

# Materials Centre

## Site Materials Analysis Services



The **Applus+** Materials Centre can provide site based materials analysis services for on-shore and off-shore installations.

Key materials analysis techniques that can be provided include:

- Visual inspection
- Portable chemical analysis using Optical Emission Spectroscopy. This technique permits full chemical analysis for ferrous based alloys including carbon and nitrogen contents.
- PMI using hand-held XRF systems
- Surface replication with direct digital microscopy
- Portable hardness testing

Surface replication is a non-destructive technique that allows the surface region of interest to be polished and etched in-situ, then the microstructure viewed using a high magnification digital microscope to reveal the key microstructural features. The **Applus+** method uses direct imaging of the prepared surface in real-time, via a tablet PC.

## Expertise

The Materials Centre is currently managed and operated by a team of dedicated professionals with key expertise in materials science and technology. Our personnel have worked in the Oil & Gas, Mining and manufacturing industries for over 30 years, specializing in failure analysis of equipment, materials analysis and characterization.

## Facilities and Equipment

The **Applus+** Materials Centre, located at the Bibra Lake facility, operate an efficient and well equipped materials laboratory, including:

- Arc-Spark Optical Emission Spectroscopy for alloy chemical analysis
- Portable XRF Spectroscopy
- Optical microscopy;
- Scanning Electron Microscope with Energy Dispersive Spectroscopy
- Vickers hardness testing, micro hardness testing and portable hardness testing
- 60 tonne and 500kg Universal Testing Machines
- Charpy Impact tester
- In-field surface replication equipment

## Additional Services

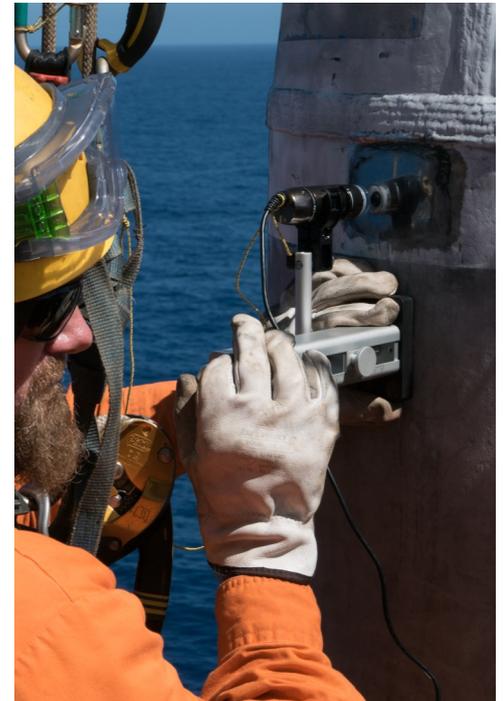
**Applus+** provides the following services as individual packages or combined to provide a total Asset Integrity Management programme.

- Advanced (non-intrusive) Inspection Services.
- Sub-sea Inspection Services.
- Engineering Design Solutions.
- Risk Based Inspection Planning.
- Inspection Management Services.
- In Service Inspection.
- Plant Life Management.
- Metallurgical Services.

Importantly, **Applus+** can also call upon extensive in-house expertise and resources for advanced inspection and conventional NDT, providing a total capability for management of through life plant integrity.

**Applus+**, in collaboration with our local and international partners, has extensive experience in the application of these services to a wide range of industries including:

- Oil & Gas.
- Petrochemical.
- Refining.
- Ore Processing and Handling.
- Power Generation.



**Applus+**

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