

ENABLING BUSINESSES. ENHANCING LIVES

# ENGINEERING INSPECTION

**SERVICES** 

Minimise Engineering Risk and Optimise Efficiency



At SIRIM QAS, we understand that safety is pertinent to your everyday business operations. Maximise efficiency and optimise the maintenance of your plant and equipment by reducing costly downtimes that might impede your business growth.

# Synergy as Priority – Engineering Inspection Services

The equipment at your facility are parts that make up the whole. This pertains to steam boilers, unfired pressure vessels, lifting equipment, pipelines, machinery and many more.

It is vital that these components function seamlessly to mitigate any disruptions to business operations which arise from unscheduled downtime or safety hazards on site.

SIRIM QAS can help you manage this risk. Our Engineering Inspection Services provide independent third-party inspection on new construction components and in-service equipment based on regulatory requirements, codes and guidelines.

We are committed to provide credible inspection services to the oil and gas, energy, petrochemical and other engineering sectors with the help of our highly experienced inspection engineers and comprehensive testing facilities.

# **Our Services**

#### **Mandatory Inspection Services**

- Design drawing and stress calculations, review and verification.
- Witnessing, inspection, verification and approval of new, used or in-service steam boilers, unfired pressure vessels and pipelines.
- Witnessing, verification and approval of Welding Procedure Specification (WPS), Welder Performance Qualification Test (WPQT).

#### Independent Third-Party Inspection, Verification and Endorsement

- Inspection before, during and after construction.
  - Site verification of production against the approved procedure.
  - Material inspection and verification.
  - Inspection of welded or non-welded structures and components.
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  - Baseline inspection.
- Compliance inspection on imported and in-service industrial equipment and machinery.
  - Remnant life assessment.
  - Fitness for service assessment.
  - Corrosion mapping.
  - Structural integrity evaluation.
- Condition monitoring and plant assessment.
- Non-destructive evaluation (Witness and Verification of Test Report).
- Endorsement of failure investigation and analysis reports.

# **Other Inspection Services**



#### Inspection Services for Crane and Lifting Equipment

Ensure the safety and reliability of your crane and lifting equipment in accordance with statutory requirements. This applies to equipment such as used cranes and mobile cranes. SIRIM QAS provides independent third-party inspection, verification and special assessment services based on applicable engineering standards and practices to assure the working capability of your superstructures on site.



#### **Inspection Services for Infrared Plant Monitoring**

SIRIM QAS provides inspection services for all types of gas-fired furnaces, chemical heaters, coal-fired boilers, petrochemical and utility industries. Our infrared cameras are designed for high-temperature industrial furnace applications, providing temperature readings across the entire surface of heaters, boilers and furnaces. This allows for the delivery of effective thermal analysis solutions and performance monitoring, as well as identification and evaluation of heat-related complications.



#### Inspection Services for Pressurized Hot Work Enclosure (PHWE) "Welding Habitat System"

Hot work carried out in hazardous areas present risks of potential hazards, and Pressurised Hot Work Enclosures are the perfect solution to manage and control that risk. SIRIM QAS's inspection services ensure that your pressurised hot work enclosure is traceable and complies with IECEx hazardous area requirements, creating a safer and hazard-free working environment.



# Personnel Certification Scheme for Installer of Pressurized Hot Work Enclosure

The certification provides assurance of personnel competency of installers of pressurised hot work enclosure based on IEC 60079-0, IEC 60079-13 and IEC 60079-17 standards. It ensures that the work associated with equipment at hazardous areas are carried out in accordance with IECEx requirements and IEC standards related to explosive atmospheres.



#### Personnel Competency Assessment for Welder Certification Scheme

The scheme certifies welders' capabilities to produce weld of acceptable quality in accordance with evaluation requirements set out in ISO 9606-1:2012. The evaluation consists of variables such as specific welding process, type of metal, thickness, joint design, position and others, to ensure that the deposits of weld metal are in accordance with Welding Procedure Specification (WPS).



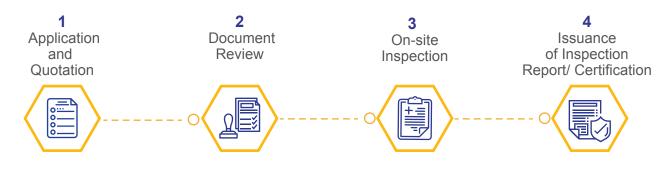
#### Factory / Site Acceptance Test (FAT/SAT)

Factory Acceptance Testing (FAT) and Site Acceptance Testing (SAT) are essential to showcase that your equipment are built to last. Our testing services assess the quality of your equipment, ensuring it meets design specifications and contractual requirements before arriving at the end user's site. This helps avoid disputes between two parties that could arise from discrepancies in the functionality of the equipment.

# Why Inspection Important

- Maximise efficiency and productivity by reducing the risk of disruptions to operations, supported by a safe work environment.
- Optimise maintenance schedule and costs.
- Safeguard investment in your assets through credible inspection and verification, allowing for defects to be identified and addressed at an early stage.
- Enhance trust in the quality, safety and delivery of your products and services.
- Gain access to the wider market by demonstrating assurance of compliance with set industry standards.

# **Certification Process**



#### SIRIM QAS - The Competitive and Credible Choice



SIRIM QAS is the first Malaysian entity authorised and gazetted by the Department of Occupational Safety and Health (DOSH) as the Inspecting Authority under the Fourth Schedule of Factories and Machinery (Steam Boiler and Unfired Pressure Vessel) Regulation 1970.

Our inspection services are accredited by the Department of Standards Malaysia under the Malaysia Inspection Bodies Accreditation Scheme (MIBAS), in accordance with MS ISO/IEC 17020.

SIRIM QAS provides the most credible and cost-effective third-party engineering inspection services in the market, making us a trusted partner for all your verification and inspection needs.

### For more information, contact us at:



SIRIM QAS International Sdn. Bhd. (410334-X) Building 8, SIRIM Complex, No.1, Persiaran Dato' Menteri, Section 2, P.O Box 7035, 40700, Shah Alam, Selangor Darul Ehsan, Malaysia.



www.sirim-qas.com.my



Tel : 603 5544 6400 Fax : 603 5544 6810



cserviceqas@sirim.my



