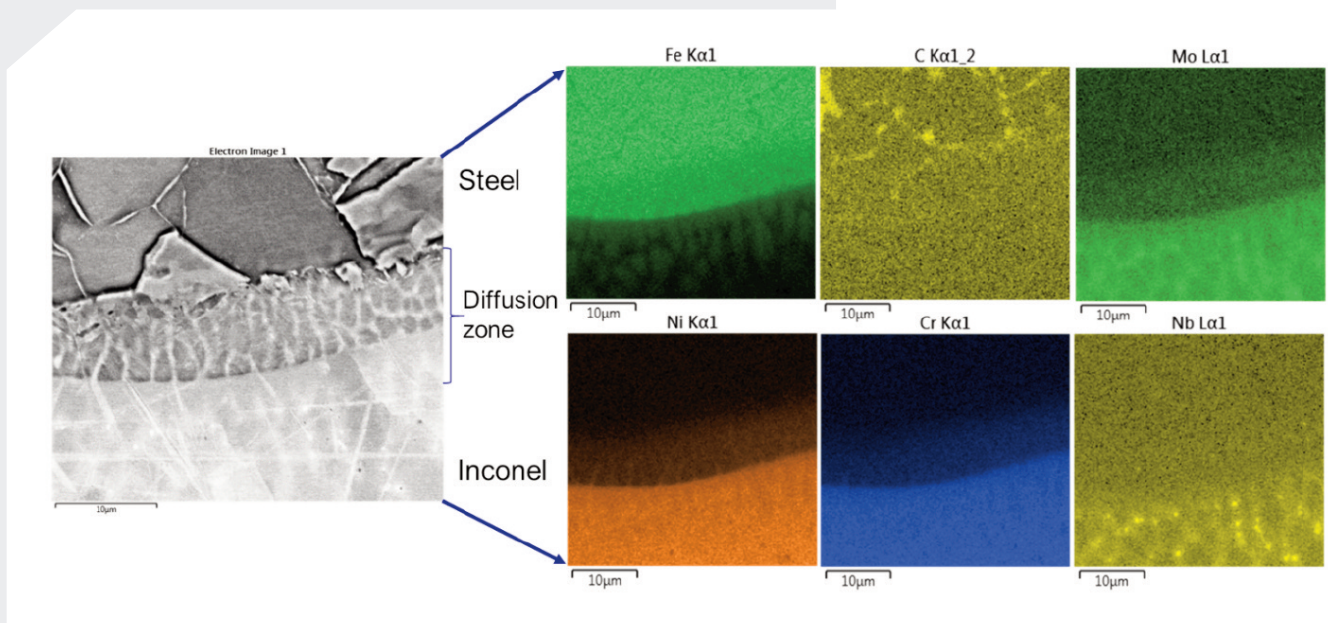




Integrity of Inconel Weld Overlay

THE PROJECT

A study was conducted in order to assess the integrity of an Inconel weld overlay that had been applied to mild steel tubes used in a heat exchanger. The figure shows a diffusion zone between the steel and Inconel. The Energy Dispersive Spectroscopy elemental maps show the individual elemental distributions of the component materials.



THE OUTCOME

Elemental mapping for Fe, C, Mo, Ni, Cr, and Nb was undertaken using Energy Dispersive Spectroscopy and Scanning Electron Microscopy techniques, with the maps showing that there was no evidence of disbondment between the steel tube and Inconel weld overlay.