

TesTex PS-2000 Pipe Scanning System Helps a Nuclear Power Plant Test Service Water Pipes



STATE OF THE ART PRODUCTS AND SERVICES
FOR NON-DESTRUCTIVE TESTING

FROM THE FIELD

Problem\Challenge:

A Nuclear Power Plant Site located in Northern Virginia contains two large PWR's serving the Northern Virginia Grid. Both of these units depend on a single spray pond to cool the service water piping. The service water is piped to the spray pond, where it is pumped through a series of headers and laterals to the spray arrays – where it is sprayed over the pond via a series of spray nozzles. The piping ranges in diameter from 20" down to 6". Gross defects such as craters and wagon tracking were highly suspect – particularly in weld heat-affected zones. The Nuclear Power Plant wanted to characterize the condition of the piping in order to make determinations regarding repair and replacement.

The facility had been deploying a semi-automated UT system for this purpose. Considering the scope of work, the continuation of this approach would require too much time and effort and yield too little data. Another disadvantage of the semi-automated UT method that the facility was employing was that the coating had to be removed in order to perform the test. The pipe was protected with approximately 15 mils of KL 3200 Epoxy and 13 mils of Wasser moisture-cured urethane coating.

Solution:

The Nuclear Power Plant staff contacted TesTex Inc. to conduct the inspection. The work was originally scheduled for January of 2006; however, this was deferred due to operating considerations.

As several months passed by, the Nuclear Power Plant decided to purchase the TesTex PS-2000 Pipe Scanning System so they could deploy LFET (Low Frequency Electromagnetic Technique) with their own NDE personnel. They requested that a TesTex crew be onsite for the initial deployment of LFET, which happened to be the

spray header inspection project. TesTex crew members, worked closely with the Nuclear Power Plant's NDE personnel by training key personnel and helping them develop operating procedures for the deployment of the LFET technology during a late June – early July window.

The spray header inspection started and ended on schedule. TesTex crew members were present for the first two days to make sure the customers were able to deploy the technology competently. Based upon the final test results, the customer concluded that the piping was in better condition than they had originally surmised. They determined that a project involving total replacement of the Spray Pond Piping could be deferred for several years.

Based upon project economics alone (cash flow and capital expenditure) the savings ranged well into the millions of dollars. The payback on the purchase of the PS-2000 Pipe Scanning System to the nuclear power plant was almost immediate; the return investment astronomical. The nuclear power plant then decided to purchase a PS-2000 Pipe Scanning System for all of their fleet locations.

For more information on the TesTex, Inc. PS-2000 Pipe Scanning System or other TesTex, Inc. products and services, please contact us at info@testex-ndt.com or call at (412) 798-8990.

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