
IIW Round Robin test on residual stress determination in welds

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Résumé

A Round Robin test has been achieved in order to work out the preferred conditions and the expectable accuracy of residual stress measurements in vulnerable zones of welds by means of X-ray diffraction (XRD).

The RR-test was carried out by six participating laboratories in Germany and in France.

The measurements were carried out on butt welded samples of a high strength structural steel S460N.

Two welding processes (GMA and GTA-welding) have been used because each welding procedure generates a typical shape of the weld seam with different difficulties for precise measurements.

Standard laboratory diffractometers in ψ -mode were used as well as portable small size diffractometers

The measurements have been finished so far. An overview about the most important results will be presented during the meeting.

Mots-Clés: residual stress, welds, X, ray diffraction

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