



# Rotech Services

Rotech is a UKAS accredited metallurgical test laboratory to ISO 17025, fully equipped to meet most metallurgical testing needs. We offer extensive product and process knowledge from our highly qualified and experienced staff that is happy to give advice and support in a friendly approachable way.

Originally established in 1918 as a works laboratory to serve the needs of Rubery Owen Holdings Ltd, we have always held an enviable reputation for quality of results and expertise and we can help deliver the assurance and advice needed to validate processes through to final product quality assurance.

Our primary testing departments are analytical and corrosion science including chemical analysis, painted/plated finish salt spray and humidity testing, mechanical testing and metallography including failure investigations.

We also offer PCN certified Non Destructive Testing including ultrasonics, magnetic particle and dye penetrant inspection on customer site locations. We can also provide radiographic interpretation and arrange for radiography to be carried out at a fixed location.

**For full details of all Rotech Laboratory services, please see overleaf.**

## Manufacturing Areas Covered

*Energy and Power • Foundry and Castings • Forgings and Machined Components  
Pressings and Fabrications • Metal Finishing • Stockholding and Processing  
Automotive and Aerospace • Metal Recycling • General Engineering • Marine  
Security and Defence • Motorsport • Architectural Ironmongery • Construction  
Rail • Heavy and Yellow Goods • Metal Packaging • Consumer Products  
Trading Standards and the Legal Profession.*



BS EN ISO/IEC 17025

A Wholly owned subsidiary of

**RO Rubery Owen Holdings Limited**



**Rotech Laboratories Limited**, Moxley Industrial Centre, Western Way, Wednesbury, West Midlands WS10 7BG  
**Tel:** +44 (0)121 505 4050 **Fax:** +44 (0)121 505 1115 **Email:** info@rotechlabs.co.uk **Web:** www.rotechlabs.co.uk

# What can we do for you?

If you have requirements for any of the following tests, please contact us:

## Analytical and Corrosion Science

- Chemical analysis
- Painted or plated parts salt spray or humidity testing
- Paint, phosphate, electroplate and plastic coating testing and assessments
- Coating thickness, adhesion, coating weight and hardness testing
- Pitting and crevice corrosion testing to ASTM G48
- Intergranular corrosion tests (ICC) to ASTM G28 and ASTM A262 Practice A, C and E

## Mechanical Testing

- Tensile testing at room temperature or at elevated temperature. Determination of r and n values (drawability and stretch formability indices) for flat rolled products
- Impact testing-Izod and Charpy to BS EN and ASTM from ambient down to -196°C. Determination of % shear and lateral expansion.
- Hardness testing-Brinell, Vickers, Rockwell, Microhardness and Equotip
- Bend, Shear, Torque and compression/crush testing
- Welding testing-procedures/welder qualification/production
- Fasteners-tensile/proof load/wedge head soundness/hardness surface and core/decarburisation tests

## Metallography

- Hydrogen embrittlement assessment
- Microstructure evaluation and defect assessments
- Inclusion content, grain size determination
- Graphite in cast irons-type/size/distribution
- Determination of heat treatment condition, case depth, decarburisation
- Ferrite content volume fraction
- Image analysis
- Weld assessments, macro examination/flow etch tests, photomicrographs
- Failure Investigations of service and manufacturing failings
- Production investigations and advice on manufacturing and process concerns
- Scanning Electron Microscopy (SEM) for fracture surface analysis
- X-ray microanalysis of contaminants, small particles and constituents
- Conductive/non conductive materials identification down to Atomic No 5
- Assessment and analysis of corrosion products

## Heat Treatment

- Small batch heat treatment of superalloys including solution treatment and sophisticated ageing regimes with subsequent mechanical test qualification

## Non Destructive Testing

- Ultrasonics
- Magnetic particle and dye penetrant inspection
- Radiographic interpretation and arrangement of radiography testing



No. 0366

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## We can help with your product quality assurance requirements and typical items we test include:

Ingots, cast 'button' samples, cast test bars and keel blocks, castings, forgings, fasteners, flat rolled strip mill products including re rolled material, plate, pipe and tube, pressings and fabrications, welded pipeline components, fittings and flanges, automotive components and sub assemblies, aerospace components, architectural hardware, plated and painted products, machined/turned parts. In fact we can test any metal product subjected to any manufacturing or finishing process including heat treatment. We also offer NDT at customer sites which compliments our experience with welding procedures and welder qualification approval testing.

Product liability legislation has increasing implications with more focus on global sourcing of metal manufactured products, often resulting in product quality not being under the direct control of the primary contractor, the purchaser or the distributor. We are able to work with you in partnership to give you added assurance and advice.

Should you need a failure investigation on any part to establish reason(s) for failure, we have considerable experience in this field. Our aim is not merely to list metallurgical 'failure mechanisms' but to use the data constructively and work with you to examine permanent corrective action to prevent a recurrence.

We understand NACE, PPAP, FMEA, 8D and the requirements for ISO 9001, ISO/TS 16949 and aerospace needs. We can provide product validation data by testing your prototype, pre-production and ongoing production parts for your continuing QA confidence.

**For detailed specific sector sheets and a copy of our latest UKAS schedule of accredited tests, please contact us and we shall be glad to email or post them to you.**



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