


Orissa Industrial Infrastructure Development Corporation (A Government of Orissa Undertaking) Phone: (0674) 2542784, 2540820, Fax: 2542956. E-mail: md@idcoindia.com Website: www idco.in	 ISO 9001 & 14001 CORPORATION
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Dated.

**EXPRESSION OF INTEREST FOR COMPREHENSIVE OPERATION AND MAINTENANCE
OF FIRE ALARM AND FIGHTING SYSTEM OF IDCO TOWERS, BHUBANESWAR.**

QUOTATION CALL NOTICE

The Divisional Head, Maintenance Division, IDCO, IDCO Towers, Janpath, Bhubaneswar - 22 invites Expression of Interest for Comprehensive Operation and Maintenance of Fire Alarm and Fighting System of IDCO Towers. The Building is located in an area 80,000 sqft. comprising of Front Block (IDCO Head Office) and Extension Block (Basement + Ground Floor + Ten Floors). The Front Block is occupied by IDCO Corporate Office and the Extension Block is rented out to Govt. PSU's and other Private Offices. The detail about the complex is as follows.

<u>FRONT BLOCK : (Basement Ground Floor + 2nd Floor)</u>	<u>EXTENSION BLOCK (Basement+Ground+10th)</u>
(a) Basement - 2500 Sqft	(a) Basement - 5,760 Sqft
(b) Ground Floor - 6000 Sqft	(b) Ground Floor - 6,912 Sqft
(c) First Floor - 6000 Sqft	(c) First Floor - 8,450 Sqft
(d) Second Floor - 8000 Sqft	(d) Second Floor - 9,818 Sqft
	(e) Third Floor - 10,730 Sqft
	(f) 4 th to 10 th Floor - 11,870 Sqft in each Floor

The specialized agencies having experience of 10 years in providing comprehensive operation of fire fighting and maintenance services and turn over not less than Rs.50.00 Lakh per year in fire fighting system and having experience of execution in similar nature of work in Govt. Building, Multistoried Apartment, Business Center, Malls, Railway Station / Air Port not less than 75,000 Sqft (Super Built-Up Area) needs only apply for providing following comprehensive operation and maintenance services of Fire Alarm and Fire Fighting Services for IDCO Towers, Bhubaneswar.

The scope of work for expression of interest as detailed in Annexure - I and Annexure - II shall be applied to the following fire alarm and fire fighting system of IDCO Towers.

THE EXISTING FIRE FIGHTING SYSTEM OF IDCO TOWER ARE AS FOLLOWS :

1. Fire Hydrant System

- a. 90 HP Main Hydrant Pump - 2 Nos. Kirloskar make
- b. 15 HP Jockey Pump Kirloskar make
- b. Wet Riser System in Front Extension Block including all accessories

2. Alarm System

- a. Automatic Fire Detection system
- b. Zonal Panel - 1 No. (in Front Block)
- c. Fire Detectors Ionization type / Smoke and Heat type
- d. Response Indicator
- e. Manual Call Point
- f. Electronic Hooter

3. Fire Extinguisher System

Fire Extinguisher in all Floor of IDCO Office and Common Areas of Extension Block in (Basement + Ground Floor to Tenth Floor)

The intended bidder may submit their **“Technical Offer”** in Packet - I containing the Earnest Money (EMD) of Rs.1.00 (One) Lakh) in shape of Bank Draft drawn on any Nationalized Bank in favour of **“Orissa Industrial Infrastructure Development Corporation”** payable at Bhubaneswar along with Experience Certificate of execution of similar nature work from the agencies. Preference shall be given to agency certified by Govt. / PSU. Certificate of approval to agency by Orissa / other State Govt. / Central Govt. Fire prevention Deptt. Company Brochure, Bank Solvency, Balance Sheet of last Three years, PAN, TIN, EPF, ESI Registration and Service Tax Registration, Certificate from Deptt. of Central Excise & Customs, the detail of proposal for engagement of Man Power for operation of Fire Alarm and Fire System for 24 x 7 to the building.

Packet - II containing Comprehensive Operation and Maintenance charges of Fire Alarm & Fire Fighting System with cost break-up per month and rate valid for 2 (Two) years and both the packets to be put inside one sealed envelope super scribing on the top **“Expression of Interest for Comprehensive Operation and Maintenance of fire alarm and fighting System of IDCO Towers.** So as to reach the IDCO Maintenance Division, IDCO, IDCO Towers, Janapath, Bhubaneswar - 751022 on or before 09.11.2009 during office hours through Registered Post / Speed Post only. The Technical Offer of the firm will be opened on 10.11.2009 at 11.30 A.M. in the office of Divisional Head (Maintenance), IDCO, IDCO Towers, Janapath, Bhubaneswar in presence of bidders or their authorized representatives, who ever intends to remain present during the opening. If the office happens to be closed on the date of receipt of the bids will be received and opened on the next day at the same time and venue. The Financial Offer will be opened only technically, qualified bidders on the day of opening of technical offer or any other day under intimation to the bidder. Intended bidders may visit the site any working day and contact Sri Subash Chandra Sar, Deputy Manager (Civil) for details, For other details and scope of work. IDCO Website www.idco.in may be visited.

The undersigned will not be responsible for any loss, damage or delay, if any in the delivery of the documents or non-receipt of the same in due date.

IDCO reserves the right to cancel any or all the bids without assigning any reason thereof.

**Divisional Head
Maintenance Division
IDCO, Bhubaneswar**

Memo No. -----/ Dtd. -----/

Copy submitted to the CGM (Civil) / CGM (Finance) IDCO, IDCO Towers, Bhubaneswar for kind information.

**Divisional Head
Maintenance Division
IDCO, Bhubaneswar**

Memo No. -----/ Dtd. -----/

Copy to BCD-I / BCD-II / Water Supply / Electrical Divisions, IDCO, Bhubaneswar for information with a request to display in their Office Notice Board for wide circulation.

**Divisional Head
Maintenance Division
IDCO, Bhubaneswar**

Memo No. -----/ Dtd. -----/

Copy to Deputy Manager (Civil) / Account Section, Maintenance Division, IDCO for information and necessary action.

**Divisional Head
Maintenance Division
IDCO, Bhubaneswar**

Memo No. -----/ Dtd. -----/

Copy Manager (MIS), IDCO, IDCO Towers, Bhubaneswar for information and necessary action with a request to publish in the IDCO Website.

**Divisional Head
Maintenance Division
IDCO, Bhubaneswar**

Memo No. -----/ Dtd. -----/

Copy Joint Manager (P&A) in-charge of PR, IDCO, IDCO Towers, Bhubaneswar for information and necessary action with a request to publish the notice consecutively by for two days in two local Oriya and one English national Daily News Paper before 23.10.09.

**Divisional Head
Maintenance Division
IDCO, Bhubaneswar**

Memo No. -----/ Dtd. -----/

Copy Notice Board, IDCO, IDCO Towers, Bhubaneswar for wide circulation.

Divisional Head

**Maintenance Division
IDCO, Bhubaneswar**

Scope of Work for operation of Fire Alarm & Fire Fighting System**1) Fire Supervisor**

- (i) He shall be responsible for maintenance and upkeep of Fire Alarm system and Fire fighting installations.
- (ii) He shall organize periodical fire drills with the assistance of local Fire Brigade at least once in six month. In the event of fire he shall take overall command of the fire fighting and evacuation operations. He shall position himself in the control Room and give necessary instructions to the Floor Wardens etc. on public address system / telephone. He shall be responsible for ensuring that the Fire brigade has been notified of the fire. On arrival of the Fire Brigade he shall direct them to the fire floor and act further according to their instructions.

2) Fire Man / Assistant Fire Man

- (i) The Fire Man / Assistant Fire Man shall familiarise himself with the Fire Alarm and extinction appliances on the floor, location of exit etc. Damages if any noticed shall be immediately reported by them to the Fire safety officer.
- (ii) They shall check for obstructions, if any, in the escape routes and arrange to remove them promptly.
- (iii) In the event of fire or fire alarm, the Fire man shall ascertain the location of the fire and take steps to extinguish the fire with available appliances. They ensure that the supervisor Fire man / Assistant fire man Officer is notified immediately. In case evacuation becomes accessory, they shall organise evacuation operations on the floor. The floor Warden shall check the environment in the stairs prior to evacuation. If it is affected by smoke, alternative stairs shall be used.

3) Fire Safety Plan

- (i) The Deputy Manager (Civil) shall be responsible for drawing up of fire safety plans for each existing building under their charge and for nominating Fire man / Assistant fire man Officers.
- (ii) The fire safety plan shall be drawn up in consultation with the local Fire Brigade and the concerned Electrical Units. Inadequacies in the fire alarm and fire fighting appliances shall be made good at the earliest.
- (iii) The Fire Safety Plan shall include printing and displaying of fire safety instructions to the staff.
- (iv) The fire safety plan shall specify action to be taken by different categories of staff in cases of fire e.g. supervisor floor man, fire fighters, watchman, air-conditioning staff, liftmen, pump operators, sub station staff and other remaining staff.

4) Records

Systematic records shall be maintained in connection with inspection, testing and maintenance of fire fighting and alarm appliances.

(i) Log Book of Fire Alarm System

The log book shall be a record of inspection not details of replacements, modifications, abnormal behavior observed, corrective measures taken etc.

(ii) Log Book of Wet Riser System

The log book shall be a record of inspection notes of pump, Wet Risers, static water tanks etc. The log book shall indicate the results of trial runs of the system, deficiencies noticed, replacement etc.

(iii) Log Book of Fire Extinguishers

The log book of fire extinguisher shall indicate S. No. of the extinguishers, type of extinguishers, location, date of purchase, details of tests, inspection, repairs and recharging.

(iv) A copy of the fire safety plan of the building incorporating details of the fire safety organization, details and locations of alarms, fire extinguishers, floor plans etc. shall be always available with the Fire fighting supervisor and in the Control Room.

5. Surveillance

The Fire fighting supervisor should inspect the buildings once every day to check house- keeping and cleanliness. The Fire Man / Assistant Fire Man shall also check obstructions if any on escape route and fire safety appliances. After departure of the staff, each day, the premises shall be inspected by official / officials nominated by the fire supervisor to see that there is no collection of waste paper of any other inflammable material likely to cause fire. It shall be ensured that all electrical appliances such as heaters, water coolers, air-conditioners, soldering irons are switched off and disconnected.

6. Reporting of fire to the higher authorities

In all events of outbreak of Fire in IDCO, Buildings, the Deputy Manager (Civil) in charge of the building should be informed, The Deputy Manager (Civil) inturn will intimate DH & CGM Civil telephonically in case of serious interruption to communications or extensive damage.

**Divisional Head
Maintenance Division**

PART - A

Annexure-II

Scope of Work for Maintenance of Fire Alarm & Fire Fighting System

The fire fighting equipment shall be kept in good working order at all times and maintenance schedule of the system should be drawn up by the agency and circulated to all the concerned for proper monitoring and execution. Fire supervisor shall be responsible the proper monitoring of the fire detection and fire fighting system and its general cleanliness.

A log book to record inspection notes, details of replacements, modifications, abnormal behaviors observed, corrective measures taken etc should be maintained.

Some important points as under should be test checked during inspection to be carried out by the Fire Supervisor:-

1. Fire alarm and detection system minimum (Once in a month and as per requirement)

- (i) Functional tests on / from Control Panel(s)
- (ii) Working of the manual fire alarm points. 3
- (iii) General Cleanliness of the system particularly the detector heads.

2. Wet Riser system

- (i) Hydrant mains shall be tested once a fortnight for its satisfactory operation.

3. Hose Pipes and Nozzles

- (i) All hose boxes / hose stations shall be inspected externally once a week to ensure that equipment installed therein is intact.
- (ii) Fire protection hoses shall not be utilized for any other purpose.

4. Fire Pumps.

- (i) A trained person shall be available at all hours of the day and night to operate the pump when required. The services of such a person can also be utilized for other maintenance operations.
- (ii) Pump sets shall be run at least five minutes every day.
- (iii) The level of water in the priming tank shall be checked daily to ensure that the foot valve is not leaking.

5. Portable Fire Extinguishers.

Routine inspection maintenance and testing of existing 23 nos. of fire extinguishers should be carried out by properly trained personnel once a month and the supervisor should test check the functioning of the extinguishers for their proper working.

6. Daily attention by the Agency. A check should be made every day to ascertain that:

- (a) The panel indicates normal Operation : if not, that any fault indicated is recorded in the log book and is receiving urgent attention : and
- (b) Any fault warning recorded the previous day has received attention.

**Divisional Head
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7. Weekly attention by the Agency- The tests should be made every week to ensure that the system is capable of operating under alarm conditions (a) Once a week, at least one rigger device or end of line switch on one zone circuit should be operated to test the ability of the control and indicating equipment to receive a signal and to be should the alarm and operate other warning devices. If there is more than one Zone on a system having unmonitored wiring, each unmonitored zone should be tested each week, but without sounding the alarm more than once. For systems having monitored wiring and upto 13 zones, each should be tested in turn but if there are more than 13 zones, more than one zone may need to be tested in any week so that the interval between tests on the zone does not exceed 13 weeks. It is preferable that each time a particular zone is tested, a different trigger device that has been used to initiate the test. If the operation of the alarm sounders and, or the transmission of the alarm signal has been prevented by disconnecting, then a further test should be carried out to prove the final reinstatement to the sounders and if permissible, the alarm transmission circuits (b) A visual examination of the battery and connections should be made to ensure that they are in good condition. Action should be taken to remedy any defect, including low electrolyte level.

Any defect should be recorded in the log book and reported to Dy. Manager (Civil) person, and action should be taken to correct it.

8. Quarterly inspection and Test by the agency- The following check-list and test sequence is carried out.

- (a) Entries in the log book since the previous inspection should be checked and any necessary action taken.
- (b) Batteries and their connections should be examined and tested to insure that they are in good serviceable condition.
- (c) Where applicable, secondary batteries should be examined to ensure that the specific gravity of electrolyte in each cell is correct. Necessary remedial action should be taken and an appropriate entry in the log book. Care should be taken to ensure that hydrometers, vessels, etc used in the servicing of alkaline secondary cells are not contaminated by acid and vice-versa. Contamination of electrolyte can ruin a cell.
- (d) Primary batteries, including reserves, should be tested to verify that they are satisfactory for a further period.
- (e) The alarm function of control and indicating equipment should be checked by the operation of a trigger device in each zone as described. The operation of alarm sounders and any link to a remote manned centre should be tested. All ancillary function of the control panel should also be tested where practicable. All fault indicators and their circuits should be checked preferably by the simulation of fault condition. The control and indicating equipment should be visually inspected for signs of moisture ingress and other deterioration.
- (f) A visual inspection should be made that structural or occupancy changes have not affected the requirements for the siting of trigger devices (manual call points, smoke detectors and heat detectors). The visual inspection should also confirm that clear space of at least 750mm radius is preserved in all directions below every detector and that the detectors are sited and that all manual call points remain unobstructed and conspicuous.

Any defect should be recorded in the log book and reported to the responsible person, and action should be taken to correct it.

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Maintenance Division**

9. Annual Inspection Tests- The following checks and test sequence should be carried out

- (a) The instruction and test routines detailed in II 5 (a) (b) (c) (d) (e) and (f).
- (b) Operation of at least 20 percent of the detectors in an installation should be checked each year, and the selection should be done in such a way that all the detectors in on installation shall have been checked once in every 5 years- replacement by a new one.
- (c) Each detector should be checked for correct operation using specified test equipment and method, except non reset table detectors. The checks to be carried out are specified in 1 to 4 in respect of heat detectors and 5 and 7 in respect of smoke detectors.

1. Restorable heat detectors and restorable elements of combination detectors should be tested by a heat source, such as a hair dryer, or a shielded heat lamp until it responds, making sure that the sensing elements is not damaged. After each heat test, the detector should be reset. Precautions should be taken to avoid damage of the non-restorable fixed temperature element of a combination rate of rise / fixed temperature detector.

2. Non reset table fixed temperature heat detector which are not to be heat tested should be tested mechanically or electrically for fire alarm function.

3. Heat detector with replaceable fusible alloy element should be tested first by removing the element to see whether contacts operate properly and then reinserting them in proper position.

4. In periodic testing heat detectors should be visually examined for damage or other conditions such as heavy coats of paints, etc likely to interfere with the correct operations.

5. Each smoke detector should be tested to initiate an alarm at its installed location with smoke of proper approved aerosol which demonstrates that the smoke can enter the chamber and initiate an alarm.

6. In order to ensure each smoke detector in within its sensitivity range it should be tested using further.

- (i) A calibrated test method or
- (ii) A manufacturers / suppliers approved calibrated sensitivity test instrument of
- (iii) Approved control equipment arranged for the purpose or
- (iv) Other approved calibrated sensitivity test method.

7. Detectors found to have a sensitivity outside the approved ranged should be replaced.

- (i) Visual inspection should be made to confirm that all cable fittings and equipment are secure, un-damaged and adequately protected.
- (ii) At least once every three years at the annual inspection, the electrical installation should be tested. Any effect should be recorded in log book and suitable remedial action should be taken.
- (iii) On completion of the annual inspection, the entry should be made in register in respect of defects found. After the defects are rectified, the entries should then again be made.

10. General Points about Detectors- It is essential (Particularly for installations involving life hazard) to ensure specified range of sensitivity of the detectors being installed and that the correct degree of sensitivity is maintained. Users should satisfy themselves on this point. Sensitivity range should be checked on equipment as already specified. It is essential to apply frequent sensitivity checks and routine tests as prescribed in the code so that the correct sensitivity levels / degree is maintained during the entire service span of the installation.

11. Cleaning and Maintenance- Detectors require periodic cleaning to remove dust or dirt that has accumulated, the frequency of cleaning depending on the type of detector and the local ambient conditions. In any case, the interval should not exceed a period of 3 months. For each detector, the cleaning, checking, operating and sensitivity adjustment should be attempted only after consulting manufacturer's instructions. These instructions creating should details methods such as creating vacuum to remove loose dust and insects, and washing heavy greasy and grimy deposits. Following partial disassembly of the washing of detectors to remove contamination, the sensitivity test requirements in accordance with the relevant clauses should be performed.

12. Test Following an Alarm of Fire- All detectors suspected of exposure to a fire condition should be tested in accordance with the provisions contained in code pertaining to annual inspection tests. In addition, a visual check of battery charger should be carried out to ensure perfect serviceability. However, a check should be made of the extent of damage, if any to the cables and other components and also the operation of the systems as a whole.

13. System Disconnection During Testing- care should be taken to minimize the disruption of the normal use of the building by alarm sounding during detector testing. If detectors are removed for testing or servicing, replacement detectors should be provided.

**Divisional Head
Maintenance Division**

PART- B

MAINTENANCE OF FIRE FIGHTING PUMP AND ITS ACCESSORIES

The following points to be followed for fire fighting pump sets and its controlling system along with the Fire Alarm installed inside the IDCO Towers Building, Janpath, Bhubaneswar.

1. The maintenance job involves operation and maintenance of fire fighting and fire alarm system including operation of Jockey pump of 15 H.P fire fighting pump 90 H.P during round the clocks for the whole year.
2. The Agency has to take possession of total Fire fighting installation including pumps and motors and Fire alarming system connecting to the fire fighting in complete such as :
 - (a) Jockey pump set of 15 H.P- 1 No
 - (b) Main fire fighting pump set of 90 HP - 1 No
 - (c) Main Auto control panel controlling the above pumping sets.
 - (d) Suction of delivery pipe line with valves pressure gauge pressure switch and power cables etc.
 - (e) Wet riser system, Hose pipe & Nozzle.
 - (f) Manual fire Alarm System.
 - (g) Fire Extinguisher
3. The Agency has to engage at least 4 Fire fighting trained personnel (3 will be in three shifts and one as leave reserve) who have adequate knowledge in operation Fire fighting system operation of Hydrant valves and Fire fighting extinguisher etc.
4. The Agency has to replace the proper fuses, other minor spares from the control panel and motor and pump at his own cost during the maintenance period including minor repair like pipe line, leakage, valve leakage, gland packing replacement of pump etc.
5. Any problem like false over cable faults, wiring fault of control panel faults, pump and motor suction ball and other main faults have to be attended by the agency without any delay at his own cost.
6. All the terminals in the control pannel, terminals of the motor are to be cleaned twice in a month positively by the Electric driven blower and the same should be noted in the log book.
7. The suction pipe priming is most important which may be checked in each shift.
8. The motor and pump coupling for freeness of the pumping set has to be checked twice in a month.
9. The stag line should be loaded by the agency by operating the jockey pump in each two day interval.
10. The Agency has to maintain the pumping set by replacing the grease, change of gland packing (when necessary) checking of alignment of the pumping set, checking the foundation nuts and bolts once in a month at his own cost by engaging the license hold Electrician and plumber. All the maintenance work should be noted in the log book.
11. The Agency has to operate the Main fire fighting pumping set once in week (on Sunday) by releasing the water at the Ground floor point. All sluice valves installed in the stag line operated once in week to keep always free, if found jam, the agency should make it free immediately.

12. The Agency should note the voltage in three phase power supply line before starting the Fire fighting pump. If the in-put voltage goes below than the operation voltage he should operate the pumping set through the Generator set to avoid the damage in the Motor winding of side by side the same should be noted in the log book. The Agency has to check the pressure gauge pressure switch bearing lamp, proper rating current in the Motor winding and leakage through gland packing.

13. The Agency should provide the following measuring instruments and safety equipments to the operator which may be kept inside the control room.

(a) Rubber Gloves

(b) Line Tester

(c) Test lamp

(d) Rubber shoes

(e) Tongue tester

(f) Electrical Driven blower for cleaning the dust.

14. All the Fire Alarm cable should be checked once in a week specially on the Sunday and if found any fault, should be attended by the Agency without any delay.

15. The Agency should always keep the fire fighting under ground sump filled with the water, daily records to be maintained as directed by the Engineer-in-charge.

16. The agency should keep contact with fire service Department for periodical operation and demonstration in each month so that the Agency staff and fire service staff will be well acquainted with the Building for Emergency operation as and when required.

17. The firm will submit safety certificate from local fire officer once in a year the above arrangements should be made by the Agency at his cost and record maintained for such demonstration to be signed by the officer of the Fire service.

18. The priming arrangement made for the purpose is to be checked regularly ensuring immediate use for the pumps during the case of emergency. The repair to leakage of pipe lines replacement of washer in foot valves and other connected fixtures including cost of materials and labour are to be attended immediately of his own cost. In case of any major replacement of parts of the system is to be brought to the notice of officer-in-charge of the work immediately and get the work done by personal permeation, Like wise the vertical risers are to be maintained certain water pressure thorough jockly (round the clock for 365 days.) This is to be ensured regularly by the Agency through the maintenance procedure.

19. The Fire fighting personnel should be regularly trained weekly / fort-nightly in consultation with Orissa Fire Brigade Services, along with demonstration of use of the equipments. Fire fighting system, Time to time changes and development of the procedure of improvements in maintaining the system to clearly imported of referring to the stage fire brigade service (i.e. operation of Fire hose, Hydrant Valves, different type of fire Extinguishers, its filling and operation).

20. As this system is operated in emergency, the maintenance of the system is to be done on top priority basis and relevant records (Such as Attendance Register of staff engaged in shifts log book for operation of pumps. Log books of day to day maintenance etc duly signed by the Agency and Officer-in-charge on duty from IDCO Authority) to maintain correctly and regularly and copy of which is to be produced by the agency during the submission of monthly payments.

