In the power generation industry, reliability is a constant priority and an increasing concern as steam generators, heat exchangers, and other balance-of-plant systems age.

Eddy current inspection technology has dramatically improved the ability to identify potential issues and take steps to improve safety and security. Advanced probes, instruments, and software are critical tools for inspectors who want to get the job done quickly and safely.

While data acquisition tools have improved dramatically, analyzing the results remains traditionally a manual process.

Teams of analysts open data files, scan them for indications of flaws, and compare historical results from inspection to inspection. The process is time-consuming and the interpretations can vary depending on each analyst’s skill and experience. Missed or incorrectly classified degradation can lead to unnecessary down-powers and put safety, license renewals, and plant capacity at risk.

Zetec’s RevospECT automated eddy current inspection analysis software helps solve this challenge.

RevospECT is the industry’s most powerful commercially available system for automated flaw analysis. It can be used in a primary or secondary analysis role or in a single-pass configuration for bobbin, rotating, and array coil inspection techniques. It’s also scalable, with the ability to support a wide range of eddy current inspection applications in power generation.

During a recent evaluation at a major utility in the United States with more than 500,000 heat exchanger tubes across its various systems, RevospECT processed and analyzed inspection data at a rate that often outpaced data acquisition and helped engineers classify more flaw indications in considerably less time.
Consistency and accuracy are equally important as system speed and efficiency. Computer-aided analysis and value-added tools such as noise measurement monitoring and automated HDC® (Historical Data Comparison) are processed in parallel with the core analysis, which makes it easier to compare data from multiple inspections.

HDC can take data from a previous inspection, overlay it on top of data that’s currently being collected, and then highlight what’s different about those two data streams. An analyst can review the RevospECT report quickly and easily compare data from one outage or event to another without the variations and inconsistencies that come from a manual historical review process.

RevospECT users find that automation enhances the value of skilled analysts and gives them a higher level of confidence in their decisions about whether a flaw or defect is exhibiting change between inspection intervals.

As power plants age, their inspection requirements increase in size and scope. They demand a robust system of inspection analysis that delivers exceptional performance and is simple to use from day one.

The advantages of RevospECT automated analysis only increase with every inspection. The more eddy current data that’s collected and processed through the RevospECT system, the more beneficial the system will become.