FREEZE PROTECTION IN CLASS I, DIVISION 1 INDUSTRIAL ENVIRONMENTS

Safe and reliable freeze-protection in CID1 hazardous environments

Application

Hazardous environments that produce potentially explosive conditions can be found in many industries. Class I, Division 1 locations are those in which flammable gases or vapors are or may be present in the air in quantities sufficient to produce explosive or ignitable mixtures. This means that ignitable concentrations of flammable gases, vapors, liquids, or even dust can exist under normal operating conditions. Examples of industries with these environments include Oil & Gas Exploration and Refining, Chemical, Mining, Coal Processing, and many more. Flammable gasses, vapors, dust, etc. are often byproducts of production processes and in some cases, can be collected and used as fuel sources or solvents. An example of this is the oil & gas refining process, which can produce ethane, butane, methane, pentane, and propane.

Liquids and gasses at these locations are stored in tanks or transported through pipes, and the pipes and tanks often need freeze-protection. Because of the high possibility that a spark or high temperature could result in an explosion, products used as protection from the cold must carry Class I, Division 1 approvals from accredited third-party service companies such as Factory Mutual (FM) or Canadian Standards Association (CSA). If these liquids and gasses are not properly protected from possible sources of ignition, the risk of a catastrophic event, lengthy downtime, and injury are greatly enhanced.

Solution

BriskHeat’s SLCAB self-regulating cable provides safe freeze-protection for pipes and vessels and is approved by both FM and CSA for Class I, Division 1 explosive-condition environments. The self-regulating design of this heating cable is specifically designed to regulate heat output for efficient freeze protection needs. The cable simply needs to run along the length of the pipes or get wrapped around vessels to provide the required warmth needed to prevent freezing conditions. The heating cable is easy to install and can be spiral wrapped, loosely fit, or even crossed over itself without risk of failure or overheating. Exact installation configurations are determined by required wattage, and accessory kits for power connection, splicing, tees, and end-seals are available.

BriskHeat also offers the TB110 Series of Hazardous Area Temperature controllers. This can be used to set a specific process temperature.

To complete the system, BriskHeat also offers several insulation options to improve thermal efficiency. BriskHeat’s Silver Series Cloth Insulators are a configurable system of insulators that feature a durable high-temperature polymer coated cloth, fiberglass insulation, and hook & loop closure. The hook & loop closure provides easy installation and easy removal for quick access for routine/preventative maintenance. BriskHeat’s Insul-lock™DS and Insul-EZ insulators are preformed elastomeric foam systems that can be installed on most pipe and vessel systems.

Industries

- Hydrocarbon Refining
- Chemical Manufacturing
- Petrochemical
- Coal Processing
- Mining
- Manufacturing
- Perfumes and Flavoring
- Production
- Oil & Gas
- Water/Wastewater

Types of Users

- Drilling Managers
- Fracking Technicians
- Automation Foremen
- Automation Technicians