	C1101 TUBES	ISSUE No.	01
			DATE	25/07/2024

Sl. No.	Components / Operation	Characteristics to be assessed	Type / method Of Check	Quantum of Check	Reference Standards or Documents	Acceptance Norms	Format of records	Inspection scope
							Supplier	BEML
1	C1101 Tube	Manufacturing route	Mill TC	100%	Seamless tubes Hot or cold rolling & shall be suitably Normalized suitably	Mill TC	P	R
2		Chemical Composition (Suggested only)	Chemical composition	One sample per batch/heat	One sample per heat/cast batch shall be checked for chemical composition and shall conform to the company standard C1101 as below as mentioned in & reports to be submitted along with supply Elements / Requirement C 0.42/0.50 Si 0.10/0.40 Mn 0.60/0.90 S 0.04 Max P 0.04Max Cr 0.20 Max Ni 0.25 Max Mo 0.05 Max Cu 0.35Max V 0.05Max Ti 0.05 Max Besides the percentage weight of all trace elements put together shall not exceed 0.8%	MillTC/ NABL REPORT	P	R
3		HEAT TREATMENT	HT CYCLE	100%	Normalizing suitably to achieve hardness of 180/229 BHN	MillTC/ NABL REPORT	P	R
4		Mechanical properties	Mechanical properties testing on specimen	One sample per batch/heat	Mechanical properties to be tested for every batch & reports to be attached . Yield strength, N/mm2 340(Min) Tensile Strength, N/mm2 550(Min) % Elongation 20%(Min)	MillTC/ NABL REPORT	P	R

Sl. No.	Components / Operation	Characteristics to be assessed	Type / method Of Check	Quantum of Check	Reference Standards or Documents	Acceptance Norms	Format of records	Inspection scope
							Supplier	BEML
5	C1101 Tube	INCLUSION RATING	Micro examination	One sample per batch/heat	Non metallic Inclusions (sulphide, Alumina silicates. Globular oxides) rating shall be less than severity 3(thin & Thick series) of IS4163-1982	Mill TC/NABL REPORT	P	R
6		Grain size	METALLOGRAPHY	ONE SPECIMEN PER HEAT	Grain size of the material shall be in the range of ASTM Grain size 5 to 8(Or Equivalent size no as per IS2853 latest issuance)	MILL TC/ NABL LAB REPORT	P	R
7		Bend test	Bend test on specimen	One sample per batch/heat	Bend test to be carried out for tubes up to 50mm outside diameter. A test specimen of suitable length cut from the end of the tube shall be cold bend through 90 deg around a bending mandrel of radius 8 times the outside diameter of the tube& No flaws/cracks are permitted in tubes	Mill TC/NABL REPORT	P	R
8		Flattening Test	Flattening Test on specimen	One sample per batch/heat	Flattening test to be carried out for tubes having more than 50mm outside diameter.The test piece of 50 mm minimum length cut from one end of the tube shall be flattened between two flat plates by compression until the distance between flat plates is 7/8times the outside diameter of the tube & No flaws/cracks are permitted in tubes	Mill TC/NABL REPORT	P	R
9								
10		Dimensions	Measurement	Dimension check as per sampling plan	Tube tolerances: For DIAMETER: ± 1% of Nominal OD; WALL THICKNESS: ±12.5% of wall thickness specified	DIMENSION REPORT	P	R

	QUALITY ASSURANCE PLAN			Sheet No: 3 of 3
EM DIVISION	MODEL		DOC No.	323 -QP -RM-C1101 Tubes
	PART NAME	C1101 TUBES	ISSUE No.	01
			DATE	25/07/2024

Slno	Components / Operation	Characteristics to be assessed	Type / method Of Check	Quantum of Check	Reference Standards or Documents	Acceptance Norms	Format of records	Inspection scope
							Supplier	BEML
11	C1101 Tube	Visual inspection	Visual check	100%	Visual inspection to be carried out on tubes and should be free from defects like cracks, pittings and corrosion. Also Tube surface both ID & OD should have only a temporary rust preventive soft film. No hard/Tar bitumen coating permitted on Tubes surface both ID & OD .Also Tubes ends shall be plugged with plastic caps	Final report	P	R

Note: Sampling Plan: As per IS: 2500- 2000, Part 1, Level -II. Details mentioned in below.

Lot Size in Nos.	Sample Size in Nos.	AQL
2 ~ 50	8	1.5%
51 ~ 90	13	1.0%
91~150	20	0.65%
151~280	32	0.40%
281~500	50	0.25%
501~1200	80	0.15%
1201~3200	125	0.10%
3201~10000	200	0.065%

P - Perform the Activity
W - Witnessing of Activity
R - Reviewing of QA Report
A – Audit check the activity

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Komatsu Dresser Company

SPECIFICATION

ENGINEERING STANDARD
ISSUANCE 6.02.006

STEEL SPECIFICATION

LW 5136
DASH 02

Product: Tubing - Mandrel drawn electric resistance welded mechanical tubing (DOM), medium carbon, killed, fine grain, finish annealed, from steel made by open hearth, basic oxygen, or electric furnace process.

Haulpak Designation: LW 5136

Steel Grade: AISI 1026/UNS G10260, ASTM A513 - Type 5

Scope: This specification covers a medium strength DOM mechanical tubing conforming to minimum mechanical properties and outlines general requirements for wrought steel deliveries to Haulpak Division and its suppliers, forgers and fabricators.

Intended Application: Hydraulic cylinders application subjected to medium stresses. Sawing, flame cutting, machining, and welding operations are imposed.

Mechanical Properties:

Yield Strength Min. (.2% offset)	= 483 MPa (70 ksi)
Tensile Strength Min.	= 552 MPa (80 ksi)
Elongation Min. in 50mm (2 In.)	= 15%
Hardness Min.	= 80 RB

Chemical Composition: (Heat) The material composition supplied shall conform to the following analysis unless otherwise specified.

C	Mn	P	S
.22-.28	.60-.90	.040 Max.	.050 Max.

Grain Size: The steel shall be made to fine grain practice.

Technical Requirements:

1. Flash - There shall be no dimensional indication of inside diameter flash.
2. The weld joint shall be normalized after welding.
3. Each tube shall be tested either ultrasonically per ASTM E213 & E273, eddy-current per ASTM E309, flux leakage per ASTM E570; or hydrostatically; or a combination of these tests to insure that the tubing meets the following requirements:
   a. There should be no surface or subsurface defects that would make the tubing unsuitable for hydraulic cylinder usage.

STEEL SPECIFICATION

LW 5136
DASH 02

Technical Requirements (Cont'd):

3. b. There shall be no defects that completely penetrate the tube wall.

c. Tubing shall be capable of withstanding 35 MPa (5 ksi) pressure.

Applicable Standards:

Haulpak Div.: Issuance 6.01.125 covering quality, testing, packing, and reporting shall apply.

Foreign:

ASTM A513 - Type 5, AISI 1026
ASTM A370 - Testing Methods and Procedures
ASTM E213 - Ultrasonic Inspection of Tubing
ASTM E273 - Ultrasonic Inspection of Welded Tubing
ASTM E309 - Eddy Current Examination of Tubing
ASTM E570 - Flux Leakage Examination of Tubing

Color Marking: Gold, brown, and purple, one end only, except tubing of less than 50mm (2 in.) cross section shall be painted with stripes on bundled end. Mill to apply gold and brown, Haulpak Division to apply purple.

Data for Haulpak Div. Internal Use: Steel stamp code number is: 77

Komatsu Dresser Company

SPECIFICATION

ENGINEERING STANDARD
ISSUANCE 6.02.007

STEEL SPECIFICATION

LW 5196
DASH 02

Product: Tubing - Cold worked seamless mechanical tubing, medium carbon, killed, fine grain, finish annealed, from steel made by open hearth, basic oxygen, or electric furnace process.

Haulpak Designation: LW 5196

Steel Grade: AISI 1026/UNS G10260, ASTM A519

Scope: This specification covers a medium strength seamless mechanical tubing conforming to minimum mechanical properties, and outlines general requirements for wrought steel deliveries to Haulpak Division and its suppliers, forgers, and fabricators.

Intended Application: Hydraulic cylinders application subjected to medium stresses. Sawing, flame cutting, machining, and welding operations are imposed.

Mechanical Properties:

Yield Strength Min. (.2% offset)	= 483 MPa (70 ksi)
Tensile Strength Min.	= 552 MPa (80 ksi)
Elongation Min. in 50mm (2 In.)	= 15%
Hardness Min.	= 80 RB

Chemical Composition: (Heat) The material composition supplied shall conform to the following analysis unless otherwise specified:

C	Mn	P	S
.22-.28	.60-.90	.040 max.	.050 max.

Grain Size: The steel shall be made to fine grain practice.

Applicable Standards:

Haulpak Div.: Issuance 6.01.125 covering quality, testing, packing, and reporting shall apply.

Foreign:
ASTM A519 - CW, AISI 1026
ASTM A370 - Testing Methods and Procedures

Color Marking: White, blue, orange, one end only, except tubing of less than 50mm (2 in.) cross section shall be painted with stripes on bundled end. Mill to apply white and blue, Haulpak Division to apply orange.

Data for Haulpak Div. Internal Use: Steel stamp code number is: 78

Date Issued	AUGUST	1990	
Revised From	SEPTEMBER	1989	

Komatsu Dresser Company
Haulpak Division
Peoria, Illinois

Form-MA - Manufacturer's Authorization Form

[The Bidder shall require the Manufacturer to fill in this Form in accordance with the instructions indicated. This letter of authorization should be on the letterhead of the Manufacturer and should be signed by a person with the proper authority to sign documents that are legally binding on the Manufacturer.]

Date: *[insert date (as day, month and year) of Bid Submission]*

BID No.: *[insert number of bidding process]*

Alternative No.: *[insert identification No if this is a Bid for an alternative]*

To:

[insert complete name of Purchaser]

WHEREAS

We *[insert complete name of Manufacturer]*, who are official manufacturers of *[insert type of goods manufactured]*, having factories at [insert full address of Manufacturer's factories], do hereby authorize *[insert complete name of Bidder]* to submit a bid the purpose of which is to provide the following Goods, manufactured by us *[insert name and or brief description of the Goods]*, and to subsequently negotiate and sign the Contract against the Bid Document.

We hereby extend our full guarantee and warranty in accordance with Warrant Clause of the terms & Conditions of Contract, with respect to the Goods offered by the above firm against this BID. We as a manufacturer of *[insert type of goods manufactured]* confirm to provide the spare & service support for a minimum period of 5 years after commissioning

Signed: *[insert signature(s) of authorized representative(s) of the Manufacturer]*

Name: *[insert complete name(s) of authorized representative(s) of the Manufacturer]*

Title: *[insert title]*

Duly authorized to sign this Authorization on behalf of: *[insert complete name of Bidder]*

Dated on_____day of _____,_____*[insert date of signing]*

Note – Modify this format suitably in cases where manufacturer's warranty and guarantee are not applicable for the items for which bids are invited. If the supply consists of number of items, indicate the specific item (s) for which alone the above authorization is required.

Mandated Enclosure: UDYAM Certificate of Manufacturer/OEM/support document to be an OEM.

Annexure III

Compliance certificate

Bidders having beneficial ownership in countries which share land border with India

I. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the competent Authority.

II. " Bidder " (including the term ' tenderer ' , consultant ' or service provider ' in certain contexts) means any person or firm or company , including any member of a consortium or joint venture (that is an association of several persons, or firms or companies) every artificial juridical person not falling in any of the descriptions of bidders stated here in before , including any agency branch or office controlled by such person , participating in a process.

III. "Bidder from a country which shares a land border with India " for the purpose of this order means : -

   a. An entity incorporated , established or registered in such country ;or
   b. A subsidiary of an entity incorporated, established or registered in such a country ;or
   c. An entity substantially controlled through entities incorporated, established or registered in such a country ; or
   d. An entity whose beneficial owner is situated in such a country ; or
   e. An Indian (or other) agent of such an entity ; or
   f. A natural person who is a citizen of such a country ; or
   g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above.

IV. The beneficial owner for the purpose of (iii) above will be as under :

   1. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s) , who , whether acting alone or together , or through one or more juridical person, has a controlling ownership interest or who exercises control through other means.
      a. " Controlling ownership interest " means ownership of or entitlement to more than twenty-five per cent of shares or capital or profits of the company
      b. " Control " shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders agreement s or voting agreements;
   2. In case of a partnership firm , the beneficial owner is the natural person(s) who , whether acting alone or together , or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;
   3. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who , whether acting alone or together , or through one or more juridical person , has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;

4. Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official.
5. In case of a trust , the identification of beneficial owner(s) shall include identification of the author of the trust , the trustee , the beneficiaries with fifteen percent or more interest in the trust an any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.

V An agent is a person employed to do any act for another, or to represent another in dealings with third person.

VI The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the competent Authority.

I/we have read the clause regarding above terms and conditions regarding restrictions on procurement whether goods, services (including consultancy service and non consultancy services) or works (including turn key projects)

I / We M/s …….(Name of the bidder) are not from a country which shares land border with India and as per the above terms and conditions are eligible to participate in this tender.

Or

I / We M/s …….(Name of the bidder) are from a country which shares land border with India and as per the above terms and conditions ,we are registered with Competent authority with Registration no ……..are eligible to participate in this tender.

[Format for seeking registration for bidders having beneficial ownership in countries which share land border with India and further details refer Notification no P-45021/112/2020-PP (BE-II) (E-43780) dated 14.10.2020 Department of promotion of industry and internal trade , Ministry of Commerce and Industry , Govt. of India .]

(Signature of authorized signatory of the tenderer)

Name:

Designation:

Place Seal :

Date:

No. DPE/7(4)/2017-Fin.(Part-I)
Government of India
Ministry of Heavy Industries& Public Enterprises
Department of Public Enterprises
*****

Public Enterprises Bhawan
Block No.14, CGO Complex
New Delhi – 110003

Date: 30th July, 2020

OFFICE MEMORANDUM

Subject: Restrictions under Rule 144(xi) of the General Financial Rules (GFRs),2017- Dept. of Expenditure OM No.6/18/2019-PPD dated 23rd July, 2020 - regarding

The undersigned is directed to enclose Department of Expenditure's (DoE) OMs No. 6/18/2019-PPD dated 23rd July, 2020 & 24th July, 2020 imposing restrictions under Rule 144(xi) of the General Financial Rules (GFRs), 2017 on the grounds of Defence of India and National Security for information and compliance.

2. All the administrative Ministries/ Departments of CPSEs are requested to ensure compliance of the directions issued by DoE by CPSEs under their administrative control.

3. This issues with the approval of competent authority.

K. Mishra

(Kalyani Mishra)
Director
Tel.24362061

Encl.: (DoE's OMs No. 6/18/2019-PPD dated 23rd July, 2020
6/18/2019-PPD dated 23rd July, 2020&
6/18/2019-PPD dated 24th July, 2020)

To
i) All the Secretaries to the Administrative Ministries/Departments of CPSEs
ii) Chief Executives of CPSEs

Copy for information to:
Secretary, D/o Expenditure, North Block, New Delhi

डा. टी. वी. सोमनाथन, आई.ए.एस.
सचिव (व्यय)
Dr. T. V. Somanathan, I.A.S.
Secretary (Expenditure)

सत्यमेव जयते

भारत सरकार
वित्त मंत्रालय
व्यय विभाग
Government of India
Ministry of Finance
Department of Expenditure
नार्थ ब्लाक, नई दिल्ली-110001
North Block, New Delhi-110001
Tel. : 23092929, 23092663
Fax : 23092546
E-mail : secyexp@nic.in
Website : www.finmin.nic.in

स्वच्छ भारत
एक कदम स्वच्छता की ओर

D.O.F.No.6/18/2019- PPD

28th July, 2020

OFFICE OF SECRETARY (EXPENDITURE) 47545 29/7/20

Dear Shri Sailesh,

As you are aware the General Financial Rules (GFRs), 2017 have been amended inserting Rule 144 (xi) which empowers Department of Expenditure to impose restrictions, including prior registration or screening on procurement from bidders from a country or countries on grounds of Defence of India and National Security. The amended Rule provides that no public procurement shall be made in violation of such restrictions. Pursuant to the above, Order (Public Procurement No. 1) and Order (Public Procurement No. 2) were issued vide F.No.6/18/2019-PPD dated 23.7.2020. A clarification was issued in Order (Public Procurement No. 3).

2. Though the GFRs ordinarily do not apply to public sector enterprises, in this instance, as they relate to national security, the orders have consciously been made applicable to all Central Public Sector Enterprises as well. It is, therefore, requested that necessary instructions may be issued by your Department reiterating the applicability of orders stated in Paragraph 1 of this letter to all Central Public Sector Enterprises.

3. Copies of the Orders are attached for ease of reference.

With regards,

Yours sincerely,

(T.V. Somanathan)

Encl: **As above**

AS(RKC)

Shri Sailesh, IAS
Secretary,
Department of Public Enterprises,
160, Udyog Bhawan,
New Delhi: 110011

Copy to: Cabinet Secretary – for information

We may issue instructions today
29/7

F.No.6/18/2019-PPD
Ministry of Finance
Department of Expenditure
Public Procurement Division

161, North Block,
New Delhi
23rd July, 2020

Office Memorandum

Subject: Insertion of Rule 144 (xi) in the General Financial Rules (GFRs), 2017

Rule 144 of the General Financial Rules 2017 entitled 'Fundamental principles of public buying', has been amended by inserting sub-rule (xi) as under:

Notwithstanding anything contained in these Rules, Department of Expenditure may, by order in writing, impose restrictions, including prior registration and/or screening, on procurement from bidders from a country or countries, or a class of countries, on grounds of defence of India, or matters directly or indirectly related thereto including national security; no procurement shall be made in violation of such restrictions.

(Sanjay Prasad)
Joint Secretary (PPD)
Email ID: js.pfc2.doe@gov.in
Telephone: 011-23093882

To,

(1) Secretaries of All Ministries/ Departments of Government of India
(2) Chief Secretaries/ Administrators of Union Territories/ National Capital Territory of Delhi

F.No.6/18/2019-PPD
Ministry of Finance
Department of Expenditure
Public Procurement Division

161, North Block,
New Delhi
23rd July, 2020

Order (Public Procurement No. 1)

Subject: Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs), 2017

Attention is invited to this office OM no. 6/18/2019-PPD dated 23rd July 2020 inserting Rule 144 (xi) in GFRs 2017. In this regard, the following is hereby ordered under Rule 144 (xi) on the grounds stated therein:

Requirement of registration

1. Any bidder from a country which shares a land border with India will be eligible to bid in any procurement whether of goods, services (including consultancy services and non-consultancy services) or works (including turnkey projects) only if the bidder is registered with the Competent Authority, specified in **Annex I.**

2. This Order shall not apply to (i) cases where orders have been placed or contract has been concluded or letter/notice of award/ acceptance (LoA) has been issued on or before the date of this order; and (ii) cases falling under **Annex II**.

Transitional cases

3. Tenders where no contract has been concluded or no LoA has been issued so far shall be handled in the following manner: -

    a) *In tenders which are yet to be opened, or where evaluation of technical bid or the first exclusionary qualificatory stage (i.e. the first stage at which the qualifications of tenderers are evaluated and unqualified bidders are excluded) has not been completed*: No contracts shall be placed on bidders from such countries. Tenders received from bidders from such countries shall be dealt with as if they are non-compliant with the tender conditions and the tender shall be processed accordingly.

    b) *If the tendering process has crossed the first exclusionary qualificatory stage*: If the qualified bidders include bidders from such countries, the

entire process shall be scrapped and initiated *de novo*. The *de novo* process shall adhere to the conditions prescribed in this Order.

c) As far as practicable, and in cases of doubt about whether a bidder falls under paragraph 1, a certificate shall be obtained from the bidder whose bid is proposed to be considered or accepted, in terms of paras 8, 9 and 10 read with para 1 of this Order.

Incorporation in tender conditions

4. In tenders to be issued after the date of this order, the provisions of paragraph 1 and of other relevant provisions of this Order shall be incorporated in the tender conditions.

Applicability

5. Apart from Ministries / Departments, attached and subordinate bodies, notwithstanding anything contained in Rule 1 of the GFRs 2017, this Order shall also be applicable
   a. to all Autonomous Bodies;
   b. to public sector banks and public sector financial institutions; and
   c. subject to any orders of the Department of Public Enterprises, to all Central Public Sector Enterprises; and
   d. to procurement in Public Private Partnership projects receiving financial support from the Government or public sector enterprises/ undertakings.
   e. Union Territories, National Capital Territory of Delhi and all agencies/ undertakings thereof

Definitions

6. "Bidder" for the purpose of this Order (including the term 'tenderer', 'consultant' 'vendor' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency, branch or office controlled by such person, participating in a procurement process.

7. "Tender" for the purpose of this Order will include other forms of procurement, except where the context requires otherwise.

8. "Bidder from a country which shares a land border with India" for the purpose of this Order means

a) An entity incorporated, established or registered in such a country; or
b) A subsidiary of an entity incorporated, established or registered in such a country; or
c) An entity substantially controlled through entities incorporated, established or registered in such a country; or
d) An entity whose *beneficial owner* is situated in such a country; or
e) An Indian (or other) agent of such an entity; or
f) A natural person who is a citizen of such a country; or
g) A consortium or joint venture where any member of the consortium or joint venture falls under any of the above

9. "Beneficial owner" for the purpose of paragraph 8 above will be as under:

(i) In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person(s), has a controlling ownership interest or who exercises control through other means.
Explanation—

a. "Controlling ownership interest" means ownership of, or entitlement to, more than twenty-five per cent of shares or capital or profits of the company;

b. "Control" shall include the right to appoint the majority of the directors or to control the management or policy decisions, including by virtue of their shareholding or management rights or shareholders agreements or voting agreements;

(ii) In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;

(iii) In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;

(iv) Where no natural person is identified under (i) or (ii) or (iii) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;

4/12

(v) In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.

10. "Agent" for the purpose of this Order is a person employed to do any act for another, or to represent another in dealings with third persons.

Sub-contracting in works contracts

11. In works contracts, including turnkey contracts, contractors shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority. The definition of "contractor from a country which shares a land border with India" shall be as in paragraph 8 above. This shall not apply to sub-contracts already awarded on or before the date of this Order.

Certificate regarding compliance

12. A certificate shall be taken from bidders in the tender documents regarding their compliance with this Order. If such certificate given by a bidder whose bid is accepted is found to be false, this would be a ground for immediate termination and further legal action in accordance with law.

Validity of registration

13. In respect of tenders, registration should be valid at the time of submission of bids and at the time of acceptance of bids. In respect of supply otherwise than by tender, registration should be valid at the time of placement of order. If the bidder was validly registered at the time of acceptance / placement of order, registration shall not be a relevant consideration during contract execution.

Government E-Marketplace

14. The Government E-Marketplace shall, as soon as possible, require all vendors/ bidders registered with GeM to give a certificate regarding compliance with this Order, and after the date fixed by it, shall remove non-compliant entities from GeM unless/ until they are registered in accordance with this Order.

5/12

Model Clauses/ Certificates

15. Model Clauses and Model Certificates which may be inserted in tenders / obtained from Bidders are enclosed as **Annex III**. While adhering to the substance of the Order, procuring entities are free to appropriately modify the wording of these clauses based on their past experience, local needs etc. without making any reference to this Department.

(Sanjay Prasad)
Joint Secretary (PPD)
Email ID: js.pfc2.doe@gov.in
Telephone: 011-23093882

To

(1) Secretaries of All Ministries/ Departments of Government of India for information and necessary action. They are also requested to inform these provisions to all procuring entities.

(2) Secretary, Department of Public Enterprises with a request to immediately reiterate these orders in respect of Public Enterprises.

(3) Secretary DPIIT with a request to initiate action as provided under Annex I

(4) Chief Secretaries/ Administrators of Union Territories/ National Capital Territory of Delhi

6/12

Annex I: Competent Authority and Procedure for Registration

A. The Competent Authority for the purpose of registration under this Order shall be the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT)*.

B. The Registration Committee shall have the following members*:

   i. An officer, not below the rank of Joint Secretary, designated for this purpose by DPIIT, who shall be the Chairman;
   ii. Officers (ordinarily not below the rank of Joint Secretary) representing the Ministry of Home Affairs, Ministry of External Affairs, and of those Departments whose sectors are covered by applications under consideration;
   iii. Any other officer whose presence is deemed necessary by the Chairman of the Committee.

C. DPIIT shall lay down the method of application, format etc. for such bidders as stated in para 1 of this Order.

D. On receipt of an application seeking registration from a bidder from a country covered by para 1 of this Order, the Competent Authority shall first seek political and security clearances from the Ministry of External Affairs and Ministry of Home Affairs, as per guidelines issued from time to time. Registration shall not be given unless political and security clearance have both been received.

E. The Ministry of External Affairs and Ministry of Home Affairs may issue guidelines for internal use regarding the procedure for scrutiny of such applications by them.

F. The decision of the Competent Authority, to register such bidder may be for all kinds of tenders or for a specified type(s) of goods or services, and may be for a specified or unspecified duration of time, as deemed fit. The decision of the Competent Authority shall be final.

G. Registration shall not be granted unless the representatives of the Ministries of Home Affairs and External Affairs on the Committee concur*.

H. Registration granted by the Competent Authority of the Government of India shall be valid not only for procurement by Central Government and its agencies/ public enterprises etc. but **also for procurement by State Governments and their agencies/ public enterprises etc. No fresh registration at the State level shall be required**.

7/12

I. The Competent Authority is empowered to cancel the registration already granted if it determines that there is sufficient cause. Such cancellation by itself, however, will not affect the execution of contracts already awarded. Pending cancellation, it may also suspend the registration of a bidder, and the bidder shall not be eligible to bid in any further tenders during the period of suspension.

J. For national security reasons, the Competent Authority shall not be required to give reasons for rejection / cancellation of registration of a bidder.

K. In transitional cases falling under para 3 of this Order, where it is felt that it will not be practicable to exclude bidders from a country which shares a land border with India, a reference seeking permission to consider such bidders shall be made by the procuring entity to the Competent Authority, giving full information and detailed reasons. The Competent Authority shall decide whether such bidders may be considered, and if so shall follow the procedure laid down in the above paras.

L. Periodic reports on the acceptance/ refusal of registration during the preceding period may be required to be sent to the Cabinet Secretariat. Details will be issued separately in due course by DPIIT.

[*Note:

i. In respect of application of this Order to procurement by/ under State Governments, all functions assigned to DPIIT shall be carried out by the State Government concerned through a specific department or authority designated by it. The composition of the Registration Committee shall be as decided by the State Government and paragraph G above shall not apply. However, the requirement of **political and security clearance as per para D shall remain and no registration shall be granted without such clearance**.

ii. Registration granted by State Governments shall be valid only for procurement by the State Government and its agencies/ public enterprises etc. and shall not be valid for procurement in other states or by the Government of India and their agencies/ public enterprises etc.]

8/12

Annex II: Special Cases

A. Till 31st December 2020, procurement of medical supplies directly related to containment of the Covid-19 pandemic shall be exempt from the provisions of this Order.

B. *Bona fide* procurements made through GeM without knowing the country of the bidder till the date fixed by GeM for this purpose, shall not be invalidated by this Order.

C. *Bona fide* small procurements, made without knowing the country of the bidder, shall not be invalidated by this Order.

D. In projects which receive international funding with the approval of the Department of Economic Affairs (DEA), Ministry of Finance, the procurement guidelines applicable to the project shall normally be followed, notwithstanding anything contained in this Order and without reference to the Competent Authority. Exceptions to this shall be decided in consultation with DEA.

E. This Order shall not apply to procurement by Indian missions and by offices of government agencies/ undertakings located outside India.

9/12

Annex III

Model Clause /Certificate to be inserted in tenders etc.

(While adhering to the substance of the Order, procuring entities and GeM are free to appropriately modify the wording of the clause/ certificate based on their past experience, local needs etc.)

Model Clauses for Tenders

I. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority.

II. "Bidder" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.

III. "Bidder from a country which shares a land border with India" for the purpose of this Order means: -

a. An entity incorporated, established or registered in such a country; or
b. A subsidiary of an entity incorporated, established or registered in such a country; or
c. An entity substantially controlled through entities incorporated, established or registered in such a country; or
d. An entity whose *beneficial owner* is situated in such a country; or
e. An Indian (or other) agent of such an entity; or
f. A natural person who is a citizen of such a country; or
g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above

IV. The *beneficial owner* for the purpose of (iii) above will be as under:

1. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has a controlling ownership interest or who exercises control through other means.
Explanation—

a. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent. of shares or capital or profits of the company;

10/12

b. "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders agreements or voting agreements;

2. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;

3. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;

4. Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;

5. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.

V. An Agent is a person employed to do any act for another, or to represent another in dealings with third person.

VI. *[To be inserted in tenders for Works contracts, including Turnkey contracts]* The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority.

Model Certificate for Tenders (for transitional cases as stated in para 3 of this Order)

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I hereby certify that this bidder is not from such a country and is eligible to be considered."

Model Certificate for Tenders

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the

11/12

Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"

Model Certificate for Tenders for Works involving possibility of sub-contracting

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority and will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"

Model Certificate for GeM:

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this vendor/ bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this vendor/ bidder fulfills all requirements in this regard and is eligible to be considered for procurement on GeM. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"

12/12

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F.No.6/18/2019-PPD
Ministry of Finance
Department of Expenditure
Public Procurement Division

161, North Block
New Delhi
23rd July, 2020

Order (Public Procurement No. 2)

Subject: Exclusion from restrictions under Rule 144 (xi) of the General Financial Rules (GFRs), 2017 –regarding.

In Order (Public Procurement No. 1) dated 23rd July 2020, orders have been issued requiring registration of bidders from a country sharing a land border with India in order to be eligible to bid in public procurement.

2. Notwithstanding anything contained therein, it is hereby clarified that the said Order will not apply to bidders from those countries (even if sharing a land border with India) to which the Government of India has extended lines of credit or in which the Government of India is engaged in development projects.

3. Updated lists of countries to which lines of credit have been extended or in which development projects are undertaken are given in the website of the Ministry of External Affairs.

(Sanjay Prasad)
Joint Secretary (PPD)
Email ID: js.pfc2.doe@gov.in
Telephone: 011-23093882

To,

(1) Secretaries of All Ministries/ Departments of Government of India for information and necessary action. They are also requested to inform these provisions to all procuring entities.

(2) Secretary, Department of Public Enterprises with a request to immediately reiterate these orders in respect of Public Enterprises.

(3) Chief Secretaries/ Administrators of Union Territories/ National Capital Territory of Delhi

F.No.6/18/2019-PPD
Ministry of Finance
Department of Expenditure
Public Procurement Division

161, North Block,
New Delhi
24th July, 2020

Order (Public Procurement No. 3)

Subject: Clarification to Order (Public Procurement No.1) dated 23rd July 2020

Attention is invited to paragraph 3(b) of the Order (Public Procurement No.1), under the heading "Transitional provisions" which reads as follows:

> b) *If the tendering process has crossed the first exclusionary qualificatory stage*: If the qualified bidders include bidders from such countries, the entire process shall be scrapped and initiated *de novo*. The *de novo* process shall adhere to the conditions prescribed in this Order.

It is hereby clarified that for the purpose of paragraph 3 (b), "qualified bidders" means only those bidders who would otherwise have been qualified for award of the tender after considering all factors including price, if Order (Public Procurement No. 1) dated 23rd July 2020 had not been issued.

2. If bidders from such countries would not have qualified for award for reasons unconnected with the said Order (for example, because they do not meet tender criteria or their price bid is higher or because of the provisions of purchase preference under any other order or rule or any other reason) then there is no need to scrap the tender / start the process de novo.

3. The following examples are given to assist in implementation of the Order.

Example1: Four bids are received in a tender. One of them is from a country which shares a land border with India. The bidder from such country is found to be qualified technically by meeting all prescribed criteria and is also the lowest bidder. In this case, the bidder is qualified for award of the tender, except for the provisions of the Order (Public Procurement No. 1) dated 23rd July. In this case, the tender should be scrapped and fresh tender initiated.

Example 2: The facts are as in Example 1, but the bidder from such country, though technically qualified is not the lowest because there are other technically qualified bidders whose price is lower. Hence the bidder from such country would not be

qualified for award of the tender irrespective of the Order (Public Procurement No. 1) dated 23rd July 2020. In such a case, there is no need to scrap the tender.

Example 3: The facts are as in Example 1, but the bidder from a country which shares a land border with India, though technically qualified, is not eligible for award due to the application of price preference as per other orders/ rules. In such a case, there is no need to scrap the tender.

Example 4: Three bids are received in a tender. One of them is a bidder from a country sharing a land border with India. The bidder from such a country does not meet the technical requirements and hence is not qualified. There is no need to scrap the tender.

(Sanjay Prasad)
Joint Secretary (PPD)
Email ID: js.pfc2.doe@gov.in
Telephone: 011-23093882

To,

(1) Secretaries of All Ministries/ Departments of Government of India for information and necessary action. They are also requested to inform the clarification to all procuring entities.
(2) Secretary, Department of Public Enterprises with a request to immediately circulate this clarification among Public Enterprises.
(3) Chief Secretaries/ Administrators of Union Territories/ National Capital Territory of Delhi

2/2

No. P-45021/2/2017-PP (BE-II)
Government of India
Ministry of Commerce and Industry
Department for Promotion of Industry and Internal Trade
(Public Procurement Section)

Udyog Bhawan, New Delhi
Dated: 16th September, 2020

To

All Central Ministries/Departments/CPSUs/All concerned

ORDER

Subject: Public Procurement (Preference to Make in India), Order 2017– Revision; regarding.

Department for Promotion of Industry and Internal Trade, in partial modification [Paras 2, 3, 5, 10 & 13] of Order No.P-45021/2/2017-B.E.-II dated 15.6.2017 as amended by Order No.P-45021/2/2017-B.E.-II dated 28.05.2018, Order No.P-45021/2/2017-B.E.-II dated 29.05.2019 and Order No.P-45021/2/2017-B.E.-II dated 04.06.2020, hereby issues the revised 'Public Procurement (Preference to Make in India), Order 2017" dated 16.09.2020 effective with immediate effect.

Whereas it is the policy of the Government of India to encourage 'Make in India' and promote manufacturing and production of goods and services in India with a view to enhancing income and employment, and

Whereas procurement by the Government is substantial in amount and can contribute towards this policy objective, and

Whereas local content can be increased through partnerships, cooperation with local companies, establishing production units in India or Joint Ventures (JV) with Indian suppliers, increasing the participation of local employees in services and training them,

Now therefore the following Order is issued:

1. This Order is issued pursuant to Rule 153 (iii) of the General Financial Rules 2017.

2. **Definitions**: For the purposes of this Order:

   'Local content' means the amount of value added in India which shall, unless otherwise prescribed by the Nodal Ministry, be the total value of the item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties) as a proportion of the total value, in percent.

   'Class-I local supplier' means a supplier or service provider, whose goods, services or works offered for procurement, meets the minimum local content as prescribed for 'Class-I local supplier' under this Order.

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'Class-II local supplier' means a supplier or service provider, whose goods, services or works offered for procurement, meets the minimum local content as prescribed for 'Class-II local supplier' but less than that prescribed for 'Class-I local supplier' under this Order.

'Non - Local supplier' means a supplier or service provider, whose goods, services or works offered for procurement, has local content less than that prescribed for 'Class-II local supplier' under this Order.

'L1' means the lowest tender or lowest bid or the lowest quotation received in a tender, bidding process or other procurement solicitation as adjudged in the evaluation process as per the tender or other procurement solicitation.

'Margin of purchase preference' means the maximum extent to which the price quoted by a "Class-I local supplier" may be above the L1 for the purpose of purchase preference.

'Nodal Ministry' means the Ministry or Department identified pursuant to this order in respect of a particular item of goods or services or works.

'Procuring entity' means a Ministry or department or attached or subordinate office of, or autonomous body controlled by, the Government of India and includes Government companies as defined in the Companies Act.

'Works' means all works as per Rule 130 of GFR- 2017, and will also include *'turnkey works'*.

3. Eligibility of 'Class-I local supplier'/ 'Class-II local supplier'/ 'Non-local suppliers' for different types of procurement

(a) In procurement of all goods, services or works in respect of which the Nodal Ministry / Department has communicated that there is sufficient local capacity and local competition, only 'Class-I local supplier', as defined under the Order, shall be eligible to bid irrespective of purchase value.

(b) Only 'Class-I local supplier' and 'Class-II local supplier', as defined under the Order, shall be eligible to bid in procurements undertaken by procuring entities, except when Global tender enquiry has been issued. In global tender enquiries, 'Non-local suppliers' shall also be eligible to bid along with 'Class-I local suppliers' and 'Class-II local suppliers'. In procurement of all goods, services or works, not covered by sub-para 3(a) above, and with estimated value of purchases less than Rs. 200 Crore, in accordance with Rule 161(iv) of GFR, 2017, Global tender enquiry shall not be issued except with the approval of competent authority as designated by Department of Expenditure.

(c) For the purpose of this Order, works includes Engineering, Procurement and Construction (EPC) contracts and services include System Integrator (SI) contracts.

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3A. Purchase Preference

(a) Subject to the provisions of this Order and to any specific instructions issued by the Nodal Ministry or in pursuance of this Order, purchase preference shall be given to 'Class-I local supplier' in procurements undertaken by procuring entities in the manner specified here under.

(b) In the procurements of goods or works, which are covered by para 3(b) above and which are divisible in nature, the 'Class-I local supplier' shall get purchase preference over 'Class-II local supplier' as well as 'Non-local supplier', as per following procedure:

i. Among all qualified bids, the lowest bid will be termed as L1. If L1 is 'Class-I local supplier', the contract for full quantity will be awarded to L1.

ii. If L1 bid is not a 'Class-I local supplier', 50% of the order quantity shall be awarded to L1. Thereafter, the lowest bidder among the 'Class-I local supplier' will be invited to match the L1 price for the remaining 50% quantity subject to the Class-I local supplier's quoted price falling within the margin of purchase preference, and contract for that quantity shall be awarded to such 'Class-I local supplier' subject to matching the L1 price. In case such lowest eligible 'Class-I local supplier' fails to match the L1 price or accepts less than the offered quantity, the next higher 'Class-I local supplier' within the margin of purchase preference shall be invited to match the L1 price for remaining quantity and so on, and contract shall be awarded accordingly. In case some quantity is still left uncovered on Class-I local suppliers, then such balance quantity may also be ordered on the L1 bidder.

(c) In the procurements of goods or works, which are covered by para 3(b) above and which are not divisible in nature, and in procurement of services where the bid is evaluated on price alone, the 'Class-I local supplier' shall get purchase preference over 'Class-II local supplier' as well as 'Non-local supplier', as per following procedure:

i. Among all qualified bids, the lowest bid will be termed as L1. If L1 is 'Class-I local supplier', the contract will be awarded to L1.

ii. If L1 is not 'Class-I local supplier', the lowest bidder among the 'Class-I local supplier', will be invited to match the L1 price subject to Class-I local supplier's quoted price falling within the margin of purchase preference, and the contract shall be awarded to such 'Class-I local supplier' subject to matching the L1 price.

iii. In case such lowest eligible 'Class-I local supplier' fails to match the L1 price, the 'Class-I local supplier' with the next higher bid within the margin of purchase preference shall be invited to match the L1 price and so on and contract shall be awarded accordingly. In case none of the 'Class-I local supplier' within the margin of purchase preference matches the L1 price, the contract may be awarded to the L1 bidder.

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(d) "Class-II local supplier" will not get purchase preference in any procurement, undertaken by procuring entities.

3B. Applicability in tenders where contract is to be awarded to multiple bidders - In tenders where contract is awarded to multiple bidders subject to matching of L1 rates or otherwise, the 'Class-I local supplier' shall get purchase preference over 'Class-II local supplier' as well as 'Non-local supplier', as per following procedure:

a) In case there is sufficient local capacity and competition for the item to be procured, as notified by the nodal Ministry, only Class I local suppliers shall be eligible to bid. As such, the multiple suppliers, who would be awarded the contract, should be all and only 'Class I Local suppliers'.

b) In other cases, 'Class II local suppliers' and 'Non local suppliers' may also participate in the bidding process along with 'Class I Local suppliers' as per provisions of this Order.

c) If 'Class I Local suppliers' qualify for award of contract for at least 50% of the tendered quantity in any tender, the contract may be awarded to all the qualified bidders as per award criteria stipulated in the bid documents. However, in case 'Class I Local suppliers' do not qualify for award of contract for at least 50% of the tendered quantity, purchase preference should be given to the 'Class I local supplier' over 'Class II local suppliers'/ 'Non local suppliers' provided that their quoted rate falls within 20% margin of purchase preference of the highest quoted bidder considered for award of contract so as to ensure that the 'Class I Local suppliers' taken in totality are considered for award of contract for at least 50% of the tendered quantity.

d) First purchase preference has to be given to the lowest quoting 'Class-I local supplier', whose quoted rates fall within 20% margin of purchase preference, subject to its meeting the prescribed criteria for award of contract as also the constraint of maximum quantity that can be sourced from any single supplier. If the lowest quoting 'Class-I local supplier', does not qualify for purchase preference because of aforesaid constraints or does not accept the offered quantity, an opportunity may be given to next higher 'Class-I local supplier', falling within 20% margin of purchase preference, and so on.

e) To avoid any ambiguity during bid evaluation process, the procuring entities may stipulate its own tender specific criteria for award of contract amongst different bidders including the procedure for purchase preference to 'Class-I local supplier' within the broad policy guidelines stipulated in sub-paras above.

4. **Exemption of small purchases**: Notwithstanding anything contained in paragraph 3, procurements where the estimated value to be procured is less than Rs. 5 lakhs shall be exempt from this Order. However, it shall be ensured by procuring entities that procurement is not split for the purpose of avoiding the provisions of this Order.

5. **Minimum local content**: The 'local content' requirement to categorize a supplier as 'Class-I local supplier' is minimum 50%. For 'Class-II local supplier', the 'local content' requirement is minimum 20%. Nodal Ministry/ Department may prescribe only a higher

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percentage of minimum local content requirement to categorize a supplier as 'Class-I local supplier'/ 'Class-II local supplier'. For the items, for which Nodal Ministry/ Department has not prescribed higher minimum local content notification under the Order, it shall be 50% and 20% for 'Class-I local supplier'/ 'Class-II local supplier' respectively.

6. **Margin of Purchase Preference**: The margin of purchase preference shall be 20%.

7. **Requirement for specification in advance**: The minimum local content, the margin of purchase preference and the procedure for preference to Make in India shall be specified in the notice inviting tenders or other form of procurement solicitation and shall not be varied during a particular procurement transaction.

8. **Government E-marketplace**: In respect of procurement through the Government E-marketplace (GeM) shall, as far as possible, specifically mark the items which meet the minimum local content while registering the item for display, and shall, wherever feasible, make provision for automated comparison with purchase preference and without purchase preference and for obtaining consent of the local supplier in those cases where purchase preference is to be exercised.

9. **Verification of local content**:

   a. The 'Class-I local supplier'/ 'Class-II local supplier' at the time of tender, bidding or solicitation shall be required to indicate percentage of local content and provide self-certification that the item offered meets the local content requirement for 'Class-I local supplier'/ 'Class-II local supplier', as the case may be. They shall also give details of the location(s) at which the local value addition is made.

   b. In cases of procurement for a value in excess of Rs. 10 crores, the 'Class-I local supplier'/ 'Class-II local supplier' shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.

   c. Decisions on complaints relating to implementation of this Order shall be taken by the competent authority which is empowered to look into procurement-related complaints relating to the procuring entity.

   d. Nodal Ministries may constitute committees with internal and external experts for independent verification of self-declarations and auditor's/ accountant's certificates on random basis and in the case of complaints.

   e. Nodal Ministries and procuring entities may prescribe fees for such complaints.

   f. False declarations will be in breach of the Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.

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g. A supplier who has been debarred by any procuring entity for violation of this Order shall not be eligible for preference under this Order for procurement by any other procuring entity for the duration of the debarment. The debarment for such other procuring entities shall take effect prospectively from the date on which it comes to the notice of other procurement entities, in the manner prescribed under paragraph 9h below.

h. The Department of Expenditure shall issue suitable instructions for the effective and smooth operation of this process, so that:

   i. The fact and duration of debarment for violation of this Order by any procuring entity are promptly brought to the notice of the Member-Convenor of the Standing Committee and the Department of Expenditure through the concerned Ministry /Department or in some other manner;

   ii. on a periodical basis such cases are consolidated and a centralized list or decentralized lists of such suppliers with the period of debarment is maintained and displayed on website(s);

   iii. in respect of procuring entities other than the one which has carried out the debarment, the debarment takes effect prospectively from the date of uploading on the website(s) in the such a manner that ongoing procurements are not disrupted.

10. **Specifications in Tenders and other procurement solicitations**:

a. Every procuring entity shall ensure that the eligibility conditions in respect of previous experience fixed in any tender or solicitation do not require proof of supply in other countries or proof of exports.

b. Procuring entities shall endeavour to see that eligibility conditions, including on matters like turnover, production capability and financial strength do not result in unreasonable exclusion of 'Class-I local supplier'/ 'Class-II local supplier' who would otherwise be eligible, beyond what is essential for ensuring quality or creditworthiness of the supplier.

c. Procuring entities shall, within 2 months of the issue of this Order review all existing eligibility norms and conditions with reference to sub-paragraphs 'a' and 'b' above.

d. Reciprocity Clause

   i. When a Nodal Ministry/Department identifies that Indian suppliers of an item are not allowed to participate and/ or compete in procurement by any foreign government, due to restrictive tender conditions which have direct or indirect effect of barring Indian companies such as registration in the procuring country, execution of projects of specific value in the procuring country etc., it shall provide such details to all its procuring entities including CMDs/CEOs of PSEs/PSUs, State Governments and other procurement agencies under their administrative control and GeM for appropriate reciprocal action.

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ii. Entities of countries which have been identified by the nodal Ministry/Department as not allowing Indian companies to participate in their Government procurement for any item related to that nodal Ministry shall not be allowed to participate in Government procurement in India for all items related to that nodal Ministry/ Department, except for the list of items published by the Ministry/ Department permitting their participation.

iii. The stipulation in (ii) above shall be part of all tenders invited by the Central Government procuring entities stated in (i) above. All purchases on GeM shall also necessarily have the above provisions for items identified by nodal Ministry/ Department.

iv. State Governments should be encouraged to incorporate similar provisions in their respective tenders.

v. The term 'entity' of a country shall have the same meaning as under the FDI Policy of DPIIT as amended from time to time.

e. Specifying foreign certifications/ unreasonable technical specifications/ brands/ models in the bid document is restrictive and discriminatory practice against local suppliers. If foreign certification is required to be stipulated because of non-availability of Indian Standards and/or for any other reason, the same shall be done only after written approval of Secretary of the Department concerned or any other Authority having been designated such power by the Secretary of the Department concerned.

f. "All administrative Ministries/Departments whose procurement exceeds *Rs.* 1000 Crore per annum shall notify/ update their procurement projections every year, including those of the PSEs/PSUs, for the next 5 years on their respective website."

10A. Action for non-compliance of the Provisions of the Order: In case restrictive or discriminatory conditions against domestic suppliers are included in bid documents, an inquiry shall be conducted by the Administrative Department undertaking the procurement (including procurement by any entity under its administrative control) to fix responsibility for the same. Thereafter, appropriate action, administrative or otherwise, shall be taken against erring officials of procurement entities under relevant provisions. Intimation on all such actions shall be sent to the Standing Committee.

11. **Assessment of supply base by Nodal Ministries**: The Nodal Ministry shall keep in view the domestic manufacturing / supply base and assess the available capacity and the extent of local competition while identifying items and prescribing the higher minimum local content or the manner of its calculation, with a view to avoiding cost increase from the operation of this Order.

12. **Increase in minimum local content**: The Nodal Ministry may annually review the local content requirements with a view to increasing them, subject to availability of sufficient local competition with adequate quality.

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13. **Manufacture under license/ technology collaboration agreements with phased indigenization**: While notifying the minimum local content, Nodal Ministries may make special provisions for exempting suppliers from meeting the stipulated local content if the product is being manufactured in India under a license from a foreign manufacturer who holds intellectual property rights and where there is a technology collaboration agreement / transfer of technology agreement for indigenous manufacture of a product developed abroad with clear phasing of increase in local content.

13A. In procurement of all goods, services or works in respect of which there is substantial quantity of public procurement and for which the nodal ministry has not notified that there is sufficient local capacity and local competition, the concerned nodal ministry shall notify an upper threshold value of procurement beyond which foreign companies shall enter into a joint venture with an Indian company to participate in the tender. Procuring entities, while procuring such items beyond the notified threshold value, shall prescribe in their respective tenders that foreign companies may enter into a joint venture with an Indian company to participate in the tender. The procuring Ministries/Departments shall also make special provisions for exempting such joint ventures from meeting the stipulated minimum local content requirement, which shall be increased in a phased manner.

14. **Powers to grant exemption and to reduce minimum local content**: The administrative Department undertaking the procurement (including procurement by any entity under its administrative control), with the approval of their Minister-in-charge, may by written order, for reasons to be recorded in writing,

    a. reduce the minimum local content below the prescribed level; or
    b. reduce the margin of purchase preference below 20%; or
    c. exempt any particular item or supplying entities from the operation of this Order or any part of the Order.

    A copy of every such order shall be provided to the Standing Committee and concerned Nodal Ministry / Department. The Nodal Ministry / Department concerned will continue to have the power to vary its notification on Minimum Local Content.

15. **Directions to Government companies**: In respect of Government companies and other procuring entities not governed by the General Financial Rules, the administrative Ministry or Department shall issue policy directions requiring compliance with this Order.

16. **Standing Committee**: A standing committee is hereby constituted with the following membership:

    Secretary, Department for Promotion of Industry and Internal Trade—Chairman
    Secretary, Commerce—Member
    Secretary, Ministry of Electronics and Information Technology—Member
    Joint Secretary (Public Procurement), Department of Expenditure—Member
    Joint Secretary (DPIIT)—Member-Convenor

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The Secretary of the Department concerned with a particular item shall be a member in respect of issues relating to such item. The Chairman of the Committee may co-opt technical experts as relevant to any issue or class of issues under its consideration.

17. **Functions of the Standing Committee**: The Standing Committee shall meet as often as necessary, but not less than once in six months. The Committee

a. shall oversee the implementation of this order and issues arising therefrom, and make recommendations to Nodal Ministries and procuring entities.
b. shall annually assess and periodically monitor compliance with this Order
c. shall identify Nodal Ministries and the allocation of items among them for issue of notifications on minimum local content
d. may require furnishing of details or returns regarding compliance with this Order and related matters
e. may, during the annual review or otherwise, assess issues, if any, where it is felt that the manner of implementation of the order results in any restrictive practices, cartelization or increase in public expenditure and suggest remedial measures
f. may examine cases covered by paragraph 13 above relating to manufacture under license/ technology transfer agreements with a view to satisfying itself that adequate mechanisms exist for enforcement of such agreements and for attaining the underlying objective of progressive indigenization
g. may consider any other issue relating to this Order which may arise.

18. **Removal of difficulties**: Ministries /Departments and the Boards of Directors of Government companies may issue such clarifications and instructions as may be necessary for the removal of any difficulties arising in the implementation of this Order.

19. **Ministries having existing policies**: Where any Ministry or Department has its own policy for preference to local content approved by the Cabinet after 1st January 2015, such policies will prevail over the provisions of this Order. All other existing orders on preference to local content shall be reviewed by the Nodal Ministries and revised as needed to conform to this Order, within two months of the issue of this Order.

20. **Transitional provision**: This Order shall not apply to any tender or procurement for which notice inviting tender or other form of procurement solicitation has been issued before the issue of this Order.

(Rajesh Gupta)
Director
Tel: 23063211
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No.F.1/4/2021-PPD
Government of India
Ministry of Finance
Department of Expenditure
Public Procurement Division
*****

264-C, North Block, New Delhi.
18.05.2023.

OFFICE MEMORANDUM

Subject: Concurrent application of Public Procurement Policy for Micro and Small Enterprises Order, 2012 and Public Procurement (Preference to Make in India) Order, 2017.

The undersigned is directed to refer two Preferential Procurement Orders mandated for the Public Procurement in India, namely:

i. Public Procurement Policy for Micro and Small Enterprises (MSEs) Order dated 23.03.2012 (PPP-MSE Order) issued by Ministry of Micro, Small and Medium Enterprises (MoMSME) in exercise of the powers conferred in Section 11 of the MSME Development Act, 2006. (Last revised on 09.11.2018)

ii. Public Procurement (Preference to Make in India) Order, 2017 (PPP-MII order), under Rule 153(iii) of the General Financial Rules (GFRs) 2017, approved by the Cabinet. Implementation of this PPP-MII order is monitored by Department for Promotion of Industry and Internal Trade (DPIIT). (Last revised on 16.09.2020.)

2. It has been brought to the notice of this Department that concurrent application of these two orders are creating confusion to the procuring entities and different procuring entities interpret them differently. In order to bring predictability both to the procuring entities as well as bidders, following guidelines are being issued.

Guidelines

3. The Class-I local suppliers, under PPP-MII Order, participating in any government tender, may or may not be MSEs, as defined under the MSME Act. Similarly, MSEs participating in any government tender, may or may not be Class-I local suppliers. Suppliers may be categorised in following four broad categories for consideration or applicability of purchase preference:

Category	**Terminology**
Supplier is both MSE & Class-I local supplier.	"MSE Class-I local supplier"
Supplier is MSE but not Class-I local supplier.	"MSE but non-Class-I local supplier"
Supplier is not MSE but is Class-I local supplier.	"Non-MSE but Class-I local supplier"
Supplier is neither MSE nor Class-I local.	"Non-MSE non-Class-I local supplier"

4. The applicability of PPP-MSE Order and PPP-MII Order in various scenarios, involving simultaneous purchase preference to MSEs and Class-I local suppliers under PPP-MSE Order and PPP-MII Order respectively, shall be as under:

a) *Items covered under Para 3(a) of PPP- MII Order, 2017 for which Nodal Ministry has notified sufficient local capacity and competition:* For these items, only Class-I local suppliers are eligible to bid irrespective of purchase value. Hence, Class-II local suppliers or Non-local suppliers, including MSEs which are Class-II local suppliers/ Non-local suppliers, are not eligible to bid. Possible scenarios can be as under:

(i) L-1 is "MSE Class-I local supplier" - 100% of the tendered quantity is to be awarded to L-1.

(ii) L-1 is "Non-MSE but Class-I local supplier" - Purchase preference is given to MSEs as per PPP-MSE Order. Balance quantity is to be awarded to the L-1 bidder.

b) *Items reserved exclusively for procurement from MSEs as per PPP-MSE Order:* These items are reserved exclusively for purchase from MSEs. Hence, non-MSEs are not eligible to bid for these items. Possible scenarios can be as under:

(i) L-1 is "MSE Class-I local supplier" - 100% of the tendered quantity is to be awarded to L-1.

(ii) L-1 is "MSE non-Class–I local supplier" - Purchase preference is to be given to Class-I local supplier as per PPP-MII Order. Balance quantity, is to be awarded to L-1 bidder.

c) *If items are neither notified for sufficient local capacity nor reserved for MSEs, then the process will be as follows:*

c (a) Items covered under Para 3A(b) of PPP-MII Order are divisible items and both MSEs as well as Class-I local suppliers are eligible for purchase preference. Possible scenarios can be as under:

(i) L-1 is "MSE Class-I local supplier" - 100% of the tendered quantity is to be awarded to L-1.

(ii) L-1 is "Non-MSE but Class-I local supplier" - Purchase preference is to be given to MSEs, if eligible, as per PPP-MSE Order. Balance quantity is to be awarded to L-1 bidder.

(iii) L-1 is "MSE but non-Class-I local supplier" - Purchase preference is to be given to Class-I local suppliers, if eligible, as per PPP-MII Order. Balance quantity is to be awarded to L-1 bidder.

(iv) L-1 is "Non-MSE non-Class-I local supplier" - Purchase preference is to be given to MSEs as per PPP-MSE Order. Thereafter, purchase preference is to be given to Class-I local suppliers for "50% of the tendered quantity minus quantity allotted to MSEs

above" as per PPP- MII Order. For the balance quantity, contract is to be awarded to L-1 bidder. *(Kindly refer to the illustrative example in the annexure).*

c (b) Items covered under Para 3A(c) of PPP-MII Order, 2017 are non-divisible items and both MSEs as well as Class-I local suppliers are eligible for purchase preference. Possible scenarios can be as under:

(i) L-1 is "MSE Class-I local supplier" - Contract is awarded to L-1.

(ii) L-1 is not "MSE Class-I local supplier" but the "MSE Class-I local supplier" falls within 15% margin of purchase preference - Purchase preference is to be given to lowest quoting "MSE Class-I local supplier". If lowest quoting "MSE Class-I local supplier" does not accept the L-1 rates, the next higher "MSE Class-I local supplier" falling within 15% margin of purchase preference is to be given purchase preference and so on.

(iii) If conditions mentioned in sub paras (i) and (ii) above are not met i.e. L-1 is neither "MSE Class-I local supplier" nor "MSE Class-I local supplier" is eligible to take benefit of purchase preference, the contract is to be awarded/ purchase preference to be given in different possible scenarios as under:

A. L1 is "MSE but non-Class-I local supplier" or "Non-MSE but Class-I local supplier" – Contract is be awarded to L1.

B. L1 is "Non-MSE non-Class-I local supplier" - First purchase preference to be given to MSE as per PPP-MSE Order. If MSE not eligible/ does not accept - purchase preference to be given to Class- I Local supplier as per PPP-MII Order. If Class-I Local supplier also not eligible/ does not accept – contract to be awarded to L-1.

d) *Items reserved for both MSEs and Class-I local suppliers*: These items are reserved exclusively for purchase from MSEs as well as Class-I local suppliers. Hence, only "MSE Class-I local supplier" are eligible to bid for these items. Non-MSEs/Class-II local suppliers/ Non-local suppliers cannot bid for these items. Hence the question of purchase preference does not arise.

e) Non-local suppliers, including MSEs falling in the category of Non-local suppliers, shall be eligible to bid only against Global Tender Enquiry.

18/5/2023

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To

1. Secretaries of all Central Government Ministries/ Departments.
2. Secretary Department of Public Enterprises with a request for issuing suitable instructions to all Central Public Sector Enterprises in this regard.

Annexure

Example explaining applicability in scenario explained in para 4 c (a)(iv)

(Scenario: Divisible items, both MSEs as well as Class-I local suppliers eligible for purchase preference and L-1 is "Non-MSE non-Class-I local supplier")

Item – Desktop computer

Qty – 50 Nos.

Details of bids received

Sr. No.	Name of bidder	Rates quoted	Price Ranking	Status of bidder
1.	A	100	L1	"Non-MSE non- Class-I local supplier"
2.	B	110	L2	"Non-MSE but Class-I local supplier"
3.	C	112	L3	"MSE but non- Class-I local supplier"
4.	D	115	L4	"Non-MSE but Class-I local supplier"
5.	E	118	L5	"MSE but non- Class-I local supplier"
6.	F	120	L6	"MSE Class-I local supplier"

1. In this case, first purchase preference is to be given to MSEs as per PPP-MSE Order for 25% of tendered quantity of 50 Nos. i.e. 12.5 Nos. (rounded off to the next whole number say 13 Nos). Accordingly, invite L3 (bidder C), whose quoted rates falls within 15% margin of purchase preference to match L1 price i.e. Rs. 100/- for quantity of 13 Nos. Bidder "E" and "F", although MSEs, will not get purchase preference since their quoted rates don't fall within 15% margin of purchase preference. Bidder C will be considered for order of 13 Nos. on confirmation of reduction of price.

2. For 50% of balance quantity of 37 number (tendered quantity of 50 – 13 awarded to bidder C; assuming bidder C has confirmed to accept L1 rates), purchase preference will be given to lowest Class-I local supplier as per PPP-MII Order. Accordingly, bidder B will be invited to match L-1 price for 50% of 37 Nos i.e. 18.5 (say 19 Nos of computers). If bidder "B" does not accept the L1 price i.e. price of Rs. 100/- per unit, next higher Class-I local supplier falling within 20% margin of purchase preference, i.e. bidder "D", may be invited to match L-1 price for 19 Nos. of computers and so on.

3. For remaining quantity i.e. 18 Nos (50-13-19), the contract will be awarded to lowest quoting bidder i.e. Bidder "A", who is L-1 in the example.

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