

MECHANICAL TESTING

We offer a wide range of Material Testing in our UKAS Accredited laboratory, working to BS EN ISO and ASTM standards in line with our BS EN ISO/IEC 17025 accreditation.

MECHANICAL TESTING (TENSILE)

We have a 600 KN and 30 KN tensile machine, which provides tensile strength (UTS), yield strength, [Z] reduction of area and elongation values for room temperature tensiles.

Both machines have the capacity to work with a wide range of sample sizes, which we can machine from even the smallest sample and which may come from the following: plates, flanges, tubes, pipes, castings, forgings, studs, nuts and valves etc.

We can carry out [Z testing] through thickness tests from 25mm thick, without welding studs to samples.

Both machines are UKAS calibrated and all testing is carried out to the latest BS EN ISO and ASTM standards in accordance with our BS EN ISO/IEC 17025 accreditation.

MECHANICAL TESTING (CHARPY IMPACT)

We have charpy impact testing machines with a working range of 300 joules for BS EN ISO standards and 406.7 joules for ASTM standards. Testing is carried out from the ranges of +20°C to -196°C, on the following materials: carbon, duplex and stainless steel etc materials. The above testing is carried out to the latest BS EN ISO and ASTM standards in accordance with our BS EN ISO/IEC 17025 accreditation.

MECHANICAL TESTING (HARDNESS)

We cover the following scales - Brinell HBW10/3000, Rockwell HRC and HRB, Vickers Hv10 and Hv30 Loads. All the above mentioned are tested to the latest BS EN ISO and ASTM standards in accordance with our BS EN ISO/IEC 17025 accreditation.

MECHANICAL TESTING (CHEMICAL ANALYSIS (O.E.S.))

Chemical analysis is performed using our Optical Emissions Spectrometer (O.E.S.). Chemical analysis can be carried out on low carbon, duplex and stainless steels.

Our OES unit will cover low carbon up to 19 different elements and 17 elements on duplex and stainless steel, which will cover most of the general specifications. All chemical analyses performed are covered by our internal procedures, which are in accordance with our UKAS ISO 17025 accreditation.

MECHANICAL TESTING (CORROSION)

Testing is carried out in accordance to ASTM G48 Method A (Ferric Chloride Pitting Test), ASTM A923 Method C (Ferric Chloride Corrosion Test for classification of structures of duplex stainless steels) and ASTM A262 Practise E (detecting susceptibility to intergranular attack in austenitic stainless steels). All the above testing is covered to the latest ASTM standards in accordance with our BS EN ISO/IEC 17025 accreditation.

We also carry out grain flows on forgings and any other material which require grain flow information.

MECHANICAL TESTING (MICROSTRUCTURE)

We offer a metallography service on the following:

- Sample cutting and preparation to a polished finish
- Chemical / electrochemical etching
- Examination of metallic microstructures
- Image analyses and digital photography

Assessments to ASTM E112 (determining average grain size) and ASTM E562 (determining volume fraction by systematic manual point count).

The above testing is covered to the latest ASTM standards in accordance with our BS EN ISO/IEC 17025 accreditation.

