

# MATERIAL TESTING LABORATORY

SAIW has a material testing laboratory on site.

The facility is fully equipped to perform mechanical and non destructive testing on weld samples, either welded in the welding school or during the performance of welding procedure qualifications in industry. The material testing laboratory supports the consulting services offered by the SAIW, which include failure analysis, welding related research and development, welding consumable evaluation, weld procedure qualification, welder qualification, post weld heat treatment and positive material identification.

All testing is performed to international standards, with the following testing services offered:

Service	Equipment available
<b>Mechanical testing</b>	
Tensile & Bend testing	MTS Criterion 64.305 (300 kN)
Charpy V notch impact testing	450 joule SANS Charpy impact test machine
Vickers hardness testing	emcoTEST Durascan 70 (10 grams to 10 kg load)
Rockwell hardness testing	Wilson Rockwell hardness tester
<b>Chemical testing</b>	
Spectrographic analysis	Bruker Q2 Ion spectrometer
X-Ray Fluorescence analysis (XRF) & positive material identification	Bruker S1 Titan XRF analyser
Diffusible hydrogen analysis	Bruker G4 Phoenix diffusible hydrogen analyser
Microstructural evaluation and reporting	Nikon microscope Eclipse MA-200
All equipment needed for test sample preparation is available in house.	



The SAIW material testing laboratory, **laboratory number T0693**, is accredited by SANAS to comply with ISO 17025. The SAIW material testing laboratory is managed by a team of qualified and experienced metallurgists.

**For more information, please contact administrator on [mat.lab@saiw.co.za](mailto:mat.lab@saiw.co.za) or on 011 298 2104**