

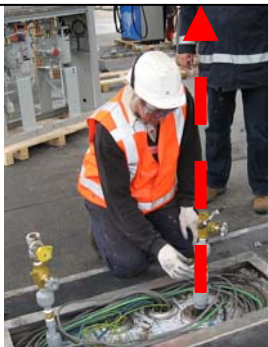
SAFETY ALERT

Contractor Medical Treatment Incident - Pipe work on LPG installation - BNL

DESCRIPTION:

A Technician of a LPG contractor was preparing the installation of an LPG pump. When he was loosening up the plug of the product line, the plug was blown off and hit the worker on the forehead. At the hospital, 7 stitches were applied after which he returned to work.

Direction of the plug – person was in the line of fire



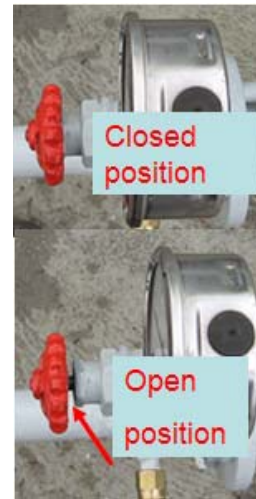
Plug



Valve, to lock out the manometer, was closed



Closed position



Open position

WHY DID IT HAPPEN?

- The crew, that installed the underground piping a few weeks earlier, forgot to release the pressure after testing the product line, before they left the site.
 - Crew is very experienced and had become complacent - compared to LPG, the inert product characteristics of the nitrogen made it a harmless product in the eyes and minds of the workers
 - No LOTO was applied during testing phase, resulting in section of piping with a valve in closed position so that manometer was at zero, pressurized and without lock or tags.
 - Lack of appropriate documentation
 - Job step was not specified in the JSA
 - No test protocol was completed - is only done as part of a legal inspection
 - No handover/incomplete installation protocol was completed
- Lack of proper Last Minute Risk Assessment - the injured person did not positively and physically check if the line was depressurized – did only quick visual check
 - Manometer was at Zero
 - Depressurizing the line after testing is the task of the previous crew, hence not included in the JSA for installation of Pumps
 - Difference between open and closed valve is small
- When unscrewing the plug, the sound of the escaping nitrogen was masked by an excavator, working nearby the worker.



WHAT COULD HAVE PREVENTED THE INCIDENT / LESSONS LEARNED:

- Document test status and outcome in a test protocol which includes check on proper depressurization of all lines.
- Apply a formal LOTO process during testing or in case of interruption of works involving pressurizing product lines.
- Ensure that the work procedure or JSA covers all steps, including the LOTO procedure
- Always perform a proper LMRA when taking over a job from somebody else and don't rely on "presumed" good practices..... *Trust is good..... Control is better*

**The Last Minute Risk Assessment is a continuous process.
Because... Every Minute can be your last one.**

Date of issue 18-5-09



Alert Behavior Based Safety System for
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Nobody Gets Hurt