

Engineering Bulletin

Removal of plugs from small bore valves

An incident has occurred on the National Grid area of the NGN / NGT Offtake site at Elton, Teesside, and resulted in serious injury to a National Grid Employee. The circumstances and actions are relevant to NGN and the following instructions should be followed by NGN Staff.

What happened

A solid 1" plug was ejected under full NTS line pressure from a 1" Audco valve (as shown below) resulting in injury to the operator and a significant release of gas from the NTS system.

Why did it happen

Initial investigations have shown that the valve was indicating fully closed but was in fact fully open.

What you need to do

The following precautions always apply when removing solid plugs from small bore valves.

- Prior to starting plug removal operation via documented risk assessment apply appropriate precautions to reduce the impact should the plug eject from the valve. Considerations should include location of other personnel and nearby plant / equipment.
- Never stand in line with the possible direction of projection of the plug, always stand to the side.
- Prior to plug removal operate the valve; this will give an indication as to the integrity of the spindle. Feel for lack of resistance which could be a sign that the spindle has sheared. Be aware that paint and / or corrosion will provide some resistance. If the spindle has failed then the valve indicator may not give the true position of the valve. **If there is any doubt as to the actual valve position, do not remove the plug and seek further advice from your line manager.**
- Apply leak detection fluid prior to slowly removing the plug at 1/6th of a turn increments whilst listening / looking for any gas passing the threads. **If gas is continually passing the threads do not remove the plug further and seek further advice from your line manager.**

