

Fire Detection & Protection System of Unit-1 & 2 at 2x800 MW NTPC LARA STPP STAGE-II

Particulars	Schedule	Total Mass (T) (Tonnes) For Pkg-A	Total Mass (T) (Tonnes) For Pkg-B
FPS-Hydrant Piping (Above Ground)	I	1027.71	1358.91
FPS-Hydrant Piping (Below Ground)	II	24.9	93.29
FPS-Spray & Other Piping	III	392.38	759.08
IGES	III	52.78	24.88
Rotating Machines	IV	22.21	7.36
Structural Steel	V	103.468	155.202
TOTAL		1623.4021	2398.7202
		4022.1223	

[illegible]

PROJECT : 2 x 800 MW NTPC LARA									
CUSTOMER : NTPC									
DOC NO. / TITLE : ANNEXURE-1 /ERECTION BOQ FOR WATER BASED FIRE PROTECTION SYSTEM (INCLUDING FIRE BOOSTER PUMPS AND ITS PLC)									
Sl.No	SYSTEM DESCRIPTION	Unit	Qty for Pkg-A BTG+AWPH	Qty for Pkg-B OUTSIDE BTG	Mass/Mtr or Unit Weight in KGS	Total Mass (T) (Tonnes) For Pkg-A	Total Mass (T) (Tonnes) For Pkg-B	Dimensions (L x B x H) in M	Schedule
A	FIRE BOOSTER PUMP HOUSE EQUIPMENT								
1	Hydrant Booster Pumps & Accessories (Electric Motor Driven)	Sets	1	0	1,014.0	1.01	-00	2x1x1 (Pump+drive assembly)	IV
1a	Motor for Booster Pumps	Sets	1	0	1,200.0	1.20	-00		IV
2	Hydrant Booster Pump & Accessories (Diesel Engine Driven)	Sets	1	0	1,069.0	1.07	-00	2x1.2x1.2 (Pump+drive assembly)	IV
2a	Diesel engine for Booster Pumps	Sets	1	0	900.0	0.90	-00		IV
3	Spray Booster Pumps & Accessories (Electric Motor Driven)	Sets	1	0	2,073.0	2.07	-00	3x1.3x1.5	IV
3a	Motor for Booster Pumps	Sets	1	0	1,200.0	1.20	-00		IV
4	Spray Booster Pump & Accessories (Diesel Engine Driven)	Sets	1	0	2,013.0	2.01	-00	3x1.3x1.5	IV
4a	Diesel engine for Booster Pumps	Sets	1	0	1,200.0	1.20	-00		IV
6	Diesel Engine Equipment in Booster Pump House								IV
i	Diesel tanks for Diesel engines in Booster PH	Sets	2	0	200.0	0.40	-00	0.6 x 0.6 x 0.6	IV
7	Instrumentation in Fire & Booster Pump House								
ii	Level Transmitters for water reservoir	Nos.	0	0	1.5	-00	-00		IV
iii	Differential Pressure Switch	Nos.	0	0	2.0	-00	-00		IV
iv	Differential Pressure guage	Nos.	0	0	1.5	-00	-00		IV
v	Level Indicator for Water Reservoir	Nos.	0	0	3.0	-00	-00		IV
vii	Vent Valve	Nos.	4	0	0.5	0.00	-00		IV
x	Safety Relief Valve	NOS	2	0	2.0	0.00	-00		IV
8	300 NB Basket Stainer in M.S. Contruction	NOS	0	0	85.0	-00	-00		I
9	Exhaust Pipe with insulation & silencer for Diesel engine	M	5	0	18.0	0.09	-00		IV
10	Cast Iron Gate Valve								
iii	Size 300 mm NB	NOS	4	0	304	1.22	-00		I
iv	Size 250 mm NB	NOS	3	0	200	0.60	-00		I
v	Size 200 mm NB	NOS	6	0	126	0.76	-00		I
vi	Size 150 mm NB	NOS	4	0	77	0.31	-00		I
vii	Size 100 mm NB	NOS	4	0	44	0.18	-00		I
12	Cast Iron Non Return Valve								
iii	Size 250 mm NB	NOS	2	0	200	0.40	-00		I
iv	Size 150 mm NB	NOS	2.2	0	126	0.28	-00		I
15	Flanges, nut bolt & gasket	LOT	1	0	500	0.50	-00		I
16	M.S. Pipe								
i	M.S. Pipe - 300 NB	Mtrs.	45	0	55.0	2.48	-00	323.9x7.1	I
ii	M.S. Pipe - 250 NB	Mtrs.	51	0	41.0	2.09	-00	273x6.3	I
iii	M.S. Pipe - 200 NB	Mtrs.	72	0	33.0	2.38	-00	219.1x6.3	I
iv	M.S. Pipe - 150 NB	Mtrs	55	0	21.3	1.17	-00		I
v	M.S. Pipe - 100 NB	Mtrs.	36	0	14.5	0.52	-00	Mild steel as per IS:1239 (Part-I) medium grade	I
vi	M.S. Pipe - 65 NB	Mtrs.	36	0	9.9	0.36	-00	Mild steel as per IS:1239 (Part-I) medium grade	III
vii	M.S. Pipe - 50 NB	Mtrs.	36	0	4.5	0.16	-00	Mild steel as per IS:1239 (Part-I) medium grade	III
22	Pipe Fittings	LOT	1	0		2.7	-0		I
B	Hydrant System and Spray system (upto DV) :: Main Header and branch lines - Piping & equipment	Unit			Mass/Mtr	Total Mass (T) (Tonnes) For Pkg-A	Total Mass (T) (Tonnes) For Pkg-B		
1	UG Pipes:: Pipes upto 150 NB IS:1239 Part-I and above 150 NB IS:3589								II
i	300 NB	Mtrs	850	1100	55.0	46.75	60.50		II
ii	250 NB	Mtrs	150	50	41.0	6.15	2.05		II
iii	200 NB	Mtrs	150	55	33.0	4.95	1.82		II
iv	150 NB	Mtrs	450	1050	21.3	9.59	22.37		II
v	100 NB	Mtrs	250	350	14.5	3.63	5.08		II
vi	80 NB	Mtrs	75	150	9.9	0.74	1.49		II
2	AG Pipes:: Pipes upto 150 NB IS:1239 Part-I and above 150 NB IS:3589								
i	300 NB	Mtrs	8600	12000	55.0	473.00	660.00		I
ii	250 NB	Mtrs	1500	500	41.0	61.50	20.50		I
iii	200 NB	Mtrs	1500	550	33.0	49.50	18.15		I
iv	150 NB	Mtrs	6000	12000	21.3	127.80	255.60		I
v	100 NB	Mtrs	3000	4500	14.5	43.50	65.25		I
vi	80 NB	Mtrs	800	2250	9.9	7.92	22.28		I
vii	50 NB	Mtrs				-00	-00		I
3	Monitors					-00	-00		
i	Water monitor 38 mm Nozzle Bore	Nos	30	20	40	1.20	0.80		I
4	Single headed 63 mm dia hydrant landing valve								
i	External & Internal	Nos	298	210	20	5.97	4.21		I
5	Branch Pipes and nozzles (triple purpose nozzle)		0.78	1.65					

PROJECT : 2 x 800 MW NTPC LARA								
CUSTOMER : NTPC								
DOC NO. / TITLE : ANNEXURE-1 /ERECTION BOQ FOR WATER BASED FIRE PROTECTION SYSTEM (INCLUDING FIRE BOOSTER PUMPS AND ITS PLC)								
	i Branch Pipes and nozzles (triple purpose nozzle)	Nos	298	210	10	2.98	2.10	I
6	Fire Hoses							
	i HOSE PIPE (15 M LENGTH)	Nos	439	309	15	6.58	4.64	I
	ii HOSE PIPE (7.5 M LENGTH)	Nos	63	44	15	0.95	0.67	I
7	Hose Boxes							
	i HOSE BOX (750X600X250)	Nos	222	157	5	1.11	0.78	I
	ii HOSE BOX (450 X 600 X 250)	Nos	34	24	5	0.17	0.12	I
8	Hose Reel	Nos	0	0	12	-0.00	-0.00	
9	Air Release Valves - Size 25 mm NB.	Nos	36	25	1	0.04	0.03	I
10	Gun Metal Gate Valve-25NB	Nos	36	25	1	0.04	0.03	I
12	Cast Iron Gate Valves in FWPH, Hydrant & Spray Header and FEH	Unit				-0.00	-0.00	
	i 15 NB GATE VALVE	Nos			3.00	-0.00	-0.00	III
	ii 25 NB GATE VALVE	Nos			5.43	-0.00	-0.00	III
	iii 50 NB GATE VALVE	Nos	5	5	15.17	0.08	0.08	III
	iv 80 NB GATE VALVE	Nos	4	4	27.00	0.11	0.11	I
	v 100 NB GATE VALVE	Nos	35	35	44.00	1.54	1.54	I
	vi 150 NB GATE VALVE	Nos	11	39	77.00	0.85	3.00	I
	vii 200 NB GATE VALVE	Nos	15	20	126.00	1.89	2.52	I
	viii 250 NB GATE VALVE	Nos	8	10	200.00	1.60	2.00	I
	ix 300 NB GATE VALVE (With Limit switch)	Nos	10	10	304.00	3.04	3.04	I
	ix 300 NB GATE VALVE	Nos	15	15	304.00	4.56	4.56	I
13	Butterfly valve					-0.00	-0.00	
	i 150 NB	Nos	0	45	16.00	-0.00	0.72	I
14	Pipe Fittings (Including FWPH & Booster PH Fittings)	Lot	1	1		208.76	283.77	I
15	Flanges, nut bolt & gasket (Including FWPH & Booster PH)	Lot	1	1		7.50	2.50	I
16	Struructural Steel	LOT	1	1	-	-	-	
C	MEDIUM VELOCITY WATER SPRAY SYSTEM (For Conveyors, Cable Galleries, Transfer Points, Crusher House, Wagon Tippler etc.)	Unit			Mass/Mtr	Total Mass (T) (Tonnes) For Pkg-A	Total Mass (T) (Tonnes) For Pkg-B	
1	MS ERW Galvanized to IS:4736 upto 150 NB							III
	i 150 NB	Mtrs.	550	1020	21	11.72	21.73	III
	ii 100 NB	Mtrs.	4400	14960	15	63.80	216.92	III
	iii 80 NB	Mtrs.	200	680	10	1.98	6.73	III
	v 50 NB	Mtrs.	2600	8840	6	16.09	54.72	III
2	25 NB ERW PIPE from Deluge Valve to spray line	Mtrs.	5800	19720	4	23.20	78.88	III
2.1	MS pipe 100/150 NB	Mtrs.	3500	7480	18	63.00	134.64	III
3	Cast iron Rising spindle Type Gate Valve							III
	i 150 NB	Nos.	32	41	76	2.45	3.12	III
	ii 100 NB	Nos.	60	245	44	2.63	10.74	III
	iii 80 NB	Nos.	4	14	27	0.11	0.37	III
5	Cast iron Deluge Valve (wet pilot) complete with necessary trim, water gong							III
	i 150 NB	Nos.	16	20	151	2.42	3.08	III
	ii 100 NB	Nos.	30	122	97	2.91	11.87	III
	iii 80 NB	Nos.	2	7	70	0.14	0.48	III
6	M.S Y- Type Strainer							III
	i 150 NB	Nos.	16	20	40	0.64	0.82	III
	ii 100 NB	Nos.	30	122	25	0.75	3.06	III
	iii 80 NB	Nos.	2	7	20	0.04	0.14	III
7	Spray Nozzle - Stainless Steel							III
	i K-18	No	35	118	0.125	0.00	0.01	III
	ii K-22	No	76	257	0.125	0.01	0.03	III
	iii K-30	No	2276	7737	0.125	0.28	0.97	III
	iv K-35	No	412	1400	0.125	0.05	0.17	III
	v K-41	No	516	1756	0.125	0.06	0.22	III
	vi K-51	No	8	28	0.125	0.00	0.00	III
	vii K-64	No	142	484	0.125	0.02	0.06	III
	viii K-79	No	46	156	0.125	0.01	0.02	III
15	SS orifice plate					-0.00	-0.00	III
	i 150 NB	No	20	27	2	0.04	0.05	III
	ii 100 NB	No	30	186	1.5	0.05	0.28	III
	iii 80 NB	No	2	1	1	0.00	0.00	III
17	Pipe Fittings, Flanges, Studnuts & gaskets	Lot	0	1		46	132	III
18	Cast Iron Rising Spindle Type Gate Valve - IS : 14846	Lot		0				III
	i 150 NB	No	0	0	76	-0.00	-0.00	III
	ii 100 NB	No	0	0	44	-0.00	-0.00	III
	iii 80 NB	No	0	0	27	-0.00	-0.00	III

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CUSTOMER : NTPC								
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D	HIGH VELOCITY WATER SPRAY SYSTEM (GT, ST, UAT & UT TRANSFORMERS, BOILER BURNER, LUBE OIL CONSOLE, BFP LUBE OIL, TURBINE LUBE OIL)	Unit						III
1	ERW G.I. Pipe as Per IS:1239 Medium Class							III
i	150 NB	Mtrs.	300	200	21	6.39	4.26	III
ii	100 NB	Mtrs.	2100	1100	15	30.45	15.95	III
iii	80 NB	Mtrs.	1500	750	10	14.85	7.43	III
iv	65 NB	Mtrs.	0	0	8	-0.00	-0.00	III
v	50 NB	Mtrs.	7500	3500	6	46.43	21.67	III
vi	40 NB	Mtrs.	0	0	4	-0.00	-0.00	III
vii	32 NB	Mtrs.	0	0	4	-0.00	-0.00	III
viii	25 NB	Mtrs.	866	346	3	2.60	1.04	III
2	ERW, MS black pipe as Per IS:1239 Medium Class							III
i	150 NB	Mtrs.	54	22	10	0.53	0.21	III
ii	100/80 NB	Mtrs.	720	350	10	7.13	3.47	III
iii	65 NB	Mtrs.	249	100	8	1.98	0.79	III
iv	50 NB	Mtrs.	1304	522	6	8.07	3.23	III
v	40 NB	Mtrs.	233	93	4	1.02	0.41	III
vi	25 NB	Mtrs.	7574	4500	3	22.72	13.50	III
3	Cast iron Rising spindle Type Gate Valve							III
i	150 NB	Nos.	7	4	76	0.55	0.31	III
ii	100 NB	Nos.	48	24	44	2.11	1.05	III
iii	80 NB	Nos.	42	32	27	1.14	0.87	III
4	Cast iron wafer Butterfly Valve							III
i	150 NB	Nos.	0	0	70	-0.00	-0.00	III
ii	100 NB	Nos.	0	0	43	-0.00	-0.00	III
iii	80 NB	Nos.	0	0	25	-0.00	-0.00	III
5	Cast iron Deluge Valve (wet pilot) complete with necessary trim, water gong							III
i	150 NB	Nos.	4	2	151	0.54	0.30	III
ii	100 NB	Nos.	24	12	97	2.33	1.16	III
iii	80 NB	Nos.	21	16	75	1.58	1.20	III
6	M.S Y- Type Strainer							III
i	150 NB	No	4	1	58	0.21	0.08	III
ii	100 NB	No	24	10	47	1.13	0.45	III
iii	80 NB	No	21	8	35	0.74	0.29	III
7	Spray Nozzle - Stainless Steel							III
i	K-23 Angle - 120	No	2014	805	0.250	0.50	0.20	III
ii	K-26 Angle - 100	No	247	99	0.250	0.06	0.02	III
iii	K-42 Angle - 115	No	86	34	0.250	0.02	0.01	III
14	SS orifice plate							III
i	150 NB	Nos.	5	2	2	0.01	0.00	III
ii	100 NB	Nos.	41	16	1.5	0.06	0.02	III
iii	80 NB	Nos.	0	0		-0.00	-0.00	III
18	Cast Iron Rising Spindle Type Gate Valve - IS : 14846	Lot	0	0		-0.00	-0.00	III
i	150 NB	No	0	0	76	-0.00	-0.00	III
ii	100 NB	No	0	0	44	-0.00	-0.00	III
iii	80 NB	No	0	0	27	-0.00	-0.00	III
E	PAINTING (Refer Annexure for details)							
	Painting for Fire water Piping Above Ground Piping - MS ERW pipes - Always charged with water, G.I pipes - Normally empty but periodically charged with water, Weld joints on G.I pipes & Water based system Equipments	LOT						
F	TESTS TO BE CONDUCTED	Units						
1	Hydro Test of all the lines (Charged with water) - 1.5 times of the design pressure	LOT						
2	Radiography - 10 % of the welded joints	LOT						
3	Holiday test - Underground piping	LOT						
4	Flushing of all the line (Open to atmosphere)	LOT						
5	Die Penetration test for all longitudinal & cross weldings	LOT						
6	Dry Film Thickness test for paint	LOT						

PROJECT: - 2 x 800 MW LARA							
CUSTOMER: - NTPC							
DOCUMENT NO. & TITLE: - ANNEXURE-3/ ERECTION BOQ FOR INERT GAS EXTINGUISHING SYSTEM (IGES) FOR CONTROL ROOM							
Sl.No	Detailed Description	Unit	Quantity	Location	Weight of Each unit (Kgs)	Total Weight (T)	Schedule
1	140L Cylinder / Valve Assembly / 300 Bar / FILLED IG 541/LABEL	Nos	92	Cylinder rooms for TG bldg. located at El. 0.0 M Cylinder room located at respective ground floor.	259.4	23.8648	III
2	CHECK VALVE 3/4"NPT X 1/2"BSP	Nos	92		0.165	0.01518	III
3	DISCHARGE HOSE 1/2" X 400 LG.	Nos	92		0.61	0.05612	III
4	HI-FLEX. HOSE 1/4" X 500MM LG.	Nos	64		0.32	0.02048	III
5	HI FLEX HOSE 1/4" X 600MM LG.	Nos	0		0.36	0	III
6	HI FLEX HOSE 1/4" X 700MM LG.	Nos	20		0.4	0.008	III
7	HI FLEX HOSE 1/4" X 400MM LG. (1X90")	Nos	8		0.23	0.00184	III
8	HI FLEX HOSE 1/4" X 700MM LG. (1X90)	Nos	7		0.32	0.00224	III
9	RELEASE UNIT (RSOV)	Nos	10		2.5	0.025	III
10	CONTACT GAUGE	Nos	82		0.7	0.0574	III
11	1 /4" TEE PIECE FOR ACTUATOR LINE	Nos	82	Each Zone of IGES	0.125	0.01025	III
12	1/4" CROSS FOR PILOT LINE	Nos	8		0.2	0.0016	III
13	DIRECTION VALVE WITH PNEUMATIC ACTUATOR (DRV) G 2" - DN50	Nos	5		16.7	0.0835	III
14	DIRECTION VALVE WITH PNEUMATIC ACTUATOR (DRV) G 1 1/2" - DN40	Nos	2		16.2	0.0324	III
15	HANDLE FOR DIRECTIONAL VALVE	Nos	7		0.5	0.0035	III
16	Pilot Manifold for 3 Diverter Valves	Nos	1		5	0.005	III
17	Pilot Manifold for 4 Diverter Valves	Nos	1		8	0.008	III
19	PRESSURE RELIEF VALVE (PRV)	Nos	1		0.37	0.00037	III
21	LEAK VALVE FOR PILOT LINE 1/4"	Nos	4		0.08	0.00032	III
22	40NB Discharge Nozzle.	Nos	16		0.67	0.01072	III
23	25NB Discharge Nozzle.	Nos	107		0.26	0.02782	III
24	20NB Discharge Nozzle.	Nos	37		0.12	0.00444	III
25	15NB Discharge Nozzle.	Nos	12		0.08	0.00096	III
26	1/4" NON RETURN VALVE / CHECK VALVE FOR PILOT LINE	Nos	8		0.1	0.0008	III
27	3" ORIFICE PLATE FOR CLASS 2500# SORF FLANGE. ORIFICE DIA-As per Design	Nos	1		11.5	0.0115	III
28	3" ORIFICE PLATE FOR CLASS 2500# SORF FLANGE. ORIFICE DIA-As per Design	Nos	1		11.5	0.0115	III
29	3" ORIFICE PLATE FOR CLASS 2500# SORFF FLANGE. ORIFICE DIA-As per Design	Nos	1		11.5	0.0115	III
30	2" Restrictor Body - NPT (F) / NPT (F) RESTRICTOR DIA - As per Design	Nos	1	Cylinder rooms for TG bldg. located at El. 0.0 M Cylinder room located at respective ground floor.	3.6	0.0036	III
31	2" Restrictor Body - NPT (F) / NPT (F) RESTRICTOR DIA -As per Design	Nos	1		3.6	0.0036	III
32	1 1/2" Restrictor Body - NPT (F) / NPT (F) RESTRICTOR DIA -As per Design	Nos	2		1.6	0.0032	III
33	Cylinder Manifold - 46 Way	Nos.	2		200	0.4	III
34	DV Manifold - 07 Way	Nos.	1		200	0.2	III
35	Cylinder Frame (20 Standby Cylinder + 20 Standby Cylinder) with accessories	Nos.	1		250	0.25	III
36	Cylinder Frame (16 Main Cylinder + 16 Main Cylinder) with accessories	Nos.	1		175	0.175	III
37	Cylinder Frame (07 Main Cylinder + 07 Main Cylinder) with accessories	Nos.	1		125	0.125	III
38	Cylinder Frame (03 standby Cylinder + 03 Standby Cylinder) with accessories	Nos.	1		75	0.075	III
48	Pressure relief vent	Nos	44	Each Zone of IGES	0.5	0.022	III
53	150 NB,C.S. SEAMLESS PIPE SCH 160ASTM A 106 GR.B	MTR.	24	Cylinder rooms for TG bldg. located at El. 0.0 M Cylinder room located at respective ground floor.	66.33	1.59192	III
54	80 NB,C.S. SEAMLESS PIPE SCH 160ASTM A 106 GR.B	MTR.	24		21.35	0.5124	III
55	50 NB, C.S. SEAMLESS PIPE SCH 160ASTM A 106 GR.B	MTR.	24		11.11	0.26664	III
56	40 NB, C.S. SEAMLESS PIPE SCH 160ASTM A 106 GR.B	MTR.	18		4.05	0.0729	III
57	C.S. SEAMLESS PIPE 150 NB, SCH 40ASTM A 106 GR.B	MTR.	240		28.26	6.7824	III
58	C.S. SEAMLESS PIPE 100 NB, SCH 40ASTM A 106 GR.B	MTR.	228		16.07	3.66396	III

59	C.S. SEAMLESS PIPE 80 NB, SCH 40ASTM A 106 GR.B	MTR.	210	From cylinder room to protected zones	11.3	2.373	III
60	C.S. SEAMLESS PIPE 65 NB, SCH 40ASTM A 106 GR.B	MTR.	198		8.64	1.71072	III
61	C.S. SEAMLESS PIPE 50 NB, SCH 40ASTM A 106 GR.B	MTR.	96		5.44	0.52224	III
62	C.S. SEAMLESS PIPE 40 NB, SCH 40ASTM A 106 GR.B	MTR.	120		4.05	0.486	III
63	C.S. SEAMLESS PIPE 32 NB, SCH 40ASTM A 106 GR.B	MTR.	84		3.39	0.28476	III
64	C.S. SEAMLESS PIPE 25 NB, SCH 40ASTM A 106 GR.B	MTR.	360		2.5	0.9	III
65	C.S. SEAMLESS PIPE 20 NB, SCH 40ASTM A 106 GR.B	MTR.	72		1.69	0.12168	III
66	C.S. SEAMLESS PIPE 15 NB, SCH 40ASTM A 106 GR.B	MTR.	54		1.27	0.06858	III
67	Fittings	LOT	1			5.80716	III

TOTAL

52.7834

PROJECT: - 2 x 800 MW LARA							
CUSTOMER: - NTPC							
DOCUMENT NO. & TITLE: - ANNEXURE-3A/ ERECTION BOQ FOR INERT GAS EXTINGUISHING SYSTEM (IGES) FOR BIOMASS SILOS							
Sl.No	Detailed Description	Unit	Quantity	Location	Weight of Each unit (Kgs)	Total Weight (T)	Schedule
1	IG-541 -cylinder (140Ltr 300Bar) assembly with Valve & Pressure Gauge Switch	Nos.	54	Biomass Cylinder room	281.1	15.1794	III
2	Electric Actuator	Nos.	2		2.5	0.005	III
3	Manual Actuator	Nos.	2		2.5	0.005	III
4	Pneumatic Manual Actuator	Nos.			2.5	0	III
5	Pneumatic Actuator	Nos.	52		2.5	0.13	III
6	Pilot Cylinder kit with Master valve, Electric actuator & Manual actuator	Nos.	2		15	0.03	III
7	Discharge Hose	Nos.	54		0.9	0.0486	III
8	Check Valve	Nos.	54		0.25	0.0135	III
9	Constant Pressure Regulator	Nos.	54		0.9	0.0486	III
10	Bleed Valve	Nos.	2		0.5	0.001	III
11	Pilot Hose for cylinders connection	Nos.	66		0.9	0.0594	III
12	Cylinder Manifold with cylinder bank frame	Nos.	1		150	0.15	III
13	Directional Valve Manifold	Nos.	1		50	0.05	III
14	Safety Valve	Nos.	1		0.3	0.0003	III
15	Directional Valve with Electric Actuator	Nos.	2		3.6	0.0072	III
17	Discharge Nozzle	Nos.	24		0.3	0.0072	III
18	Pilot Hose for Pilot cylinder assembly	Nos.	2		0.9	0.0018	III
19	Non- Return Valve for Pilot cylinder assembly	Nos.	2		1.5	0.003	III
20	Pressure Regulator for Pilot cylinder assembly	Nos.	1		2.5	0.0025	III
21	2-way DV Pilot manifold for Pilot cylinder assembly	Nos.	1		5	0.005	III
31	CS Seamless Pipes Sch .40 as per ASTM A106 Gr.B	LOT	1	From cylinder room to protected zones	9000	9	III
32	Fittings	LOT	1	From cylinder room to protected zones	100	0.1	III
34	Ni-Cad batteries	Nos.	2	Biomass Cylinder room	1	0.002	III
35	Gas Loss Indication Panel	Nos.	2	Biomass Cylinder room	1	0.002	III
36	Cable Fittings & fixtures	LOT	1	From cylinder room to protected zones	25	0.025	III

PROJECT: - 2 x 800 MW LARA							
CUSTOMER: - NTPC							
DOCUMENT NO. & TITLE: - Erection BOQ for Portable Fire Extinguishers							
Sl. No.	Description	Qty	Unit	Unit Weight (Kg)	Total Weight (T)	A	B
1	CO2 type Fire Extinguishers-4.5 kg	200	Nos.	17.5	3.50	2.10	1.40
2	DCP type(ABC) Fire Extinguishers-6 kg	180	Nos.	12	2.16	1.30	0.86
3	DCP type(ABC) Fire Extinguishers-50 kg	35	Nos.	100	3.50	2.10	1.40
4	Trolley mounted CO2 type Fire Extinguisher-22.5kg	42	Nos.	70	2.94	1.76	1.18
5	Pressurised water type (operated by CO2 cartridge) - 9lit	130	Nos.	25	3.25	1.95	1.30
6	Mechanical Foam type Fire Extinguishers-9 Lit.	85	Nos.	12.3	1.05	0.63	0.42
7	Mechanical Foam type Fire Extinguishers-45 Lit.	20	Nos.	100	2.00	1.20	0.80

18.40 11.04 7.36

**Structural steels : To be procured by PS-Region for Fire
detection and Protection system**

Sl. No.	Item Description	Unit	Qty for Pkg-A BTG+AWPH	Qty for Pkg-B OUTSIDE BTG	Unit Wt (Kg)	Qty for Pkg-A BTG+AWPH (MT)	Qty for Pkg-B OUTSIDE BTG
1	MS PLATES- 8 mm Thk	Sqmt	160	240	62.8	10.048	15.072
2	L- ANGLE						
2.1	L- ANGLE-75X75X8mm thk	MTRS	1400	2100	8.9	12.46	18.69
2.2	L- ANGLE-65X65X8mm thk	MTRS	2600	3900	7.7	20.02	30.03
2.3	L- ANGLE-50x50x6mm thk	MTRS	6200	9300	4.5	27.9	41.85
3	C-CHANNEL		0	0			
3.1	C-CHANNEL-ISM 150	MTRS	200	300	16.4	3.28	4.92
3.2	C-CHANNEL-ISM 100	MTRS	2200	3300	9.2	20.24	30.36
3.3	C-CHANNEL-ISM 75	MTRS	1400	2100	6.8	9.52	14.28
						103.468	155.202