

Incident Investigation Summary

Responsible Managers **Tony Jackson**
Incident Reference No: **30921/09/NG**
Person Responsible for National Implementation: **Russell Wilcock**

Damage To A Pig Trap During Pig Loading Operations

What happened?

During a recent pigging operation at Felindre Compressor Station, one of Rosen's inspection tools became jammed as it was being loaded into the pig trap. It was eventually inserted but caused gouge type damage (Figure 1) to the inside of the trap adjacent to the face used to seal against the pig trap door. The tool being used was Rosen's Axial Flaw Detection (AFD) pig (Figure 2), also known as the Transverse MFL tool. This was the first time National Grid had used this tool and it is different in design to the corrosion detection tool we normally use during inspection (the CDP tool). In this case the damage caused was superficial, but had the sealing face been damaged the required repair would have been substantial.

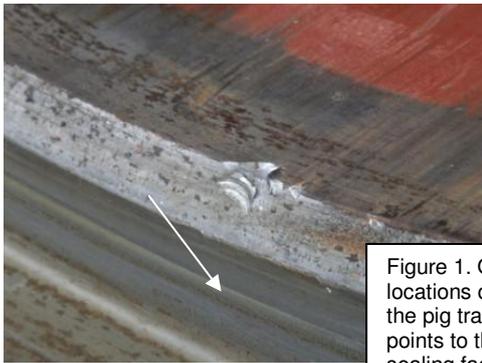


Figure 1. One of the locations of damage to the pig trap. The arrow points to the adjacent sealing face.

Figure 2. The AFD tool being loaded. Note the articulated magnet-sensor arrays (arrowed).



Why Did This Happen?

The investigation found that:

- The damage to the pig trap was caused by magnet-sensor arrays moving into the gap/step between the end of the pig loading trolley and the bore of the pig trap, in the area of the door closure and then being forced against pig trap by the hydraulic ram used for loading the pig.
- This problem can be avoided by using a pig loading trolley with a tray that extends into the bore of the pig trap, thereby bridging the gap/step. This was employed in a subsequent inspection starting from Felindre and worked well, no damage occurring to the pig trap.

Learning points

1. With immediate effect, Transverse MFL tools (Rosen's AFD tool) are only to be loaded or unloaded using a trolley with a tray that extends inside the bore of the pig trap. Rosen have a temporary modification in place for the trolley for the 1220 mm tool (48"), and could effect a similar modification for the trolleys of other diameter tools.
2. National Grid will engage with Rosen to ensure that a long term solution is developed to the issue of loading trolleys and trays. Extended loading trays that provide protection to the pig trap should become the norm whenever any kind of inspection to is loaded to or from a pig trap.

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For further information regarding this bulletin please contact Robert Bood (01926 656046) or the Responsible Manager detailed above.