

# REFERENCE CASE

## INDUSTRIAL MANUFACTURING



### Manufacturing Inspection of Crude Oil Separators for Oil Field Project in Iraq

Awarded a contract for the design and fabrication of three different types of crude oil separators for a subcontractor on one of the largest oil field development projects in Iraq, an Italian manufacturer of systems for the oil and gas industry entrusted TÜV Rheinland to provide comprehensive manufacturing inspection services.

Basic Facts	
Client	Italian high-tech industrial plants construction company
Timeframe	December 2012 to October 2013
Project location	Baghdad and Zubair oil field, Iraq
Main services	<ul style="list-style-type: none"><li>▪ Manufacturing and material inspection</li><li>▪ Inspection on pressure vessels, coating and welding</li><li>▪ Factory acceptance test</li><li>▪ Review of documentation and manufacturing processes</li></ul>
Involved regulations/standards	<ul style="list-style-type: none"><li>▪ American Society of Mechanical Engineers (ASME) standards</li><li>▪ American Welding Standards (AWS)</li></ul>

#### Initial situation and requirements

Specializing in the realization of systems for the oil and gas industry, an Italian high-tech industrial plants construction company with an operating branch in Baghdad, Iraq, was awarded a contract for the design and fabrication of 24 crude oil separators, 7 knock-out drums (also called vapor-liquid separators) and 3 drain vessels for a subcontractor on one of the largest oil field development projects in Iraq. The Italian supplier relied on our many years of experience to provide a series of inspection services during the fabrication of all separators to ensure quality and reliability of the goods to be delivered and later used in operations on the oil field.

## Solutions, results

As a leading provider of inspection services for the oil and gas industry, TÜV Rheinland prevailed as the preferred choice and most reliable partner for the Italian manufacturer of separators. For this contract, our experts were appointed to provide a comprehensive range of inspection services during the manufacturing phase, and also to provide the company's Italian headquarters with regular status updates and reports on the progress and evolution of the project in Bagdad.

In order to ensure quality and reliability of all three types of separators, our experts first conducted manufacturing and material inspections. We examined both internal and external parts of the vessels, inspecting welding, coating and painting quality. We also conducted insulation checks and inspected internal attachments.

During production, our experts performed audits and conformance testing to ensure that manufacturing processes and standard operating procedures were conducted in accordance with the sub-contractor's specifications and with all applicable regulations on pressure vessels such as the ASME code or the AWS standards.

### Did you know?

The oil field of Az Zubair, located in southern Iraq, is one of the world's largest fields. Discovered by the Basrah Petroleum Company in 1949, it has proven reserves of around 4.5 billion barrels.

### Benefits for the client

TÜV Rheinland helped the Italian separators manufacturer to:

- Ensure high quality separators.
- Keep track of the project's progress and avoid costly bottlenecks.
- Ensure compliance of the manufacturing processes with applicable regulations.
- Receive early warnings on issues of non-conformance to the project's specifications and standards.

### 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.

As a provider of comprehensive inspection services for the oil and gas industry, we can help reduce risk, prevent material defects and ensure maximum safety of plants and pipelines. We support our clients with certification, inspection and testing services and help them meeting their obligations for all applicable standards and regulations.

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