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Veeder-Root

Secondary Containment Leak Detection (SCLD)
TLS-450Plus and TLS-350/ProMax/EMC Console with Vacuum Sensors 857280-100, 200, 30x, or Assembly 332175-001

CONTINUOUS INTERSTITIAL LINE MONITORING METHOD (PRESSURE/VACUUM)

Certification:
Certified as equivalent to European leak detection standard EN-13160-2, Part 2, as a Class I leak detection system.

Operating Principal:
System uses vacuum generated by the turbine pump to continuously maintain a partial vacuum within the interstitial space of double-walled tanks and double-walled piping.
System is designed to activate a visual and acoustic alarm before stored product can escape to the environment.
System is capable of detecting breaches in both the inner and outer walls of double-walled tanks and double-walled piping.

Alarm Condition:
System alarms when a liquid or air leak occurs which causes the interstitial vacuum to decrease (pressure to increase) and the system is unable to maintain minimum vacuum.
System will also alarm if liquid is detected in the interstitial space, or if the vacuum level in the interstitial space decreases at a rate exceeding 85±15 liters/hour.

Applicability:
Underground double-walled tank, connected double-walled piping, connected double-walled containment sumps, and other connected interstitial spaces storing gasoline, gasohol, diesel, heating oil #2, kerosene, aviation fuel, motor oil, waste oil, water. Storage of biodiesel blends B6-B20 meeting ASTM D7467 and biodiesel B100 meeting ASTM D6751 would also produce a system alarm if the system threshold is exceeded. Responses to these fuels were not determined but would be expected to be very similar to the system's response when storing diesel. In addition, the vendor indicated that sensors responded to 100% Lubrizol Ultrazol 9888, 100% Afton OTR 8332G, and 100% Afton OTR 8843G following internal evaluation.

EN13160-2 requires the use of separate monitoring systems for separate USTs.

Manufacturer's Specifications:
Alarm will activate when interstitial vacuum decreases to 1.7 psi (3.5" Hg) vacuum for TLS-350; 1.8 psi (3.6" Hg) vacuum for TLS-450Plus.
Default maximum vacuum level (pump-off pressure) is 8 psi vacuum (16.3" Hg), but can be set as low as 4 psi (8.2" Hg) if the monitored system requires a lower level of vacuum **to** be maintained (e.g. double walled fiberglass tank with dry interstice).
The interstitial space shall be rated for the operating vacuum of the leak detector, regardless of temperature and groundwater level fluctuations.
Volume of monitored interstitial space must not exceed 8 m^3 (2,114 gal) for tanks and 10 m^3 (2,642 gal) for piping.
When monitoring double-walled tanks, a liquid sensor must be located at lowest point of interstitial space.

Calibration:
Functional and operational safety tests should be performed in accordance with manufacturer's instructions.

Comments:
Interstitial space is tested continuously.
System is connected to the interstitial space by a single vacuum line.
Vacuum is generated by the turbine pump and is measured and controlled by a vacuum control valve.
This system may not be compatible with all secondarily contained tanks and/or piping. Always consult with the tank and/or piping manufacturer and the manufacturer's applicable recommended installation practices before installing this system, or damage may be caused to the tank or piping by its use.

A difference in elevation of 8 foot or greater between the float valve and the low point (s) of the interstitial space may prevent the float valve from activating if the pressure from the column of liquid from intrusion is able to exceed or offset the vacuum established by the vacuum pump. (Example: An 8 foot column of water is the approximate equivalent of 3.5 psi (7 in HG) and may mask intrusion if liquid sensor is not located at the lowest point of an interstitial space.)

This system is also listed as an approved "Continuous Interstitial Tank Monitoring Method (Pressure / Vacuum)"

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