

Improved Heat Exchanger Inspection Performance using RevospECT® Automatic Data Analysis and Historical Data Compare™

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RevospECT automated inspection data analysis software application is a proven steam generator technology from Zetec that enables production of eddy current tubing inspection data analysis in a highly automated, controlled and scientific manner. RevospECT is the latest innovation incorporating 30+ years of experience in creating software products designed specifically for the power generation industry. Eddy current tubing inspections are highly sensitive examinations which create a unique and individual ‘fingerprint’ of each tube. Historical Data Compare (HDC) is a software application that exploits that unique characteristic by overlaying and comparing historical outage inspection data simultaneously with the current inspection data highlighting any response signature changes attributed to tube degradation. The unique and powerful attribute of this software process is that it occurs over the entire tube length (30+ meters) and can be easily automated to identify only the differences or changes between the inspection data sets. Both software applications have now been adapted for use in the various Balance of Plant (BOP) heat exchangers that are present throughout a power generation plant. When combining these unique technologies, the result is a comprehensive tool set able to automatically monitor the entire inspection data stream for comparative differences allowing enhanced identification of emerging degradation previously masked by other factors. This automatic analysis process can be implemented as a real time background task while the inspection is progressing. In some cases, testing and analysis can be performed by one person effectively eliminating the typical delay in producing the needed analysis results. This paper will focus on implementation of this technology right at the data acquisition station to provide real time and accurate inspection results in a highly efficient process and significantly reducing the amount of time and resources needed to perform the examination.