

TIME OF FLIGHT DIFFRACTION



COURSE CONTENT

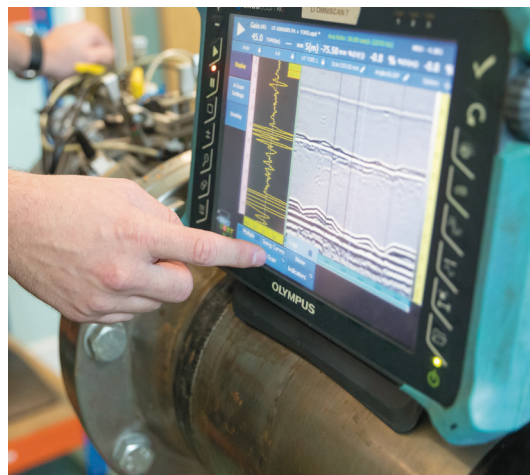
Time of Flight Diffraction (TOFD) is an ultrasonic technique that can provide very accurate defect sizing, for example for conditioning monitoring. It is a non-amplitude based technique, with the major advantage that defects can be detected regardless of orientation.

Applications include crack detection, sizing and monitoring and detection of weld root erosion. Recent developments include testing butt welds in high density plastics. It can be used as an alternative to radiography, either independently or together with conventional pulse-echo or phased array UT.

The Level 2 course is designed to teach the basics of TOFD, familiarise trainees with TOFD equipment and analysis software and meet the requirements of SNT-TC-1A, CP105, CP189 and EN ISO 9712 (PCN) training requirements.

The Level 2 course covers:

- TOFD principles
- Advantages and limitations
- Comparison of flaw sizing
- Inspection coverage
- Blind zones
- Instrument setup and calibration
- Data acquisition: manual and encoded, parallel and non-parallel scans
- Data analysis – defect positioning, sizing and characterisation; lateral wave synchronisation (straightening) and removal



DURATION

80 hours including exam held over 10 days.

PRE-REQUISITE

Trainees must hold UT Welds Level 2 certification. Holders of SNT-TC-1A UT Welds certification are eligible to take SNT-TC-1A TOFD. Holders of the following central certification PCN, CGSB, ASNT-ACCP L2 may be eligible to take PCN BS EN ISO 9712 TOFD exam (UT certificates to be verified).

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