FOERSTER

EDDY CURRENT CRACK DETECTION OF REFORMER TUBE TOP ENDS

Reformer tube top ends can develop thermal fatigue cracks even outside the heated furnace area. These defects often remain undetected during conventional tube inspections. Specialized eddy current testing enables reliable crack detection and helps prevent unexpected failures.

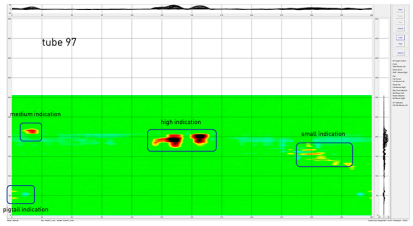


THE CHALLENGE

Conventional reformer tube inspections typically focus on the heated sections inside the furnace. However, the upper tube ends outside this area can also suffer from thermal fatigue, particularly under fluctuating temperatures and in cold or humid environments. Cracks can initiate on the inner surface and propagate outward without measurable tube expansion. If undetected, they may cause leaks, equipment damage and unplanned shutdowns.

THE SOLUTION

FOERSTER uses a specialized eddy current probe designed to detect thermal fatigue cracks in reformer tube top ends. The probe scans the tube internally, providing 360° circumferential coverage. Inspection results are visualized in a color-coded C-scan, allowing defects to be identified and their locations documented. This targeted inspection complements conventional reformer tube testing by detecting damage in areas that might otherwise remain uninspected.





THE RESULT

Early crack detection enables timely maintenance and targeted replacement of affected components before leaks develop. Reliable inspection data helps reduce the risk of consequential damage, improve plant safety and minimize unplanned shutdowns.

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