PREVENT COLD EMBRITTLEMENT OF CUSTOMER INSTALLATION PIPING

"Danger: Overdrawing gas can lead to catastrophic failure"

THE HAZARD

Cryogenic temperatures (-29°C and below) can make standard carbon steel pipes as brittle as glass, causing them to shatter under pressure.

Gas withdrawal exceeding vaporiser capacity

THE CAUSE :

Temperature drop is often caused by a rapid gas withdrawal or due to undersize vaporiser capacity.

Cold embrittlement occurs when non-resilient materials, such as carbon steel pipes and buffer tanks are exposed to cryogenic liquid or gas at temperatures that are too cold for the material.

Pipe failure

THE CONSEQUENCE :

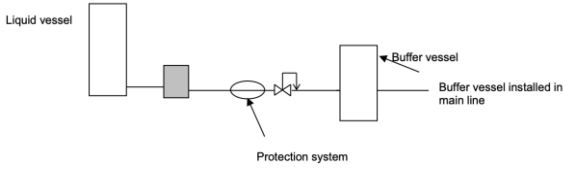
Carbon steel pipes and buffer tank could fail when subjected to temperature lower than -29°C.

Temperature Control Valve

THE PROTECTION:

The Temperature Control Valve (TCV): This critical safety device automatically shuts off gas flow if the temperature drops to an unsafe level

Gas withdrawal within vaporiser capacity



YOUR ACTIONS TO PREVENT FAILURE:

- ✅ KNOW the maximum flow rate of your system.
- ✅ MONITOR for excessive ice build-up.
- ✅ NEVER bypass a low-temperature safety device.
- ✅ ASSESS risks before increasing gas demand.

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