H S E

HEALTH SAFETY ENVIRONMENTAL

SAFETY ALERT

Alert #: SA 23-23

Date: June 19, 2023

Hydrostatic Testing Safety

Hydrostatic testing is a form of strength and leak testing of piping components, pressure vessels, gas cylinders, boilers and other pressure equipment and systems.

Hydrostatic testing involves filling the components with water and then pressurizing the mechanisms with a hydraulic pump until the test pressure is reached. Normal testing pressures are usually one and a half times that of the design pressure.

Given the nature of this type of testing, there are serious risk associated hydrostatic testing including:

- Line of fire incidents from metal fittings and high-pressure water.
- Failure of the pressure safety valve that can result in uncontrolled pressure build-up.
- Pressure gauge issues that result in damage to the product and/or equipment.

Correct Installation

Incorrect Installation

When performing a hydrostatic test, it is important to ensure that the test area is properly barricaded, all gauges and valves are properly calibrated, and crew safety precautions are taken including avoiding standing in the direction of blind flanges or other fittings.

Furthermore, crews should take caution to ensure that the appropriate rated fittings and gaskets are used according to the test pressure, flanges and plates are following the line specifications, and all equipment such as hoses are rated to withstand the expected pressure without failure.

The test area should be free from obstacles allowing for safe movement of personnel and equipment. **NO PERSONNEL**, including those conducting the test, should approach the system when under pressure, and a supervisor should always be present to monitor safety protocols, and respond to any emergencies promptly.

Lastly, as mentioned above, limited access should be enforced in the testing area and only trained personnel should be allowed at the hydro test location. Risk assessments and JESA's should be properly filled out and signed off on by **any personnel** in the limited access area. Whip lash arrestors should also be installed at hose connections to prevent sudden hose disconnections and subsequent whipping movements.

Report all incidents immediately to the GIS Hotline

1-855-543-5163

Following your initial phone call, an incident report **must** be completed and e-mailed to:

incident@gisy.com