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Hydraulic Over-Torqueing of Bolted Joint Equipment

Who could be interested in this?

Applicable to any site that conducts hydraulic torqueing of bolted joints

What is this all about?

Two incidents have occurred during the hydraulic torqueing of bolted joints on assets operated by two different operators in the UKCS. In one instance, the event caused significant damage to the bolted joint; in the other event, the over-torqueing value was identified before serious damage could occur.

In both instances the hydraulic torqueing equipment was wrongly set to a torque level higher than the bolted joint design value.

Common issues in both incidents include:

- The torqueing value was entered incorrectly (~1000psi higher than design)
- Both gauge faces involved contained both Bar and PSI scales
- Both torqueing sets were in a position where reading the gauge could be problematic due to the low angle
- No verification of equipment settings was carried out prior to torqueing equipment being operated

Some things to consider?

- Consider whether the gauge on the equipment you use is required to carry both Bar and PSI. Could it cause confusion?
- Consider whether your processes are sufficiently robust to prevent a similar incident occurring
- If you contract out this activity, consider how you assure yourself on the competence of the operators provided

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