



**बामर लॉरी एण्ड कं. लिमिटेड**  
**Balmer Lawrie & Co. Ltd.**

(A Government of India Enterprise)

**Engineering & Projects**

**21, Netaji Subhas Road**

**Kolkata - 700 001**

**Supply, Installation, Testing & Commissioning of Fire  
Protection System for Central Warehouse**

**at**

**AMTZ, ANDHRA PRADESH**

**Tender No. EP / AMTZ / CWH / FPS / 04**

**PRICED PART (PART-II)**

**NOTES:**

- 1.0 Details of the items under this Schedule shall be read in conjunction with the corresponding Specifications, Drawings and other Tender Documents.
- 2.0 The work shall be carried out as per approved drawings, Specifications and the description of the items in this Schedule and/or Engineer's instructions. Drawings enclosed with these documents are only for providing some preliminary of the work involved.
- 3.0 Items of work provided in this Schedule but not covered in the Specifications shall be executed strictly as per instructions of the Engineer-In-Charge.
- 4.0 Unless specifically mentioned otherwise in the Contract, the Tenderer shall quote for the finished items and shall provide for the complete cost towards power, fuel, tools, tackles, equipment, Constructional Plant, Temporary Work, labour, materials, levies, taxes, transport, layout, re-pairs, rectification, maintenance till handing over, supervisions, colonies, shops, establishments, services, temporary roads, revenue expenses, contingencies, overheads, profits and all incidental items not specifically mentioned but reasonably implied and necessary to complete the work according to the contract.
- 5.0 The Quantities of the various items mentioned in the Schedule of Items are approximate and may vary or may be deleted altogether. The Contractor, in his own interest, should get an indication of the probable extent of the work to be executed under any particular item in this Schedule before undertaking any preliminary and enabling work or purchasing bought out components related to the work.
- 6.0 Rates shall be quoted both in figures and in words in clear legible writing. No over writing is allowed. All scoring and cancellations should be countersigned by the Tenderer. In case of illegibility, the rates written in word will be considered final. All entries shall be in English language.
- 7.0 Engineer's decision shall be final and binding on the Contractor regarding clarification of items in this Schedule with respect to the other sections of the Contract.
- 8.0 For extra items, rates shall be derived from similar item rates included in the schedule of work. Where there is no such similar item available in the schedule, rate shall be analyzed as follows:  
Rate for extra item = Cost of material including transportation for delivery upto site (a) + cost of labour inclusive of all necessary tools, tackles, equipment, machinery and consumable (b) required to carry out the work + 15% of (a+b) towards profit and overhead + taxes, duties etc. as applicable.

## Schedule of Work

### Supply, Installation, Testing and Commissioning of Fire Protection System for Central Warehouse at AMTZ, Andhra Pradesh

#### Tender No EP / AMTZ / CWH / FPS / 04

Sl. No.	Description	Unit	Qty	Unit Rate (Rs)	Amount (Rs)
	<b>Supply, Installation, Testing &amp; Commissioning (SITC) of</b>				
1.0	Electrical motor driven online <b>Booster pump</b> of monoblock type capable to deliver 1600-LPM (96 Cum/ Hr) at 45 MWC. The pump shall be coupled to TEFC motor of suitable HP Rating with speed of 2900RPM and complete set shall mounted on common base frame. The installation shall be complete with necessary pressure gauge with gun metal shut off cock on suction & delivery side. The quoted rate shall includes providing & fixing of anti vibration pad and suitable size of metal expansion bellows at suction & delivery side of the pumps and Foundation bolts etc. <b>Hydrant Tapping will be available from central rainm main laid by AMTZ Authority. This item along with item no 2 &amp; 3 will be executed as per requirement at site only if the pressure available at tapping point/battery limit is low.</b> As the pump will be installed outside, suitable canopy to be provided on the motor.	Set	1		
2.0	Suitable <b>outdoor duty starter (Star-Delta type) electrical panel</b> with all protection and Amp Meter / Volt Meter / Auto Manual selector etc. for the above mentioned pump.	Set	1		
3.0	Cabling of suitable size (along with termination) from Electrical Starter to Motor for commissioning of the pump. However, incoming supply to starter is not included in the scope. Earthing of the Pump and panel from the nearest earthpit shall be included in this item.	Lot	1		
4.0	Dial type glycerine filled pressure gauge with 150 mm dial and range of 0-14 Kg./sq.cm. together along with ball valve of 15 mm and GI Barrel Nipples.	No	1		
5.0	Supplying, laying, testing and commissioning of <b>above-ground piping</b> carried out of MS Class "C" ERW pipes as per IS : 1239 for pipes upto 150 mm NB and as per IS:3589 ( 6.35mm thick ) with all online Pipe Fittings, flanges (ASA 150 class), nuts,bolts (Galvanised),gaskets,washers, 'U' clamp and tapping for gauges/instruments including cutting, welding, fixing in / on walls, ceiling by using suitable supports etc.. The quoted rate shall also include for chasing / chipping walls, making bore holes in walls / floor and making them good with filler material etc. The item rate shall also include surface preparation of pipes by wire brushing, application of 2 coat red-oxide primer and 2 coat of synthetic enamel finish paint. complete. Steel work for supports shall be paid under separate item.				
a	150mm nominal dia	Rmt	900		
b	100mm nominal dia	Rmt	24		
c	80mm nominal dia	Rmt	108		
d	50 mm nominal dia	Rmt	6		
e	25mm nominal dia	Rmt	24		
6	Supplying and laying <b>underground buried piping (or road crossing)</b> together with protective wrapping and coating for MS pipe as per IS : 1239 carried out of MS class "C" piping for pipes up to 150mm NB and as per IS : 3589 for pipes 200mm NB and above together with fittings and accessories as under : Rates shall include Excavation & Back filling in soft soil/murum and application of 4mm thick wrapping & coating material over under ground piping.	Rmt	40		
7	Supplying, installing, testing and commissioning of C.I. butterfly valves conforming to BS 5155 (PN 1.6) slim seal standard lever operated type with required flanges, nuts, bolts etc. complete.				
a	150mm nominal dia	No	4		
8	Cast Iron Gate Valve -Rising Spindle type (IS : 14846 ) with companion Flanges, Bolts, Nuts and Gaskets				
a	150mm nominal dia	No	2		
9	Supplying, installing, testing and commissioning of C.I. Non-return valves as per IS:5312 reflux swing check type with required flanges, nuts, bolts and gaskets etc. complete.				

## Schedule of Work

### Supply, Installation, Testing and Commissioning of Fire Protection System for Central Warehouse at AMTZ, Andhra Pradesh

#### Tender No EP / AMTZ / CWH / FPS / 04

Sl. No.	Description	Unit	Qty	Unit Rate (Rs)	Amount (Rs)
a	150 mm nominal dia	No	4		
10	Stand Post type Water Monitor made of C.S Body having 63/32 mm nozzle size with flow capacity of 1750lpm@7Kg/Cm2 as per IS:- 8442 Type- "I", ISI marked.-Refer data sheet.	No	2		
11	Single headed oblique type ground faced hydrant valve conforming to IS 5290, made of gunmetal with 63 mm dia instantaneous outlet of 80 mm dia fanged inlet, Blank caps, chain and CI hand wheels etc complete.	No.	28		
12	15 M long, 63mm dia RRL hose conforming to IS 636 Type A with instantaneous couplings and Hoses shall be stored inside the hose cabinet.	No.	56		
13	Gun metal short branch pipe with nozzle conforming to IS 903.	No.	28		
14	M.S. Hose cabinet (with canopy) stand mounted type fabricated out of M.S. sheet of 16 swg. with glass fronted (4mm thick glass with rubber beeding) door, lock and key suitable for 1 branch pipe and 2 hoses and size of the cabinet shall be 600mm x 750 mm x 250 mm. Quoted rate shall be inclusive suitable stand for mounting, all fasteners etc, and cabinet shall be powder coated of approved colour both inside and outside. (Structural work shall be paid separately).	No.	28		
15	First aid fire Hose reel drum of MS powder coated with fire red colour, 180° swinging type with 19mm dia Rubber braided hose of 30 m length with 25 mm dia Ball Valve and 6mm diameter Shut off nozzle, complete. Hose reel shall be fixed on wall.	No	12		
16	Fire brigade inlet siamese connection (4way) manifold including valves and check valve of size 150mm size having gunmetal 4 nos. 63mm dia Gun Metal instantaneous inlet arrangements to the main header complete with required flanges, bolt, nut and washer, cap and chain etc. It shall be as per IS 5131 with built in check valve and 150mm dia outlet connection to the fire main grid with 150mm dia Butterfly valve and non – return valve. Butterfly valve & NRV shall paid under separate item as mentioned above.	Nos	1		
17	Supplying and fixing approved make of 25mm dia automatic air release valve of single ball or spring loaded type complete with unions etc. complete.	Nos	2		
18	Supplying, installing, testing and commissioning of Gun metal chrome finished Ball valves with fittings of screwed end type.				
a	25mm nominal dia	Nos	3		
19	Supply, fabrication, erection, alignment and fixing in position, true to line and level, structural steel work for structural supports etc. made out of rolled steel angles, plates, steel tubes etc., including splicing, cutting, bending, drilling, welding, riveting, bolting etc., with all tools and tackles, plant and machinery including preparation of detailed shop drawings as per design drawings and specifications, wire brushing to remove mill scales etc and painting. Quoted rate shall be inclusive of two coat of primer and two coat of synthetic enamel paint of approved shade.	Kg	1,000		
20	Flow Switches to indicate and transfer signal to Fire Alarm Panel regarding the flow of the water in respective bursting of sprinkler	No	1		
21	Supplying, installing, testing and commissioning K 80 conventional Sprinkler quartzoid bulb type of standard coverage and standard response with 15 mm screwed end connection of 68 deg. C. temperature rating and orifice shall not be less than 12.7mm. Sprinklers shall be UL Listed / FM approved with Chrome finished.				
a	Pendent sprinkler	No	6		
22	Stainless steel corrugated flexible pipe(hose) for dropping sprinklers below false ceiling, pipe shall be 16 bar pressure rating and 1500 mm long 25 mm dia with union / reducer collar, clamps etc. as required.	No	6		
23	Supply & fixing of approved type rosette plates (Surface mounted type, in two piece) for Sprinklers below false ceiling area.	No	6		
24	Supply, installing, testing and commissioning of analogue addressable Fire Alarm Control panel with 48 hrs battery back up. The Panel Shall be <b>single loop</b> capacity. The control panel, battery charger etc, The panel shall consist with 80 character LCD display and RS 485 for networking.	No	1		
25	Supply, installing, testing and commissioning of Analogue beam detector	No	12		

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Sl. No.	Description	Unit	Qty	Unit Rate (Rs)	Amount (Rs)
26	Supply, Installation, Testing and Commissioning of Intelligent Addressable Photo Electric Type Smoke Detectors - Below False Ceiling with indicating lamp, mounting base and all other mounting accessories complete as required.	No	6		
27	Supply, installing, testing and commissioning of Analogue Addressable I/O Module .	No	6		
28	Supplying, installing, testing and commissioning of Analogue Addressable Electronic Hooter cum Strobe (loop powered)	No	12		
29	Supplying, installing, testing and commissioning of Addressable Manual Call Point	No	12		
30	Monitor Module: Supply, Installation, testing and commissioning of Addressable Monitor Modules for Interfacing PFC/Dry Inputs of Sprinkler Line Flow Switch Status in Fire Alarm Panel integration with all the mounting accessories complete as required.	No	1		
31	Supplying, installing, testing and commissioning of 2 core x 1.5 sq. mm, annealed tin copper conductor, armoured FRLS outer sheathed PVC insulated Cable conforming to IS 1554 Part-1. with Ferrules, Lugs, saddles, saddles base, conduits (if required) & other accessories complete as required. Wherever the cable is laid inside the office, it shall be concealed as per the direction of Engineer-in-Charge. The job includes chipping of walls and making it good for concealed wiring.	Rmt	1700		
32	Supply, installation, transportation of Fire Extinguishers including supply of nuts, bolts, brackets etc. including making good of wall, wherever required, after installation and supply of all related material all complete as per codes, standards, specifications, documents and direction of Engineer-in-Charge.				
a)	CO2 type Fire Extinguisher -4.5 KG as per IS 15683	No	10.0		
b)	Mechanical Foam-9 Liter as per IS 15683	No	4		
c)	DCP type Fire Extinguisher -25 Kg as per IS 10658, Trolley type	No	2.0		
d)	ABC type Fire Extinguisher-6 KG as per IS 15683	No	24.0		
33	MS Fire Water buckets filled with sand including the structure of fixing- 3 buckets on MS fabricated stand. The stand shall be painted with red oxide or zinc chromate primer and synthetic enamel paint thereafter.	Nos	1.0		
34	Self Illuminated Signages-Fire Exit, Fire Extinguishers, Danger, Fire Bucket and No Smoking, Size 300 x 150 mm approx	No	22		
35	Self Illuminated Fire EXIT Signages 10 " X 12 "	No	6		
36	Supply & fixing of Signboard-Aluminium Composite Panel Board of 3mm with ecosolvent printing with Lamination and Radium Stickers of different sizes such as 12 inch X 6 inch, 8 inch X 4 inch or any other sizes	Sq. ft	75		
37	Sign-writing/Letter writing with 'Post Office Red' paint or any other shade (as directed by Engineer-in-Charge) on sign-boards or on the wall like "Fire Extinguisher", "Fire Bucket", "Danger", numbering of extinguishers etc.	Sq. m.	2		
38	S.I.T.C of 1.5 HP single stage, high speed, horizontal, centrifugal, open well Submersible pump (Kirsokar KOS N or equivalent model of other approved make) to be installed in RCC water reservoir along with standard length suitable size power supply cable suitable for operation on Three phase, 415 volts, 50 Hz, A.C Supply etc. complete as reqd. as per specifications below. Pump shall generate flow of 7.5 Cum/Hr at head of 20 mtr. The scope shall include supply and fixing GI pipe line with necessary fittings at pump delivery with connection to CPVC water line laid by other contractor. The scope also covers supply and installation of suitable IP-54 DOL starter for the mentioned pump with contactors, overload relays, on-off switches etc. (L&T or approved equivalent make). (1 No Pump - Work + 1 No Pump- Stand By)	No	2		
39	Supply, installation, testing & commissioning of C-PVC Sch 40 Brass Threaded end Ball valve of 2 Inches	Nos	2.0		
40	Supply, installation, testing & commissioning of C-PVC Sch 40 Brass Threaded end Ball valve of 1 1/2 Inches	Nos	2.0		

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Sl. No.	Description	Unit	Qty	Unit Rate (Rs)	Amount (Rs)
41	Supply, installation, testing & commissioning of C-PVC Sch 40 Brass Threaded end Ball valve of 1 Inches	Nos	2.0		
42	Supply, installation, testing & commissioning of C-PVC Sch 40 Brass Threaded end Ball valve of 1/2 Inches	Nos	1.0		
43	Supply & fixing of 1 1/2 inch brass gate valve with CI wheel	No	1.0		
44	Supplying and Fixing of 40 mm dia. Gun Metal vertical threading type non return valve , including cutting , threading etc. as reqd..	Nos	2.0		
45	Supply and installation of Brass mechanical type flange end flowmeter for AMTZ inlet of 50NB	Nos	1.0		
46	Excavation and back filling work with all materials, labour, tools and tackles complete as per direction of Engineer-In-Charge.	CuM	8.0		
47	P.C.C. work with shuttering, all materials, labour, tools and tackles complete as per direction of Engineer-In-Charge	CuM	4.0		
48	R.C.C. work (includng shuttering & reinforcement @ max. 100 kg per Cum of concrete) with all materials,labour, tools and tackles complete as per direction of Engineer-In-Charge for the supports.	CuM	2.0		
<b>A</b>	<b>TOTAL (BASIC)</b>				
<b>B</b>	Add for Applicable GST(bidder to indicate %)				
<b>C</b>	<b>GRAND TOTAL WITH GST</b>				