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Engineering Bulletin 081

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Pig trap pressurisation for pigging operations

During a recent pigging operation, some of the sensors on the Magnetic Flux Leakage (MFL) pig were damaged as the pig moved backwards during pig trap pressurisation.

The pigging operation is carried out as a Non Routine Operation (NRO) – see T/PM/OLI/2 Appendix D, which includes a typical in-line inspection pigging operation.

It is important that the NRO is rigorously followed and takes account of:

- Safety guidelines for the loading and unloading of pigs are given in T/PM/OLI/2 Appendix H. After the loading of the pig into the pig trap, the pig trap should be purged from air to nitrogen, prior to purging to gas.

- The pig trap should be **slowly pressurised equally on both sides of the pig** with an equalising bypass line. This is particularly so with the ROSEN pigs, which do not have a permanent bypass hole through the pig. If a differential pressure is allowed to build up across the pig it may move either forwards or backwards and this could cause damage to the pig itself.

- It is important that a **suitably designed equalising bypass (balance) line** is used and pressure gauges are positioned so that it is possible to monitor both gauges from one position. This equalising line will normally be smaller than the forcing gas pipework, therefore the forcing gas pipework valve should be opened very carefully in order to minimise the differential pressure across the pig. These issues should be considered at the Pre-Start Planning Meeting, recorded on the pipeline questionnaire and included in the NRO.

- Only when the pressure across the pig has equalised, the pig trap has reached full line pressure and the forcing gas pipework is fully open, is the pig ready for launch. The pig trap isolation valve is then opened and the main offtake valve closed.

For further information regarding this Bulletin please contact your Line Manager or Robert Owen on 07721 748008