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(Supersedes 20080002)

Environmental & Regulatory Services Division
Bureau of Petroleum Products and Tanks
201 West Washington Avenue
P.O. Box 7837
Madison, WI 53707-7837

Wisconsin COMM 10 Material Approval

Equipment: STP-MLD, STP-MLD-D, STP-MLD-E, STP-MLD-HC, and STP-MLD-HCD Pipeline Leak Detectors

Manufacturer: Franklin Fueling Systems
3760 Marsh Road
Madison, WI 53718

Expiration of Approval: December 31, 2013

SCOPE OF EVALUATION

The STP-MLD series of line leak detectors manufactured by Franklin Fueling Systems were evaluated for use as automatic line leak detectors for hourly monitoring in accordance with **ss. Comm 10.130 and Comm 10.515 (8)** of the Wisconsin Administrative Flammable and Combustible Liquids Code.

This evaluation summary is condensed to provide the specific installation, application, and operational parameters necessary to maintain the subject systems in compliance with the Wisconsin Administrative Code – Comm 10.

DESCRIPTION AND USE

The STP-MLD leak detector is a mechanical device that incorporates a poppet valve and metering pin. When the pump is activated, fuel is metered into the line to raise the pressure. If the pressure rises above 12-19 psi, the poppet valve opens and full flow into the line occurs. If the pressure fails to rise above 12-19 psi, fuel flow in the line is restricted to approximately 2 gal/ min.

The STP-MLD series uses a preset threshold and a single test to determine pipeline leakage. The system declares a leak if the preset leak detection threshold of 3 gallons per hour at 10 psi is exceeded.

The standard configuration is used for rigid and flexible pipelines carrying gasoline, diesel, aviation fuel, or alcohol blends (0-10% ethanol).

The "D" configuration is used for rigid pipelines carrying diesel and kerosene only.

The "E" configuration is used on flexible piping.

The “HC” configuration is used for high capacity pumps with rigid pipelines carrying gasoline, diesel, aviation fuel, and alcohol blends (0 to 10% methanol and ethanol).

The “HCD” configuration is used for high capacity pumps with rigid pipelines carrying diesel, and kerosene only.

TESTS AND RESULTS

All five variations of the STP-MLD Line Leak Detector are certified as capable of detecting a three-gallon per hour leak with a probability of detection of greater than 95 percent and a probability of leak alarm of less than 5 percent. They are also UL Listed.

LIMITATIONS / CONDITIONS OF APPROVAL

General

- All monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer instructions, and certified every 12 months for operability, proper operating condition, and proper calibration by inducing a physical line leak. The individual performing the test must be qualified by the equipment manufacturer. Records of sampling, testing, or monitoring shall be maintained in accordance with **Comm 10.500(9)**.

- The manufacturer shall submit for a revision to this Wisconsin Material Approval application if any of the functional performance capabilities of this equipment are revised.

- The system may be used with trapped vapor present in the line.

- The safe maximum operating pressure for this system is 50 psi.

- There is no required waiting time between a product delivery and the use of this leak detection equipment.

- Maximum static head pressure without affecting operation is 10' for the standard configurations and 12’ for the HC configurations from mechanical Line detector to dispensing point.

- **Mechanical line leak detectors cannot be installed in the same line as an electronic line leak detector.**

- Critical performance parameters for the **STP-MLD Line Leak Detector:**

Parameter	Value
Total maximum allowable volume of product in any **rigid** test pipeline	**129 gallons or less**
Total maximum allowable volume of product in any **flexible** test pipeline	**101 gallons or less**

- Critical performance parameters for the **STP-MLD-D Line Leak Detector:**

Parameter	Value
Total maximum allowable volume of product in any **rigid** test pipeline	**341 gallons or less**

- Critical performance parameters for the **STP-MLD-E Line Leak Detector:**

Parameter	Value
Minimum Bulk Modulus	**1,280 psi**
Total maximum allowable volume of product in any **flexible** test pipeline	**49.6 gallons or less**

- Critical performance parameters for the **STP-MLD-HC Line Leak Detector:**

Parameter	Value
Total maximum allowable volume of product in any **rigid** test pipeline	**172 gallons or less**

- Critical performance parameters for the **STP-MLD-HCD Line Leak Detector:**

Parameter	Value
Total maximum allowable volume of product in any **rigid** test pipeline	**172 gallons or less**

This approval will be valid through December 31, 2013, unless manufacturing modifications are made to the product or a re-examination is deemed necessary by the department. The Wisconsin Material Approval Number must be provided when plans that include this product are submitted for review.

DISCLAIMER

The Department is in no way endorsing or advertising this product. This approval addresses only the specified applications for the product and does not waive any code requirement unless specified in this document.

Effective Date: January 1, 2011

Reviewed by: Signature on File
Greg Bareta, P. E.
Engineering Consultant
Bureau of Petroleum Products and Tanks

Approved by: Signature on File Date: _____