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## **ACPD Detection and Evaluation of 475 °C Embrittlement of Aged 2507 Super Duplex Stainless Steels**

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An investigation of the capabilities of ACPD to detect the effect of 475 °C embrittlement on the properties 2507 super duplex stainless steel (SDSS) is conducted. Quantitative analysis of the microstructure using SEM revealed that the thermal aging did not affect the volumetric proportions of the phases present in the duplex microstructure. Nevertheless, results obtained from ACPD measurements showed an increase in electric conductivity of samples with prolonged exposure to 475 °C. In addition, the hardness of the samples increased significantly for long holding times, resulting in an embrittlement of the SDSS corroborated by Charpy impact energy measurements.