TANK SHELL PLATE CORROSION

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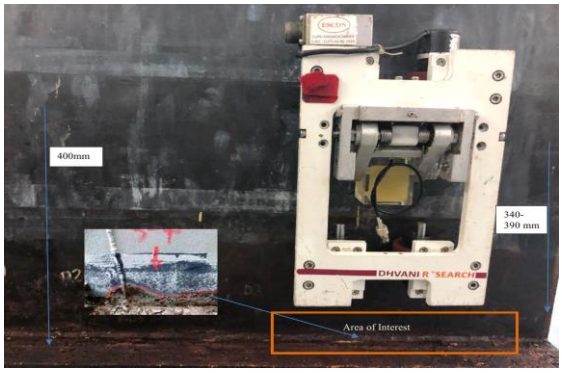
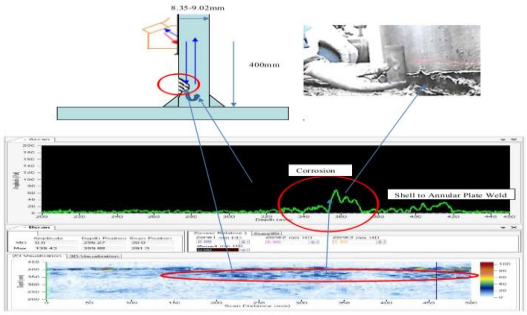
HIDDEN CORROSION INSPECTORS





INDUSTRY PROBLEM:

The Shell to Annular Plate bottom connection zone can be prone to corrosion in harsh environment and corrosion is normally seen across the tanks within 3-4 inches of the tank bottom on the Shell plates.

The location and extent of corrosion requires a rapid scanning and sizing of defects which could have a maximum close to the Shell and Annular Plate Weld

OUR SOLUTION:

A new concept for the improved inspection of corrosion at annular plate in the near shell wall region of storage tanks using a short-range ultrasonic guided wave technique that uses a collection of Higher Order Modes Clusters, called here as ***HOMC**** has been developed and verified at several field sites. Ultrasonic guided waves, once generated will be reflected from corrosion in the plate. Inspection can be carried out from outside the tank mounting the probes on the Shell plate and looking towards the region of interest on the accessible portion of the Shell plate. Presence of welds, uneven surfaces or coatings does not come in the way of inspection using HOMC technique. Reflections from corrosion are assessed and wall loss is estimated.