

***TENDER  
FOR***

**SUPPLY INSTALLATION TESTING AND  
COMMISSIONING OF FIRE FIGHTING SYSTEM AT  
HLL CORPORATE OFFICE, POOJAPURA**

**PART-III  
PRICE BID**

**TENDER NO. HLL/ID / 15/25  
AUGUST 2015**



**INFRASTRUCTURE DEVELOPMENT DIVISION  
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## **1 COMMERCIAL CONDITIONS**

1.0.1 The tendered rate shall inter alia be deemed to include for the provision of all materials, process, operation and special requirements detailed in the particular specification irrespective of whether these are mentioned in the description of equipment schedule and Bill of quantities or not. It is an express condition of the contract that the tendered rates for various items in the Bill of Quantities shall be deemed to include for the full, entire and final condition of the contractor respective items of the works in accordance with the provision of the contract.

1.0.2 The tendered rate shall include for all taxes, duties, etc. as applicable and shall be quoted on the works contract basis for **Supply Installation Testing and Commissioning of Fire Fighting System at HLL Corporate office, Poojapura**

1.0.3 The tendered rate shall remain firm and free from variation due to rise in the cost of materials/equipment, labour or any other reasons whatsoever during the contract period and valid extension on the case may be.

1.0.4 The quantum of excise duty included in the tendered price, the rate at which they were assumed etc. shall be indicated in the tender.

### **1.1 UNIT RATES**

1.11 Only approved work will be measured on completion and priced as per rates quoted against the respective items.

### **1.2 BRIEF DESCRIPTION OF PRICING**

1.2.1. Unforeseen difficulties for which provision has not been made in the tender will in no way relieve the successful tenderer from the full execution of the work.

1.2.2 The price quoted shall be the final amount for this finished work.

### **1.3 INCOME TAX**

Any payment to the contractor as per contract, will be made after deducting income tax as per the rules and regulations.

### **1.4 SALES TAX AND EXCISE DUTY**

The tenderer shall clearly indicate sales tax, Excise and other duties as applicable in his offer for carrying out this work.

### **1.6. SUBMISSION OF BILL**

1.6.1. The contractor shall from time to time prepare and submit interim bills of the work executed and on completion of the contract, he shall prepare and submit the final bill. The measurements sheets in support of the interim and final bills shall be prepared by the contractor on the basis of measurements taken by him jointly with the project engineer and the said measurement sheets shall be submitted by him with the relevant bill.

### **1.7. EXTRA ITEMS**

The contractor is bound to carry out any items of work necessary for the completion of the job even though such items may not have been included in the schedule of probable quantities or rates, such items being necessary or essential for completing the job. Variation order in respect of such additional items and their quantities will be issued in writing by the employer.

1.7.1 All shavings, cuttings and other rubbish as it accumulates from time to time during the progress of work and on completion including that of the sub-contractors and special tradesman and all materials condemned by the project engineer shall be cleared and removed from the site by the contractor without any extra charge.

1.7.2 All measuring steel taps, scaffolding, ladders instruments and tools that may be required for taking measurements shall be supplied by the contractor.

## **1.8. OVER TIME WORK**

If the contractor is required to work night or on holidays in order to maintain the time schedule he shall take prior approval from the Engineer-in-charge. He should also provide and maintain at his own cost sufficient lights as may be necessary to enable the work to proceed satisfactorily during the night.

- 1.8.1. The contractor shall give full facilities to all other contractors working on site. He shall also arrange his programme of work so as not hinder the progress of other trades. The decision of the Engineer-in-charge on any point of dispute between the various parties shall be final and binding.
- 1.8.2. It is specifically pointed out that the contractor shall not be entitled to any compensation whatsoever on account of delay in procurement or supply of controlled materials and the rates quoted in the contract are fixed till the completion of the contract.
- 1.8.3. The contractor shall co-operate with other agencies appointed by the owners for the work to proceed smoothly with the least possible delay and to the satisfaction of the owners, architects and the consultants.
- 1.8.4. The owners shall provide a source for power supply at one convenient point at site. The contractor shall at his own cost install a separate meter at the said source and lay additional cables from the said source also at his own cost. For the electricity consumed by the contractor he shall pay the owner the actual cost at the rate charged by the local authority for power for constructional purposes. The contractor shall also obtain the necessary permit for utilizing power for constructional purposes.

## **2 SPECIAL CONDITIONS**

### **2.1. EXECUTION WORK**

2.1.1. The whole of the work as described in the contract (including bills of materials, specification and all drawings pertaining thereto) and as advised by the Engineer-in-charge from time is to be carried out and completed in all parts to the entire satisfaction of the Employer. Any minor details of construction which are obviously and fairly intended, or which may not have been definitely referred to in this contract, but which are usual construction practice and essential to the work, shall be included in this contract.

### **2.2. CERTIFICATE OF COMPLETION**

2.2.1 The contractor shall intimate to the Engineer-in-charge in writing as and when the works are completed and put into beneficial use in order to enable the consultants to check certify to the owners to take over the plants.

2.2.2 The work shall not be considered as completed and put into beneficial use until the consultants have certified in writing that the same has been completed and put into beneficial use.

2.2.3 The defects liability period of one year shall commence from date of such completion or any specific date mentioned therein.

### **TERMS OF PAYMENT**

The rate of payment for the contract value under this contract shall be regulated and detailed below:

70% after supply of materials at site in good working condition on pro-rata basis.

20% after completion of installation in all respects.

Balance 10% will be paid after testing, commissioning & handing over to the HLL, including all required statutory approvals.

**The bidder should specify 100% service tax in their quoted price irrespective of whether any portion of the Service tax is directly payable by the contractor or to be remitted by the client. This total price will be taken for comparison and deciding the lowest bidder. However, due to the constitution of the bidder being proprietary or otherwise, if any portion of the service tax is to be borne by the HLL statutorily, the same shall be borne by the HLL. This shall be clearly indicated as given in the abstract as shown below.**

**BILL OF QUANTITIES**  
**ABSTRACT**

<b>SL. No</b>	<b>ITEM</b>	<b>AMOUNT (Rs.)</b>
<b>1</b>	<b>Supply Installation Testing and Commissioning of Supply Installation Testing and Commissioning of Fire Fighting System at HLL Corporate office, Poojapura including all taxes &amp; duties except service tax.</b>	
<b>2</b>	<b>Service tax component to be paid by the bidder.</b>	
<b>3</b>	<b>Service tax component to be directly paid by the HLL in case the bidder is a Proprietary firm</b>	
	<b>Total Amount</b>	

SL NO	DESCRIPTION	QTY	UNIT	Rate in Words and Figures	Amount in Words and Figures
A	<b>HYDRANT SYSTEM</b>				
1	<b>MAIN PUMP</b>				
	Supply, installation, testing and commissioning of Main fire fighting pump of horizontal centrifugal end suction type rated for 2850 LPM 70m head high efficiency volute type with cast iron casing, bronze impeller, pump rated for automatic operation coupled to squirrel cage induction motor screen protected drip proof rated at 415V 50 Hz foot mounted type 60 HP, 2900 RPM including supply and installation of all accessories like base frame foundation bolts etc. complete.	1	No		
2	<b>SPRINKLER PUMP</b>				
	Supply, installation, testing and commissioning of Main fire fighting pump of horizontal centrifugal end suction type rated for 2850 LPM 70m head high efficiency volute type with cast iron casing, bronze impeller, pump rated for automatic operation coupled to squirrel cage induction motor screen protected drip proof rated at 415V 50 Hz foot mounted type 60 HP, 2900 RPM including supply and installation of all accessories like base frame foundation bolts etc. complete.	1	No		
3	<b>JOCKEY PUMP</b>				

	Supply, installation, testing and commissioning of Jockey Pump mono block rated for 180 LPM at 70 M head high efficiency suitable HP volute type with cast iron casing bronze impeller, pump rated for automatic operation coupled to squirrel cage induction motor totally enclosed fan colled rated at 415V 50 Hz foot mounted type , 2900 RPM including supply and installation of all accessories like base frame foundation bolts etc. complete.	1	No		
4	<b>DIESEL ENGINE DRIVEN PUMP</b>				
	Supplying, Installation, Testing and Commissioning of Diesel Engine driven main fire pump suitable for automatic operation and consisting of following : complete in all respect as required.(a)Horizontal type, end suction pump of cast iron body & bronze impeller with stainless steel shaft, mechanical seal to ensure a minimum pressure of 3.5 kg/sq.cm.at highest and farthest outlet at specified flow of 2850 lpm at 70m. head coupled to				

	60 HP, 1800 RPM water cooled with radiator, Diesel engine Complete with auto starting mechanism, 12 Volts/ electric starting equipment , Diesel tank, exhaust pipe extended up to 1.0 m.out side pump house duly insulated with 50 mm. thick glass wool with 1.0 mm. thick aluminum sheet cladding, residential silencer, instruments and protection as per specification, stop solenoid for auto top in the event of fault with audio indications, painted with post office red color etc. as required.(c)M.S. fabricated Common base plate, coupling, coupling guard, foundation bolts etc. as required.(d)Providing and fixing 15 mm dia GI pipe C class for fuel line as required. (e)Suitable cement concrete foundation duly plastered with ant vibration pads.	1	No		
4a	<b>PRIMING PUMP</b>				
	Providing Installing testing and commissioning of open well submersible mono block pump set for automatic priming operation and capable of delivering 50 ltrs per minute against a total head of 10 M complete with squirrel cage induction motor or operation on 415 Volts 50 Hz 3 phase AC supply etc including providing water level controller, suitable size power and control cable from control panel etc as required (Similar to Kirlosker make Model No. KDS 112)	1	No		
5	<b>CONTROL PANEL</b>				

	Fabrication, Supplying, Installation, Testing and Commissioning of Electrical control panel of cubical construction, floor mounted type, fabricated out of 2mm. thick CRCA sheet, compartmentalized with hinged lockable doors, dust and vermin proof, powder coated of approved shade after 7 tank treatment process, cable alley, inter connection, having switchgears and accessories mounting and internal wiring, earth terminals, numbering etc. complete in all respect, suitable for operation on 415 V, 3 phase, 50 Hz. AC supply with enclosure protection class IP 42 required.				
	(A) COMMON PANEL IN FIRE PUMP HOUSE				
	<b>INCOMER</b> (a)200 Amps. TPN				
	(b) Voltmeter (0-500 Volts) with selector switch.				
	(c) Ammeter (0-200 Amps) with selector switch & CT's etc.				
	(d)Set of 3 Phase indicating lamp.				
	(e)Set of Al. bus bar 250Amps.				
	<b>OUT GOING</b>				
	<b>(a) Main Fire pump</b> 125 Amps. TPN with suitable for 60 HP fully automatic star delta starter with over load protection, current sensing type single phase preventer complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/ OFF operation.				

<b>(b)</b>	<b>Sprinkler Pump</b> 125 Amps. TPN with suitable for 60 HP fully automatic star delta starter with over load protection, current sensing type single phase preventer complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/ OFF operation.				
<b>(c)</b>	<b>Jockey pump</b> 32 Amps. TPN fuses with suitable for Jockey Pump fully DOL starter with over load protection, current sensing type single phase preventer complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/ OFF operation.				
<b>(d)</b>	<b>Diesel Engine Control.</b>				
	(a) 2 Pole MCB 16Amps				
	PLC Control for Diesel Engine comprising:-				
	(i)Auto/Manual selector switch & 3 attempt starting device, timers and relays as required, push buttons, start/stop in manual mode.				
	(ii)Indication lamp for High/Low Lub. Oil pressure, High Water Temp. and Engine ON indication.				
	(iii)SMBS Battery charger suitable for 12 V/ 24 V DC with boost and tickle selector switch, 0-30 V DC volt meter, 0-20A DC Ammeter				
	(iv)All standard relays and accessories for automatic operation of diesel engine.				
	v) All automatic operation of Main Pump, Sprinkler Pump & Jockey Pump as per IS/CPWD specification attached	1	No		

6	<b>POWER CABLING</b>				
	Supply and Laying of below sized XLPE insulated PVC sheathed Aluminum conductor armored cabling to the incoming and outgoing of fire pump panel including necessary termination, glanding, necessary connections etc				
	3.5 x 50 sq mm routed in soil	30	Mtr		
	3.5 x 35 sq mm on wall, floor	24	Mtr		
	3 x 16 sq mm on wall, floor	12	Mtr		
7	<b>PRIMING TANK</b>				
	Supply and installation of out door type PVC priming water storage tank of not less than 500litters with adequate MS support structure and base complete with inlet, outlet, drain, etc as required	1	No		
8	<b>ABOVE GROUND/UNDER GROUND PIPING</b>				

	Providing, laying, testing and commissioning of 'C' class heavy duty MS pipe conforming to IS:1239 I/c fittings like elbows, tees, flanges, tapers, nuts, bolts, gaskets etc fixing the pipe on the wall/ ceiling with suitable clamps and painting with two or more coats of synthetic enamel paint of required shade complete as under ground pipe required wrapping and coating with bitumen				
a	150 mm dia	66	Mtr		
b	100 mm dia	156	Mtr		
c	80 mm dia	18	Mtr		
d	65 mm dia	36	Mtr		
e	50 mm dia	272	Mtr		
f	40 mm dia	138	Mtr		

g	25 mm dia	420	Mtr		
9	<b>FOOT VALVE</b>				
	Supplying , fixing, testing and commissioning of butterfly valve PN 1.6, nitrile seat complete with Nuts, Bolts, washers, gaskets, conforming to IS 13095 of following sizes as required.				
a	150 mm dia (Pump room + FBI )	7	No		
b	100 mm dia	1	No		
c	80 mm dia	1	No		
d	65 mm dia (Sprinkler isolation)	6	No		
e	50 mm dia (Sprinkler isolation)	2	No		
f	40 mm dia (for priming of 4 pumps)	4	No		

10	<b>NON RETURN VALVE</b>				
	Providing and fixing cast iron Dual plate Non -return valve of approved quality conforming to API-594 with bolts, nuts, washers, 3mm thick insertion rubber gaskets complete. as reqd.				
a	150 mm dia	3	No		
b	100 mm dia	1	No		
c	80 mm dia	1	No		
d	40 mm dia	4	No		
11	<b>FOOT VALVE</b>				
	Supply in stallion testing and commissioning of Foot valve.				
a	150 mm dia	3	No		
b	80 mm dia	1	No		
12	<b>HYDRANT VALVE</b>				
	Supplying and fixing single headed internal hydrant valve with instantaneous Stainless steel coupling of 63 mm dia with cast iron wheel, ISI marked, conforming to IS 5290 (type A) with blank cap and chain as required.	11	No		

13	<b>HOSE BOX</b>				
	Supply, installation, testing and commissioning of weather proof hose cabinet having the size of 750x600x250mm made of 16gauge MS Sheet with full front front glass door and locking arrangements suitable to accommodate 2 nos 15m long hose pipes and 1 No. branch pipe. The cabinet shall be painted to scarlet red color outside and white inside. The out door hose box should be powder coated to prevent rust	11	No		
14	<b>HOSE REEL</b>				
	Supplying and fixing First-Aid Hose Reel with MS construction spray painted in post Office Red drum and brackets, Conforming to IS 884/ International standards with up to date amendments, complete with the following as required. (a) 30 m. long 20 mm (nominal internal) dia water hose Thermoplastic (Textile reinforced) Drum and brackets for fixing the equipments on wall. (d) Connections from riser with 25 mm dia stop valve & M.S. Pipe	8	No		
15	<b>FIRE HOSE</b>				
	Providing and installation of 63 mm dia,15 Mtr long rubber lined woven jacketed hose pipe, type- A (Reinforced rubber lined) of IS-636-1988 complete with necessary instantaneous SS coupling at the ends to match with landing valve / hose pipe / branch pipe with Stainless steel male & female couplings (IS:903:1993)	22	No		
16	<b>BRANCH PIPE</b>				
	Providing and installation of Branch pipe of 63 mm dia having Stainless steel body with hexagonal head of 20mm dia nozzle conforming to IS903 with ISI mark	11	No		

17	<b>AIR CUSSION VESSEL</b>				
	Supplying, Installation, Testing & Commissioning of air cushion tank ( air vessel) of continuous welded construction, fabricated out of atleast 8mm thick steel with dished ends, galvanized to IS:4736-1968 and supporting legs, 250mm dia & 1200mm high complete with necessary air release valve, safety valve, pressure gauge, flange connection to the wet riser piping with necessary piping to meet the functional requirement of the system.	1	No		
18	<b>PRESSURE GAUGE</b>				
	Supplying, fixing, testing and commissioning of 0-15 Kg/sq cm100mm dia Dial type pressure gauge with isolation cock and pipe at hydrant station as per specification.	3	No		
19	<b>PRESSURE SWITCH</b>				
	Supply, installation, testing and commissioning of industrial type pressure switch having 1/4" BSP(F) connection IP:32 enclosure protection, phosphor bronze bellows as sensing element, SDPT contact system, switch rating 6A Inductive/10A resistive 380 V AC, 0.2A Inductive/10A resistive 250V DC suit with ball valve etc. complete as required.	4	No		
20	<b>AIR RELEASE VALVE</b>				
	Supply, installation, testing and commissioning of Gun metal Air Release valve 20mm dia	2	No		

21	<b>FIRE BRIGADE INLET</b>				
	Supply, installation, testing and commissioning of 4way Fire Brigade Inlet connection of 63 mm dia. built - in Gun metal Non- return valves instantaneous coupling type arrangement to be connected to wet riser main.	1	No		
22	<b>SPRINKLER BULB</b>				
	Supply, installation, testing and commissioning of sprinkler Bulb, 20mm dia, 68 degree Celsius UL listed with necessary flexible metal hose.				
	Pendent type	142	No		
	Upright sprinkler	12	No		
23	<b>EXTINGUISHER</b>				
	Supply and installation of <b>ABC type fire extinguisher</b> of 4 kg. Capacity complete with initial charges and installation brackets complete with installation brackets with ISI mark IS:15638	10	No		
24	<b>EXTINGUISHER</b>				
	Supply and installation, testing and commissioning of <b>CO2 type fire extinguisher</b> with 4.5kg. Capacity complete with installation brackets with ISI mark IS:15638	16	No		
25	<b>EXTINGUISHER</b>				

	Supply and installation, testing and commissioning of Mechanical Foam <b>type fire extinguisher</b> with 9 Ltr Capacity with initial filling in brand new cylinder with powder coated finish, fitted with gun metal union high pressure co2 gas cartridge hose and ABS type branch pipe and wall mounting bracket etc complete confirming to IS 15683	2	No		
26	<b>FIRE BUCKETS</b>				
	Fire buckets round bottom type enamel painted, white inside & Red out side and Letter "FIRE" in black out side and handle with mounting bracket. (2 buckets each)	3	No		
	<b>SUB TOTAL</b>				
<b>B</b>	<b>ADDRESSABLE FIRE ALARM SYSTEM</b>				
27	<b>ADDRESSABLE FIRE ALARM PANEL</b>				

<p>Supply, installation, testing &amp; commissioning of networkable <b>Two loop</b> Micro processor based 2 wire fault tolerant loop with optional redundant network module ,each loop shall have the capability of connecting 126 devices. The fire alarm control panel shall have built in degrade mode function. The panel should have inbuilt TCP/IP communication for Panel Program and Remote Monitoring option through LAN or WAN communication. The panel shall be able to give location of all fire and More Fire /fault and Isolation conditions of addressable units via the address codes. The panel shall have the capacity of storing up to 2000 events. Further, the panel must be able to automatically switch ON /OFF respective control module when ever any alarm is triggered. The panel should have inbuilt common Alarm, Fault and monitored sounder output. The panel shall have a 8x40 characters LCD display with resolution of 256 X 112 pixels, and analog output, external/inbuilt printer to log all fire or fault events complete in all respects. Also the panel should have the option to operate in manned and unmanned mode. The Panel Shall have the option of 24/48/96 Zones with Individual LED Indicators or with in the Loop mimic driver for 96 LED indicators. The panel shall have a built in power supply and battery charger along with maintenance free 24 AH, 2 x 12 volt SMF Lead acid batteries capable of running for a minimum of 24 hours with battery charger complete as required. And as per specifications and Duly Approved by EN54/LPCB/VDS/FM .Control module for lift operation during emergency with all accessories -Control module (Life shaft room)</p>	1	No		
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28	<b>DETECTORS</b>				
	Supply and installation, testing and commissioning , of Intelligent Analog Addressable <b>Multi-Sensor</b> type Smoke Detector and integral response indicator with 360 degree viewing angle. Detector shall communicate 3 danger levels for differentiated alarm activation and high tolerance to dust, dirt, temperature fluctuations and air currents. Detector should have unique address for communication and assigned through panel with Mounting Base as required with the protection category of IP40 and Duly Approved by EN54/LPCB/VDS/FM/UL	88	No		
29	<b>HEAT DETECTORS</b>				
	Supply and installation, testing and commissioning of Intelligent Analog Addressable <b>Heat</b> Detector (Static + ROR) with <b>inbuilt turbo Isolator</b> and integral response indicator with 360 degree viewing angle. Detector shall communicate 3 danger levels for differentiated alarm activation. Detector should have unique address for communication and assigned through panel with Mounting Base as required with the protection category of IP40 and Duly Approved by EN54/LPCB/VDS/FM/UL	18	No		
30	<b>OUT PUT MODULE</b>				
	Supply and installation, testing and commissioning of addressable Programmed control out put Module for automatic operation for emergency lift operation	2	No		
31	<b>MANUAL CALL POINT</b>				

	Supply and installation, testing and commissioning of Intelligent addressable <b>manual call point with inbuilt turbo Isolator</b> suitable for flush or surface mounting, call point shall include test key feature without removing the glass. Also should have protection category of IP44 and extra accessories as required, duly approved by EN54/LPCB/VDS/FM	8	No		
32	<b>LOOP POWERED SOUNDER</b>				
	Supply and installation, testing and commissioning of Intelligent addressable loop powered/external power sounder cum beacon with base, inbuilt turbo Isolator, able to provide an o/p of 99dBA at 1m, peak light o/p of at least 3.2cd and shall have 11 programmable tones, 3 volume settings selectable from the panel and fully synchronized with other sounders and shall have the ability to switch between one tone for alert and one tone for evacuation. Shall have protection category of IP42 and duly approved by EN54/LPCB/VDS/FM	8	No		
	<b>FRLS CABLE</b>				
33	Supply and installation, testing and commissioning of 2C x 1.5 Sq.mm twisted pair copper cable ISI marked with proper clamping, supports and terminations..	1800	Mtr		
	<b>SUB TOTAL</b>				
C) 34	<b>SIGNAGES:</b>				
	Providing and installing in position the following type of sign boards made out of 3mm thick rigid PVC board with computer cut with texts written to recommended height in photolumiscent material complete vide technical specifications with mirror fasteners. Sizes and mounting				

	height of the board shall be as per technical specification.				
a	Signage -"IN CASE OF FIRE, USE STAIRS UNLESS INSTRUCTED OTHERWISE"	14	No		
b	Fire extinguisher/Manual Call Point and other life safety related signage's	50	No		
c	Fire order (as per consultant drawings) - 750 x 450mm	21	No		
d	Action by security in case of fire - 750 x 450 mm	1	No		
c	Assemble point 750 x 400 mm	1	No		

35	Providing and installing in position the Fire safety Plan to a recommended scale and at suggested locations	21	No		
36	Photo luminescent type Fire exit signage's with image & supplementary text. As per per suitable image and directional arrow and (Size = 150mm x 400mm)	21	No		
	<b>GRAND TOTAL</b>				

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