

BAE SYSTEMS Submarines Chemistry Laboratory is staffed by professionally qualified and fully trained chemists who employ computerised instrumentation techniques. Experience gained over many years of serving the large Shipbuilding and Engineering Works at Barrow enables the laboratory to accurately analyse a wide range of ferrous and non-ferrous alloys, oils and gases.



Chemical Analysis

Commercially, the laboratory offers a rapid, accurate and cost-effective analysis scheme against a selected range of samples and services.

Key Activities

- Elemental analysis in a wide range of ferrous and non-ferrous alloys
- Particulates in Waters and Oils
- Analysis of Breathing Air
- Combustion Decomposition of Non-metallics for Anions
- Fire Toxicity Testing for Non metallics
- Weld gas analysis

Scope of Services

- Standardised 25 element range in metal alloys plus 15 optional.
- Particulate counting and sizing of contaminants in oils and water.
- Combustion gas analysis for toxic gases.
- High pressure decomposition of non metallic materials for cation and anion content.
- Any chemical analysis requirement discussed FOC.

Applications

- Ferrous and non-ferrous alloys, including structural, low-alloy and stainless steels, cast iron, copper, nickel, aluminium, tin, zinc, lead and cobalt-based alloys.
- Direct solid analysis.
- Wet chemical analysis for small or limited availability samples.
- Weld metal and consumables analysis.
- Oil characteristics analysis.
- On site analysis of breathing air
- Weld purge gas analysis

Benefits

- Immediate free discussion.
- Fast analysis service based on instrumental analysis and printout.
- Typical sample turnaround service of one/two days.
- Qualified and competently trained chemists control all work.
- Access to full metallurgical support, including Scanning Electron Microscope
- Analysis via on-site metallurgical and mechanical testing facilities.
- Other chemical analysis available on request.

Equipment

- ARL 34000 direct reading Emission Vacuum Spectrograph
- ARL 3410 Inductively Coupled Plasma Spectrometer
- LECO Analysers for Carbon, Sulphur, Oxygen & Nitrogen in alloys
- Dionex Ion Chromatograph
- Perkin Elmer 929 Atomic Absorption Spectrometer
- IKA Thermal Decomposition System
- Toxicity Gas Apparatus
- Portable Oxygen analysers and Dew Point meters

