



AW-LAKE
PROCESS FLOW MEASUREMENT



APPLICATION SPOTLIGHT
Chemical Odorant Injection for Dangerous Gases



Chemical Odorant Injection for Dangerous Gases



APPLICATION:

Natural gas, LPG, and other gaseous fuels are originally odorless but highly combustible making them dangerous to distribute. To help detect any leak, a chemical odorant, Ethyl Mercaptan (primarily tetrahydrothiophene (THT) or tert-butylmercaptan (TBM) is added to the fuel as it leaves storage terminals. Ethyl Mercaptan has widely been considered the top chemical odorant due to its ability to maintain its chemical equilibrium (odor) in both liquid and vapor states.

PRODUCT SUPPLIED:

JV-UF Series Positive Displacement Flow Meters

HUB-40EX2-S1-H1 Hazardous Area Rated Flow Transmitters

CHALLENGE:

The addition of Ethyl Mercaptan is a delicate process due to the strong and lingering odor of the gas. Inhalation of Ethyl Mercaptan can lead to respiratory irritation and with prolonged exposure, dizziness, coma and even death. Ethyl Mercaptan is highly combustible and must be stored in cool, well-ventilated area away from sunlight, heat and rubber. Proper containment or ventilation of the gas is required along with protective/non-ventilated eyewear, respiratory masks and clothing to prevent any exposure on skin while working with the gas.

SOLUTION:

The JV-UF Series Gear Flow Meters were designed with extremely tight clearance around gears to prevent slippage; specifically, to handle low-viscosity fluids like the Ethyl Mercaptan. They maintain high accuracy and repeatability at system pressures up to 6,000 psi. That allows the manufacturer to meet the required accuracy level of even the smallest dosing quantity within the cycle.

