

Overheat and Fire Detection in Floating Roof Tanks

SPECIAL HAZARD APPLICATION

Protectowire Linear Heat Detector is a simple cost-effective form of fire detection in floating roof fuel storage tanks. The Detector, when used with a Protectowire intrinsically safe control panel, provides early warning of lightning-caused fires in the seal area of tanks. The Detector can also be used to warn of overheating in the motor and shaft of the mixing blade.

This system easily adapts to retrofit or new installation in both internal and external floating roof tanks. Early detection allows time for automatic or manual extinguishing and draining of volatile fuels.

Protectowire Linear Heat Detector Type XCR resists harsh environments, and is generally recommended for this type of application.



Figures 1 and 2 illustrate Protectowire Linear Heat Detector installed around the perimeter of a floating roof tank. The Detector is run in the area between the primary tube seal and the secondary weather seal. The need for and type of mounting clips will vary according to type of tank to be protected. Protectowire Linear Heat Detector is a component of a complete family of fire detection systems manufactured by The Protectowire Company.

In this installation, direct burial type cable containing copper conductors is run from the remotely located fire alarm control panel to the tank. The copper feed cable is spliced to a retractable cable inside a ZB-HD type zone box at the top of the tank. The retractable cable is then suspended from the top of the tank into an 18" receiving tube mounted on the floating roof (Photo A). This allows the cable to coil and uncoil itself as the roof changes elevation.

From the tube, the cable enters a Protectowire Model ELR-HD type junction box (Photo B) where it is connected to the Linear Heat Detector. At this point the Detector is installed around the perimeter of the roof in the area between the secondary weather seal and the primary tube seal (illustrated in Figures 1 and 2). It then returns to the ELR-HD type junction box terminating the circuit.

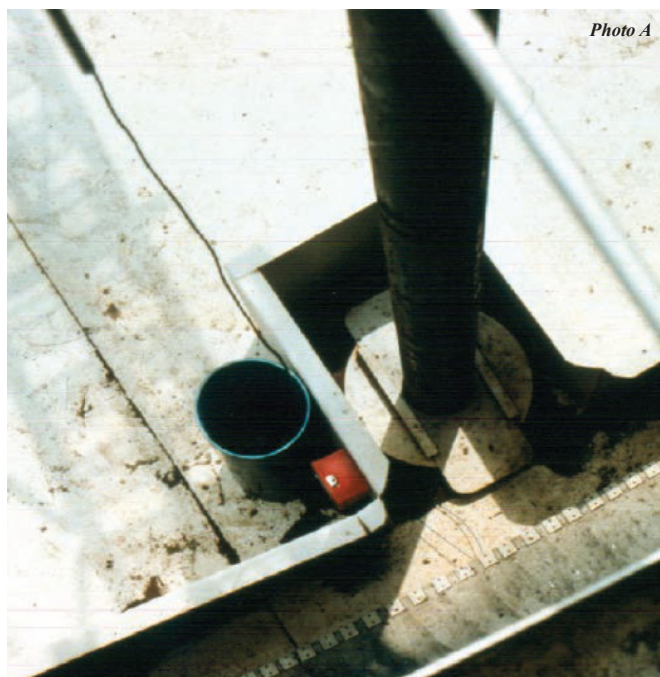
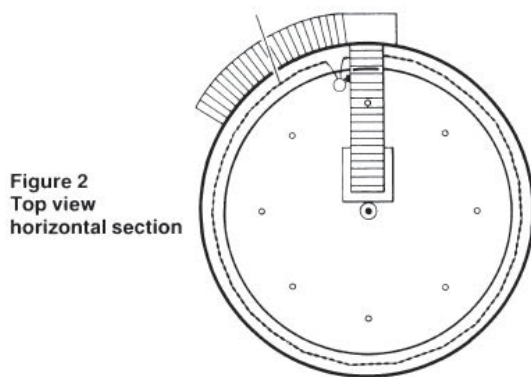
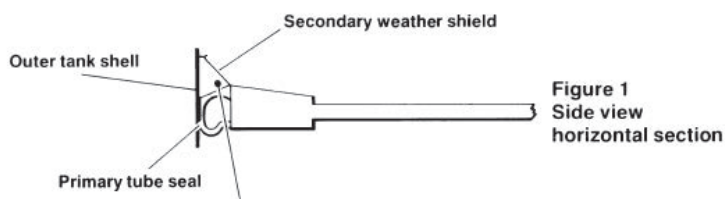


Photo A



Photo B



Photos taken at: Amdel Pipeline Inc., Div. of American Petrofina Co., Port Arthur, Texas, U.S.A.