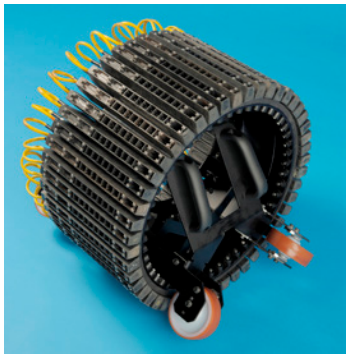
TELETEST™ FOCUS+ IN DRILL RISER INSPECTION APPLICATIONS

Inspecting pipes with the Teletest™ FOCUS+ long-range ultrasonic testing (LRUT) system is now commonplace. FOCUS+ requires a bracelet of transducers to be placed around the pipe circumference. Drill risers are clearly similar in geometry to pipes, but with added complexity on their external surfaces such as clamps and other attachments. This makes the attachment of the transducer array to the external surface impossible.

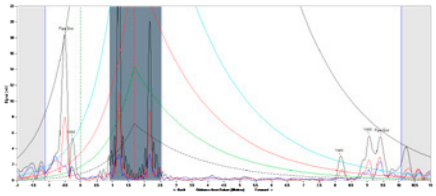
Because it is desirable to inspect drill risers, Eddyfi Technologies developed an alternative array system that takes advantage of the access to the internal surface of the cylinders. The internal array design appears below.



Internal transducer array design

Specimen under test

Unfortunately, no defects were present in the sample, so the sensitivity and detection limits were not tested. Note the low level of noise between 0 m and 8 m (26.2 ft). Signals reflected from the welds and the end of the riser can clearly be detected.



Representative A-scan of results from drill riser inspection

A laboratory method was developed where drill risers can be inspected with LRUT. Detection limits have not been studied and further research and development is necessary before this system can be used under field conditions.