

GLYCOL PUMP SYSTEM

Glycol heat trace systems are commonly used in oil and gas operations to prevent hydrate and ice formation in cold climates. On locations where electricity is not available, pneumatic pumping systems using natural gas are commonly used. Specifically, blow cases and diaphragm pumps provide a simple means for pumping glycol through a heat trace loop.



Recent concerns over methane emissions from oil and gas operations have prompted new environmental regulations, specifically the US EPA's New Source Performance Standards (NSPS), issued on June 3, 2016, amends the current standards for the oil and gas sector and establishes new standards for methane and VOC emissions from the production, processing, transmission, and storage of natural gas (40 CFR Part 60, Subpart OOOOa). The new ruling requires that pneumatic pumps at natural gas processing plants be controlled to zero natural gas emissions.

To comply with this ruling, oil and gas producers must either capture all the gas from the pneumatic pumps or replace the pneumatic pumps with motor-driven pumps. For sites without electricity, Aspen Engineering Services has developed a patent-pending pneumatic motor pump system. The pneumatic motor is driven by pressurized natural gas. The natural gas discharging from the pneumatic motor is recycled back to the natural gas compressor, resulting in a zero-emission pumping system .

