

Ref No.: **SCOPEMINAR/MMO/18-19/183**

Dated :- **06.12.2018**

NOTICE INVITING TENDER

1. Online e-tenders are invited by Dy.General Manager, SCOPE on behalf of Constituents of SCOPE MINAR, Laxmi Nagar Delhi- 110092 for the following work as per the detail given below:-

- | | |
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| 1.1 Name of the work | : SITC of Gas based Fire Suppression System for Electrical panels at SCOPE Minar, Laxmi Nagar District Centre, Delhi. |
| 1.2 Estimated Cost | : Rs.62,76,183.00 incl. GST @ 18%. |
| 1.3 Earnest Money | : Rs.1,30,000/- |
| 1.4 Tender Processing fee | : Rs./- |
| 1.5 Time for completion | : Three Months from the date of issue of LOI. |
| 1.6 Cost of Tender | : Rs. 1180/- |
| 1.7 Commencement of downloading E-Bid | : 07.12.2018 from 10.00AM |
| 1.8 Last date of downloading of E-Bid | : 27.12.2018 Up to 10.00AM |
| 1.9 Last date of E-Bid submission | : 27.12.2018 Up to 03:00PM |
| 2.0 Last date of submission of hard copy of EMD | : 27.12.2018 Up to 03.00PM |
| 2.1 Tender opening date & time(technical) | : 27.12.2018 at 03.30PM |
| 2.2 Tender Opening date & time (Financial) | : To be intimated later |

2. Bidders have to download the Bid documents from the e-procurement portal i.e. www.tenderwizard.com/SCOPE after registering themselves on portal and submit e-bids after payment of bid processing fee & Bid document fee before last date & at time of downloading the e-bids online. Bidder can also view the NIT, scope of work on www.scopeonline.in. For E-tendering support contact:- **8800991840, 8800991868**

3. Bids shall be submitted through e-bidding mode only. No other mode of bid submission shall be accepted.
4. Tender document shall be accepted only from reputed specialized Contractors / manufactures, who fulfill following pre-qualification criteria & showing their original documents in this regard:

Experience of having successfully completed similar works during the last 7 years ending last day of the month previous to the one in which applications are invited:

Three similar completed works, each costing not less than the amount equal to 40% of estimated cost put to tender.

OR

Two similar completed works, each costing not less than the amount equal to 60% of the estimated cost put to tender.

OR

One similar completed works of aggregate cost not less than the amount equal to 80% of the estimated cost.

and

- 4.1 One completed work of any nature (Either part of (3) or a separate one) costing not less than the amount equal to 40% of the estimated cost put to tender with some central Govt. Department / State Government Department / Central Public Sector Undertaking / SCOPE / State Public Sector Undertaking / City Development Authority / Municipal / Corporation of City formed under any Act by Central / State Govt. and published in Central / State Gazette.

"Similar works shall mean "SITC of Gas based Fire Suppression system in multi-storied office building & industry".

- 4.2 The past experience in similar nature of work should be supported by certificates issued by the client's organization. In case the work experience is of Private Sector the completion certificate shall be supported with copies of Letter of Award and copies of Corresponding TDS certificates. Value of work will be considered equivalent to the amount as shown in TDS certificate.

5. The tenderer must be registered under ESI, PF, GST & Income Tax act and PAN No. copies of registration papers along with details need to be furnished latest ESI & PF deposit with challan authority is also needed.
6. Average annual financial turn over should be at least 1.5 times of the estimated cost during the immediate last 3 consecutive financial year.
7. Balance sheet for previous three years with ITR.
8. Copies of similar works executed / in hand for multi-storied office building & industry during last five years along with work order & clients performance certificate.

9. "Form of Tender" duly signed & stamped must be submitted during submission of tender through e-portal.
10. All the above certificate / documents shall be uploaded by the firm duly signed & self attested subject to verification with original documents.
11. The tender shall be submitted: thorough only e-portal i.e. [www. tenderwizard.com](http://www.tenderwizard.com) / SCOPE.
12. Tenderers are advised to submit their offers strictly based on the layout, design parameters, specific requirements, terms & conditions and specifications given in the tender documents and instructions to the bidder.
13. Cost of tender documents & Earnest money mentioned above should be paid by crossed Demand Draft/Pay orders from any nationalized /Schedule Bank in favor of "MMO SCOPE Minar". Tenders without cost of tender and Earnest Money Deposit will be summarily rejected and the representative of such tenderers will not be allowed to attend tender opening.
14. Pre-bid Conference shall be held at 3:00PM on 21.12.2018 if required.
15. SCOPE reserves the right to reject any or all tenders without assigning any reasons.

Dy. General Manager-Engg

CC to

- 1. GM (T) – For Information please**
- 2. Sr. Manager (PR) – With a request to upload on web site**
- 3. Sr. Manager- (F&A)**
- 4. Notice Board- SCOPE Minar**
- 5. Notice Board- SCOPE Complex**

SCOPE OF WORK

- 1 The scope covers Supply, Installation, Testing and Commissioning of Automatic Clean System complete for electrical panels with heat detection tube, cylinder, Alarm Control Panel for status monitoring etc. The Finder installer shall cover:
 - 1.1 Providing Direct Panel Gas Flooding System with linear heat detection tube inside the Electrical Panel etc. / any Enclosure.
 - 1.2 Arrangement of Clean Gas Agent for flooding inside the panels.
 - 1.3 Audio-visual annunciation devices for indicating incidence of Fire.
 - 1.4 Any other item required to the successful commissioning of the system
1. The electrical panel fire suppression system shall be complete with Direct Clean Gas required capacities, extinguishing agent as specified adaptors, pressure switches, control equipment and all necessary accessories and push in fittings to form a complete and working installation to protect the Electrical panel in case of Fire.

The Electrical Panel / Enclosures etc. to be protected shall be determined as per the approval of the engineer

The system will have an interface with Main Fire Alarm and Control Panel. In case of Panel, indication of Fire Finder discharge status should come in

REGULATORY REQUIREMENTS

- 2.1 All installations shall conform to NFPA requirements.
- 2.2 Clean Agent used should be NOVAC 1230
- 2.3 National Electric code SP 30 : 1985

2. SYSTEM DESCRIPTION

- 3.1 The Clean Agent Pre-Engineered automatic direct fire suppression system
- 3.2 Each clean agent pre-engineered automatic system is equipped with its own Finder tubing. The pre-engineered concept minimizes the amount of engineering involved in the system Design. When the Detection / Discharged Tubing installed within the limitations stated in

the manufacturer manual, No Hydraulic calculations are required to determine the pressure drop, agent flow or discharge time.

- 3.3 Each Clean Agent extinguishing unit, when installed, is a self-contained system, meaning that it is equipped with its automatic (non-electric) detection system, which when actuated, automatically releases the suppression agent in the Electrical Panel / Enclosure etc without harming any equipment.
- 3.4 The NOVAC 1230 gas is stored in cylinders.
- 3.5 For the direct Clean Agent systems, the tubing performs three functions: Heat Detection, System Activation, and Clean Agent discharge. The tubing is installed throughout the Electrical Panel volume, with one end connected to the top of the Clean Agent container valve. The tubing is pressurized maintains the system in the "OFF" position. An optional pressure gauge or pressure switch can be connected to the other end of the detector/discharge tube to monitor system pressure and/or signal of system actuation, etc. The detector/discharge tubing is heat sensitive and in a fire situation is designed to rupture at any point upon flame impingement. The rupture of the tube results in a formation of a discharge nozzle that will perform a complete discharge of the Clean Agent. Location and spacing of the tubing should be placed above the hazard areas being protected.

4. DESIGN REQUIREMENTS

- 4.1 Provide sufficient amount of NOVEC 1230 (3M). Considering the following when computing volume to verify suitability and to establish design limitations:
 - Volume of hazard area.
 - Specific volume of Clean Agent.
 - Design concentration and design factors.
 - Detector / discharge tubing placement.
- 4.2 Locate Clean Agent supply near each hazard area.
- 4.3 Interface system with main control fire alarm system and BMS (if required).
- 4.4 The pre-engineered automatic system concept minimizes the amount of engineering required when evaluation is design for a specific application.
- 4.5 No calculations are required for pressure drop, flow rates or discharge time as long as the discharge/detection tubing is installed within the limits as specified by this manufacturer.
- 4.6 When the additional limitations of hazard volume, area coverage, maximum height, design concentration, agent quantity, detection tubing arrangement etc are also met, the system installation shall be understood to comply with the design requirements, NFPA-2001.
- 4.7 Therefore, no discharge tests or concentration measurement shall be required.
- 4.8 All doors and holes in the enclosed/equipment should be closed or sealed to maintain the tightness of enclosure.

4.9 The system should have means to close the exhaust fans if installed in the panel at the time of system activation.

4.10 As desired by the engineer-in-charge the main supply of panel can be shut off with the System.

5. SYSTEM CONFIGURATION

Heat Detection Tube

Extinguisher Cylinder Assembly.

Pressure Switch and Audio Alarm.

HEAT DETECTION TUBE:

The tube is a fixed temperature sensing tube made of high tech polymer material to cater to long time leak resistance, flexibility, consistent and accurate heat sensitivity.

CLEAN AGENT EXTINGUISHER CYLINDER ASSEMBLY

Clean Agent Extinguisher Cylinder comprises of Direct Low Pressure Valve and pressure gauge for monitoring the pressure in the cylinder and a ball valve for regulating of pressure between the cylinder and the Fire Detection Tube. The outlet of the valve remains in closed position until pressure in the Fire Detection Tube is retained. Once rapid drop of pressure in Tubing occurs due to rupture, it will activate the valve and Extinguisher instantly and completely released to the origin of the fire, through the opening created by the busting of heat Detection Tube.

PRESSURE SWITCH:

The Pressure Switch is a sensitive device, which senses the drop in pressure at a predefined setting. It is fitted at the end of line adapter to monitor the pressure in the Fire Detection Tube. The drop in pressure in the tubing will be sensed by the Pressure Switch and it will activate the Audio Alarm.

AUDIO ALARM:

An alarm unit is provided to alert the Occupants of the Electrical and Networking rooms. The alarm unit is ruggedly built to cater to the adverse environmental conditions and will get activated when the Pressure Switch senses the reduction in pressure.

6. After completion of work and during progress of work, proper site clearance should be done as per the directions of Engineer-In-Charge.
7. Supply & fixing of all the materials required to carryout the work including all consumables are also in the scope of work of contractor. Nothing shall be paid extra on this account.
8. Contractor shall got approved the sample of materials before supply at site.
9. As this work is to be carried out in locations where offices of the constituents of SCOPE Minar are functioning, contractor has to work in such manner that constituents face minimum

disturbance. For this purpose contractor may have to work in late hours or after office hours or on holidays including Sundays etc.

10. The contractor have to work in late hours or after office hours or on holidays including Sundays etc. Decision of Engineer-In-Charge in this regard will be final and contractor is bound to carryout the work accordingly, other wise suitable penalty shall be imposed on the contractor.
11. The work shall be carried out in such a way that no damage to the property of SCOPE / Building occurred and in case of any damage to the same contractor is liable to replace / provide the same.