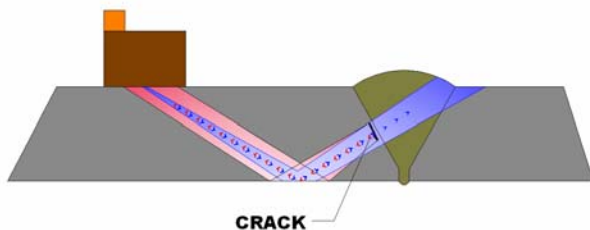


Manual ultrasonic weld inspection

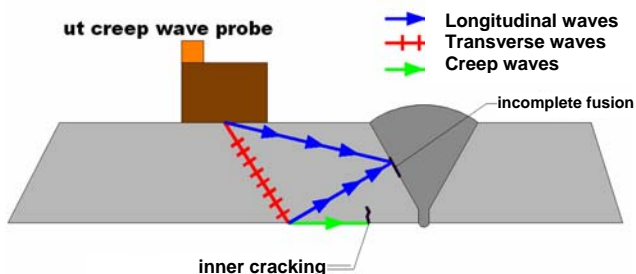
Welding is the most widespread way of connecting metallic mechanical parts of industrial equipment. The integrity of these connections during manufacturing as well as during the operation of mechanical equipment is of critical importance for the safety of the installation.



The use of ultrasounds for the integrity inspection of welds is a common practice in the Industry. The applied technique consists of scanning the weld mass and the Heat Affected Zone (HAZ) with ultrasonic beams emitted by angle probe that is moved manually along the lateral region of the weld.

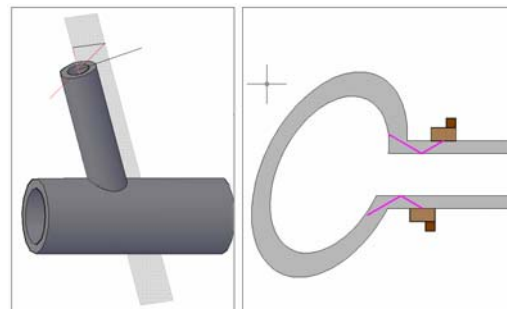
The detection and sizing of discontinuities is performed by receiving and evaluating the beam reflected from the discontinuity surface.

Modern digital instruments with capability of storing the discontinuity signals are used for the inspection. Common UT transverse-wave angle probes are used, while special double-crystal longitudinal-wave probes are used for the inspection of thick-grained steels (stainless steels).



Advantages of the method:

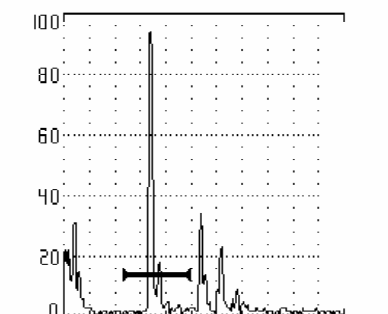
- Quick and direct results.
- No protection against radiation required, neither interruption of other peoples work.
- In-service inspection.
- Inspection of complex geometry welds with profile analysis of the weld using a PC.



Inspection of angle welded nozzle

- Inspections performed according to international standards ASME, EN etc.
- Final technical report that contains position, depth and type information of discontinuity.
- Storage of the discontinuities signals and inspection parameters.

FILE: MWB-70_.ECL 18/10/04 _:_
ID>125MM PEAK 13.56mm



AMPLITUDE MAX 100% CURRENT 94%
42.50 > 40.28 | 13.56 mm
REF 44.4+ 0.0dB RANGE 125.0 mm
REJ 0 % DELAY 0.000 mm
VEL 3226 m/s FULLWAVE RECTIFY
ZERO 6.257 us PULSER HIGH
ANGLE 71.4~ DAMPING 400 !
THICK 0.00 mm PULSE-ECHO MODE
PRF AUTO

Gate	Start	Width	Level	Alarm
1	30.21	33.26	14 %	OFF
2	83.24	5.376	47 %	OFF

- Sensitivity in critical discontinuities detection (e.g. cracking).

Envirocoustics also provides weld inspection services using the TOFD (Time Of Flight Diffraction) technique and weld inspection services using Eddy Currents.

Please visit www.envirocoustics.gr for more information.

Member of



A World of NDT Solutions

El. Venizelou 7 & Delfon, 144 52 Metamorfofi, Athens, Greece
Tel.: 210 2846 801 to 804, Fax: 210 2846 805, info@envirocoustics.gr