

ऑयल एण्ड नेचुरल गैस कॉरपोरेशन लिमिटेड

प्रथम तल, टॉवर-ए, दीनदयाल ऊर्जा भवन, 5. नेल्सन मंडेला मार्ग, वसन्त कुंज, नई दिल्ली-110070 (भारत)

Oil and Natural Gas Corporation Ltd.

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Dt.17thSeptember 2020

Dear Sir,

SUB: <u>Demonstration of Fire Fighting Equipment and Systems – Developed & Introduced by Vimal Fire Controls Pvt Ltd on 04.02.2020</u>

I take this opportunity to thank you for arranging our visit to your manufacturing facilities at Vadodra followed by live fire demonstration of various advanced Fire Fighting Equipment & Systems developed by your company under MAKE IN INDIA policy through tremendous R & D and relevant quality checks.

The demonstration was witnessed by following ONGC Officials:

- 1. Mr. Sanjeev Kapoor, GM-HFS, New Delhi
- 2. Mr. D.N.Patil GM (FS), Mumbai
- 3. Mr. Ratendra Kumar, GM(M), New Delhi
- 4. Mr. H.S.Sahu, DGM(FS), Hazira Plant
- 5. Mr. Parag Kumar Gupta, CE(M), New Delhi
- 6. Mr. Rakesh Pandey, CE(Elex.), New Delhi
- 7. Mr. Surendra Yadav, CM (FS), New Delhi
- 8. Mr. P.K.Jaiswal, Manager(FS), Mumbai

Following are the comments on the demonstrations of various equipments demonstrated by you.

1. Fire Fighting Robot

It is a self-driven remote controlled unit which is capable to travel into areas which are considered unsafe, unapproachable and hazardous. It reduces strain and exposure to fire fighters operating near a fire incident. It assists the fire fighters in removing debris and other road blocks. The unit comprises of a water/foam monitor, nozzles for producing water mist, thermal /visual imaging camera, gas detector, cable winch and a dozer blade. The unit moves on heavy duty rubberised tracks enabling it to cross over open drains and trenches. This robot is very good for fighting fire of storage tank from the safe distance for longer duration without any fatigue to the fire fighters. The robot can be manoeuvred easily by a single person. Such Robots will be immensely useful in every Oil Installations/ Terminals. Oil Depots, Refineries, LPG storage, Loading/unloading gantries and areas which are inaccessible / unapproachable and hazardous for fire fighters.

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2. Nitrogen Based Transformer Fire Protection System

This system is very good for internal & external fires involving Oil based Transformers. The system is able to detect internal and external fires occurring in the transformer. On receiving the signal, the system automatically injects nitrogen gas inside the transformer and simultaneously transformer oil is removed into the drain tank. Further the fixed water mist system actuates and covers the entire transformer externally thus reducing its temperature.

3. ISI Marked lightweight Aluminium Fire Extinguishers

A stored pressure type fire extinguisher with aluminium body and lighter than 3-4 kg as compared to MS body fire extinguisher and suitable for Class A and B fires. It can be used with dry chemical powder, water, foam and clean agent and available in different capacities. The extinguisher is rust and corrosion free and hence can be installed in all weather conditions.

4. ISI Marked Portable Water Mist Fire Extinguisher

This is an innovative and technologically product, which is useful for Class A, B, C & even electrical fires. By converting the water in the mist form it can be used on electrical appliances provided the power supply is totally cut off. These fire extinguishers are highly recommended for petrol pumps, offices, residences, Hotels, hospitals. The cost of refilling seems to be less as compared to other conventional fire extinguishers.

5. High Volume Long Range Monitor of 40000 LPM

This unit comprises of long range monitor having high discharge volume of water with discharge capacity of 10500 US gallon approximately 40000 LPM at 7.0 kg/cm² pressure along with unit mounted motors to control the movement of monitor and throw pattern. The monitor is capable to discharge water in the form of jet and spray. Arrangement is also provided to supply foam through a pick up pipe. The monitor can be manoeuvred electrically through remote control system and is very useful where larger volume of water is required for fire fighting e.g. tank fires, jetties, blow out etc.

6. Auto Fire Detection & Suppression Systems

This system performs by quick detection and instant fire suppression. The heat detection system comprises of quick response detectors and the fire suppression media can be DCP, Foam or Water Mist based. This system can be useful for petroleum tankers, LPG Tankers, engine rooms.

7. Addressable Linear cable microprocessor based Heat Detection System.

The linear heat sensor cable system with electronic sensors is a temperature measurement system and a resettable line type heat detector. It continuously measures and monitors the temperature in the area deployed to provide a reliable and early alarm if any abnormal rises of temperature occur or if the temperature reaches at any point the maximum temperature threshold. LHS automatically give the signal to the SCADA and to

the fire panel which transmits the alarm to the Emergency Services. The sensors are completely sealed in a cable to protect them from environmental influences. It is a useful item for cable trays, underground/above ground cables.

8. Centralised Fixed Foam Feeding System (CFFS)

CFFS is designed to feed water and foam to remote / portable / manual HVLR monitors, MEFFG, etc continuously without any stoppage thereby making the firefighting operation effective and simultaneously alerting the personnel at the facilities so that they can respond to the incident. The system comprises of two interconnected mother foam storage tanks ,one daughter foam storage tank, one foam sump, rotary pumps and interconnected pipe network to transfer foam between tanks and finally to the discharge units. The existing foam cum water monitors can be connected to this system. This system can be very effective for oil tank farms.

9. Artificial Intelligent based Automatic Fire Detection & suppression system:

The system comprises of a camera mounted on the elevated monitor which detects any fire and gives signal to the remote unit which on turn starts the operation of water/foam monitor. The whole operation can be carried out without human intervention. The automatic alert can be sent by email with the picture of the fire place to number of persons. This system is suitable for any hazardous unmanned location where round the clock monitoring is essential.

It was well noted that the majority of the products demonstrated by you are developed and manufactured in India and will be assets and extremely beneficial for Oil & Gas sector to protect their facilities from fire.

All of your team members deserve appreciation for the joint work and demo. We also thank you for the wonderful and heart touching hospitality given to our entire team from ONGC. Please accept our heartiest congratulations for such gallant and innovative ideas in the field of Firefighting & Safety.

Wishing you good luck for your growth and all your future endeavors.

Yours sincerely,

(Sanjeev Kapoor)

Shri Nalin C Doshi Managing Director, Vimal Fire Controls Pvt Ltd., Mumbai.