



THE FIRE EXPERTS



**WORLD CLASS PRODUCT THAT
SUPPRESSES FIRE BEFORE IT SPREADS**

**EXTINGUISH ANY FIRE AUTOMATICALLY ON
RIM-SEAL AREA OF FLOATING ROOF STORAGE TANK**



Installed and operating over 900+
petroleum storage tanks since 10+ years

**Automatic Heat Detection cum Fire
Suppression System to Protect
Rim Seal Area of Floating
Roof Storage Tank**



Floating roof storage tank is designed to fill and empty the petroleum product regularly. Due to this process there is wear and tear in the seal area, hence vapour may be emitted. When this vapour comes in contact with sparks, static electricity, natural lightning etc. it has a high possibility of catching fire.

Rim Seal floating roof tank fires characterize most precarious threats for petroleum storage tanks. Industry data base displays that the oil industry has experienced several rim seal fires worldwide and some of them have developed into very large catastrophes. The causes of such disasters start with a rim seal fire that breaks out and grows undetected to a point that it spreads over the whole seal area and therefore the floating roof tank is submerged in fire.

In the worst case scenario, the intense heat radiated is absorbed partially by the tank shell and the pontoon until the point that the metal sheets lose their mechanical stability. In such conditions the roof is no longer capable to float normally and can incline causing the roof to sink under the fuel with a consequential full surface fire. It is in fact of paramount importance that fire on a floating roof tank has to be ceased as soon as possible. In this respect an additional system is supplied and integrated with the tank floating roof in order to provide early warning heat detection and instantaneous fire suppression within the rim seal area.

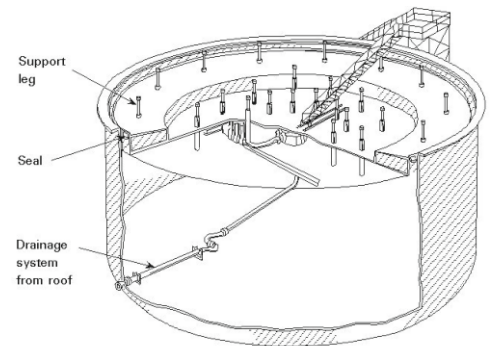
Looking at the above dangerous threats, Vimal's R&D team has developed this Automatic Heat Detection cum Foam Based Suppression System to protect the rim seal area of floating roof storage tanks as an import substitute for the first time in India.

The Automatic Rim Seal Fire Detection and Extinguishing system detects even incipient fire in 06-10 seconds and suppresses the rim seal fire on a floating roof, within 20 seconds after detection of fire, total discharge time of Foam Solution shall be for approx. 40 seconds. It is a First Aid Primary System and acts as a watch dog round the clock.

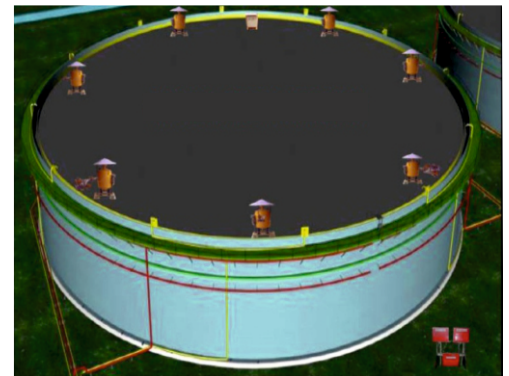
Fires occurs more often in dangerous locations - with conventional fire detectors quickly reaching their limitations. The intelligent line type heat detector works perfectly, even under the most difficult conditions. The systems operate without any human intervention and simultaneously also alerts operators / fire department in case of any alarm. It is designed to replace the harmful Halon Gas system, which is now considered environmentally hazardous due to CFC gases.

Detection is done using the world's best micro processor based linear metallic sensor (Copper/SS) having EN approval of Type A1, UL, VdS and other approvals of competent agencies worldwide. An intelligent evaluation unit senses the 'Rate of Rise' in temperature & maximum temperature beyond the pre-configured parameters through a highly sensitive hollow metallic tube in the non-pressurized state. The extinguishing vessels are filled with UL Listed extinguishing agent (AFFF, AR-AFFF or FFFP) and pressurized with Nitrogen, discharges extinguishing agent at 18 LPM/M2 application rate on to the Rim Seal area through UL-Listed specially designed stainless steel foam spray nozzle, to extinguish the fire within 20 seconds of fire detection.

Fire detection has to be possible in all ambient conditions - not just in good weather and at elevated temperatures. Whether in the gas and oil industry, in chemical production facilities or vehicle storage halls, loading platforms and road tunnels, the Hollow Metallic Detector comes handy, when other systems fail.



**RIM SEAL AREA OF
A FLOATING ROOF TANK**



Rim Seal Fire Protection System



FEATURES & BENEFITS

- Class A1 certified as per EN54/22 heat detection system for response behavior.
- UL / FM / VdS / CE approved Detection System.
- Only System for quick detection for Hydrocarbon Fire on the Rim Seal area of Floating Roof Storage tanks.
- Environment-friendly detection and suppression system.
- Immune to Mechanical, Chemical & Electromagnetic interferences and Environmental changes.
- 6 Lakh Event logs – for specific parameters & Events.
- Self-Diagnostic and fail safe features for Continuous monitoring of parameters in a remote location and remote area in real time mode.
- Installed on operational tanks without down time / shut down / outage of tanks.
- Auto sensing mechanism, needs minimum human intervention.
- More than 10 years of experience in installation system on hydrocarbon product filled storage tanks (900+ Tanks) designed system that too, no hot job is required on the tank top.
- Highest percentage of safety till date for Floating Roof Tank related Fire Hazard.
- Provision to send a signal to Rim Seal Fire panel situated in Control Room, with Annunciator and Graphic Console so that operator can get alarmed and follow continuous monitoring. Detection system is programmable from control room.
- Detection sensor is of reusable type after expose to several Hydrocarbon Fires & unlike other system has very less down time. Only refilling of module is required
- Sensor element can work from -40°C to $+300^{\circ}\text{C}$ temperature.
- Detection system works on 2 parameters (Maximum Temperature & Rate of Rise). This cross zoning feature eliminates possibility of false alarm. Online monitoring of both parameters, can be provided.
- Pre-Alarm settings can be done for early intervention.
- Robust detection system, requires zero maintenance.





VIMAL FIRE CONTROLS PRIVATE LIMITED

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