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APPLICATION NOTE - LINEAR HEAT DETECTION CABLE

Petrochemical Product Pumps

The mechanical failure of Petrochemical Product Pumps can in many cases cause a fire.

The Patol Linear Heat Detection System in its Intrinsically Safe form may be employed to monitor one or more pumps.

Generally a failure of the pump motor or of the mechanical coupling causes seal failure, therefore the most likely source of fire is in the seal area. A loop of Linear Heat Detection Cable above the seal provides early detection whilst being flexible enough to be held aside during the maintenance work.

A line of pumps may be monitored in any one "zone" and therefore the system is cost effective.

For each "zone" a length of Linear Heat Detection Cable is connected to a Zone Monitor the latter being housed in a safe area.

The Intrinsically Safe circuitry within the Zone Monitor imposes a limitation on cable length because of the capacitance of the Linear Heat Detection Cable. The maximum permissible length varies with the Hazardous Gas Groups.

Where there are relatively long distances between the Detection Zone and the Zone Monitor special low capacitance Extension Cable is available (further details on request).

The Zone Monitor provides repeat signals to the control area via a suitable interposing cable.

At an area control panel the status of a number of zones may be displayed using either an annunciator matrix or a graphic display.

Applicable Data Sheets

Linear Heat Detection Cable
Patol Zone Control Module LDM-519 / SEN
Patol Zone Control Module LDM-519 / ACT
Patol Zone Control Module LDM-519 / LP (line powered)
Patol LDM- 519 Eurocard Module
Fixings (various)
Annunciators and Displays

Other Relevant Documentation

Intrinsically Safe Systems – Limitations on Cable Length - Barrier Types