REMOTE FIELD TESTING

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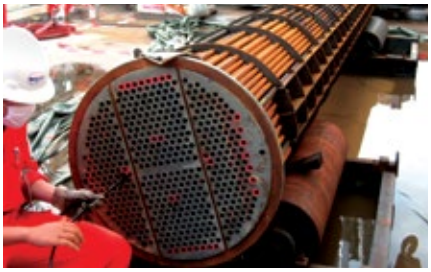
Remote field testing (RFT) is an electromagnetic method of testing whose main application is finding defects in steel pipes and tubes. An RFT probe is moved down the inside of a pipe and is able to detect inside and outside defects with approximately equal sensitivity (althou gh it can not discriminate between the two).



Although RFT works in nonferromagnetic materials such as copper and brass.

RFT probe consists of an exciter coil (also known as a transmit or send coil) which sends a signal to the detector (or receive coil).

The exciter coil is pumped with an AC current and emits a magnetic field. The field travels outwards from the exciter coil, through the pipe wall, and along the pipe. The detector is placed inside the pipe two to three pipe diameters away from the exciter and detects the magnetic field that has travelled back in from the outside of the pipe wall (for a total of two through-wall transits). In areas of metal loss, the field arrives at the detector with a faster travel time (greater phase) and greater signal strength (amplitude) due to the reduced path through the steel.