

REFERENCE CASE POWER PLANT



Inspection Services for Aluminium Smelter and Power Plant Project in Abu Dhabi

When a Danish supplier for minerals and cement industries required vendor inspection as well as on-site inspection services for the engineering, procurement and construction (EPC) contract for a smelter complex project, the company entrusted TÜV Rheinland with the tasks.

Basic Facts	
Client	Danish supplier for minerals and cement industries
Timeframe	Since February 2011
Project location	Taweelah, Abu Dhabi - United Arab Emirates
Main services	<ul style="list-style-type: none">▪ Vendor assessment▪ Expediting services at manufacturers' locations▪ Factory acceptance tests▪ Pre-shipment inspection▪ Quality assurance and quality control▪ Inspection during unloading▪ Material inspection
Involved regulations/standards	<ul style="list-style-type: none">▪ American Society of Mechanical Engineers (ASME) standards▪ American Welding Society (ASW) D1.1▪ BS EN Eurocodes

Initial situation and requirements

Early in 2011, a Danish supplier for minerals and cement industries was awarded an EPC contract for Phase 2 pot feeding systems by Canada's largest engineering and construction company and aluminium smelter complex in Abu Dhabi, United Arab Emirates. After first contacting TÜV Rheinland for technical expertise and vendor requirement inspections, our client further extended its contract and requested our experts to provide a larger scope of inspection services, including on-site construction inspection, quality assurance and quality control as well as vendor assessment.

To provide this extensive range of services and offer our client the relevant support along the entire project, we solicited inspectors from various areas of expertise at each stage: from civil and mechanical engineering to experts in lifting and electrical components safety.

Solutions, results

For the contract's first phase, we provided vendor assessment services, focusing especially on the manufacturing process. These services included supplier auditing, verification of manufacturing procedures such as welding, welding equipment and suppliers' qualifications. Upon completion of extensive inspection and vendor assessment, our experts conducted verification of the final products as well as pre-shipment inspection.

In addition to vendor assessment services, our experts conducted procedure reviews, offloading inspections, supervised construction activities supervision and provided continuous support down to the project's commissioning phase. We also verified all documentation such as test records, mill certificates, non-destructive testing (NDT) and hydrostatic test records, providing our client with feedback and early warning in case of non-conformity of documents. Furthermore we helped the Danish minerals supplier understand and comply with requirements based on ASME standards, instead of the BS EN standards the company was familiar with.

Did you know?

Upon completion of the smelter complex project's second phase, Abu Dhabi will have the world's largest single-site aluminium smelter.

Benefits for the client

TÜV Rheinland supported the Danish supplier for minerals and cement industries with:

- [Technical advice, expert inspection and verification services across the global supply chain.](#)
- [Early detection of potential problems across the supply chain to avoid issues and delays during the building stage.](#)
- [Ensuring compliance of manufactured equipment with the relevant standards.](#)
- [Reliable comparison of the value and trustworthiness of each supplier.](#)

About TÜV Rheinland:

Founded more than 140 years ago, TÜV Rheinland is a global leader in independent inspection services, ensuring quality and safety for people, the environment, and technology in nearly all aspects of life.

We inspect technical equipment, products and services, oversee projects and help to shape processes for companies around the world. Since 2006, we have been a member of the United Nations Global Compact to promote sustainability and combat corruption.

Due to our extensive knowledge of supply chain services, we can help to trace the entire supply chain, ensuring quality and safety of the materials and products that are destined for a project. We offer a comprehensive range of services, including auditing, assessing or verifying suppliers, according to specifications or applicable international codes and standards. We can also provide project management, quality assurance, quality control, on-site inspections, and diverse supporting services along the whole supply chain.

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