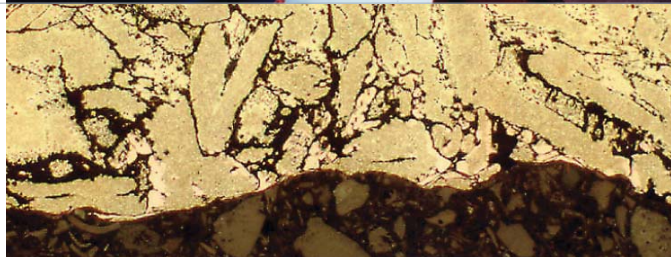


BAE SYSTEMS Submarines Metallurgical Laboratory undertakes routine metallurgical testing and operates a materials consultancy. The capability embraces trouble-shooting and metallurgical failure investigations and includes a specialist welding metallurgy section.



## Metallurgical Services

### Metallurgical Laboratory Facilities

In its role as a major defence prime contractor and heavy engineering fabricator, BAE SYSTEMS Submarines deals with a wide range of metallic materials and production processes that is probably unsurpassed in any other establishment in the UK.

In support of BAE SYSTEMS Submarines' Design and Manufacturing capabilities, the Metallurgical Laboratory employs a team of highly qualified and experienced metallurgists whose expertise combines the theoretical and practical application of ferrous and non-ferrous materials technology.

In addition to routine metallurgical testing, the Laboratory provides a fast and professional service embracing failure investigations, corrosion research, evaluation of material properties and applications, assessment of weld procedures and welder approval tests to various fabrication codes. Practical engineering solutions are given to problems involving materials and their applications.

### Facilities

Scanning Electron Microscope -	Cambridge Stereoscan S120 with AN10/85 EDX analysis facility
Optical Microscopes -	Olympus Vanox-T with integral microprocessor photography. Olympus BHM with Photographic facility Olympus Stereoscan zoom microscopes. Vickers M55 projection microscope.
Hardness Testers -	Vickers Pyramid Avery Brinell Zwick Microhardness
Lab Heat Treatment Furnaces	
Precision Cutting Facility	
Microspecimen Preparation Equipment	
Specialist Photographic Facilities	
Portable Equipment -	Mechanical Polisher; Electro Polisher; Struers microscope (400x Magnification); Replica Kits; Specialist Gear hardness tester; Equotip hardness tester; ARL hardness tester; King Brinell 3000kgf hardness tester: Poldi hardness tester.

The laboratory operates to BS EN ISO 9001:2000 Quality Assurance and relevant Military Standards.

