

TELETEST™ FOCUS⁺ IN SPHERE LEG INSPECTION APPLICATIONS



Collapsed spherical tank due to corrosion

The collapse of a spherical tank for storing liquefied gas was attributed, in part to corrosion on one of the support legs. This led to general concern about the long-term integrity of the legs supporting storage spheres worldwide. There are access problems that often make it difficult to inspect sphere legs with conventional non-destructive testing (NDT) methods.

Legs are often encased to give protection from heat in the event of a fire or from low temperatures should there be a spill of liquid gas followed by rapid boil off. Conventional NDT methods are time consuming and would require the legs to be exposed over their full lengths. Secondly, such methods would call for the installation of scaffolding to provide man access to the full leg height.

Teletest FOCUS⁺ provides a means of overcoming these difficulties as long as access to the leg can be obtained over a sufficient length for the transducer ring to be mounted.

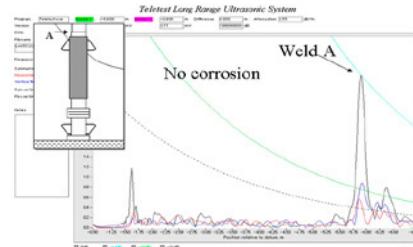


FOCUS⁺ used to measure corrosion of tank legs

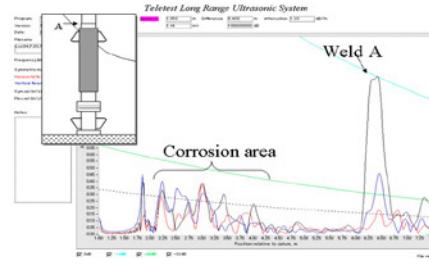
In this case, the legs were protected by light concrete. This was cut away to allow access to FOCUS⁺. Normal full weight concrete attenuates ultrasound rapidly.

This relatively thin and light coating was less attenuative and the full 6 m (19.7 ft) height of the 25.4 cm (10 in) and 35.6 cm (14 in) diameter legs was inspected in one test. The results fell into three categories: no corrosion, general corrosion, and localized corrosion. As illustrated in the scans below.

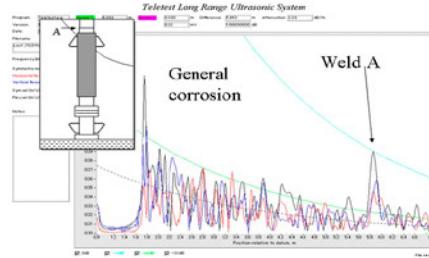
The customer expressed total satisfaction with the inspections and monitoring of their sphere legs and scanning with FOCUS⁺ is now planned on a regular basis.



FOCUS⁺ scan showing no corrosion



FOCUS⁺ scan of minor corrosion



FOCUS⁺ scan of general corrosion