

# Application

## Fujitsu RFID and Sensor Solution for the Oil and Gas Industry

Fujitsu's advanced RFID solutions provide robust track-and-trace tools for the oil and gas industry that thrive in harsh production environments and remote locations

Oil and gas companies continually expand their extraction operations into more and more remote locations across the globe. This expansion has strained the industry's ability to collect data, monitor equipment, manage inventory and monitor safety and compliance across a remote and increasingly distant supply network.

Radio frequency identification (RFID) provides a robust, durable track-and-trace solution for the oil and gas industry that ensures real-time visibility. Fujitsu offers a complete Automated Identification Technology (AIT) solution that includes flexible software and application development tools, as well as rugged RFID tags that can survive the harsh production and operating environments of the energy industry.

RFID tags provide a way to encode data directly onto a part or asset so that it can be captured and recorded with no manual intervention. Because the data on the tags is rewritable, equipment data can travel with the tool, part or other asset.

In remote oil fields or offshore drilling platforms, where network connectivity may be non-existent, employees can access that information and update it at the point of activity without access to an enterprise database.

RFID is also a durable parts marking alternative for an industry in which assets are exposed to oil, dirt, harsh chemicals, sea water, and other contaminants that would render other identification methods impractical.

Fujitsu's RFID Tracking Pro platform and rugged RFID tags provide accurate, up-to-date part-level data that can be shared with trading partners and customers, and used to optimize production operations for Oil & Gas manufacturers and suppliers. These types of RFID solutions are already proving their value in a variety of applications throughout the industry.

### Risk Management

Oil and gas producing facilities require thorough inspection, repair and maintenance processes to ensure equipment operates safely, as well as compliance with environmental, safety, and other regulations.

Using a combination of RFID tags, sensors, and inspection software, oil and gas producers can receive real-time data on equipment operation and safety conditions as well as alerts that can warn operators before a failure occurs.

### Improved Asset Management

Oil rigs and other production facilities are typically in remote locations or even offshore, far from supply depots. Managing assets, tools, parts and other items is crucial; if a tool or part goes missing, it could be days or weeks before a replacement can be procured. By attaching a unique RFID tag to each asset or piece of equipment, companies can establish secure and reliable check-in/check-out processes, dynamically monitor inventory usage, and even automate receipt of new supplies.



Fujitsu's RFID solutions can provide fast, accurate identification of assets and equipment.

Fujitsu's rugged high-memory RFID tags can store maintenance and repair history directly on the equipment, ensuring an accurate equipment record and audit trail.

#### **Faster Inspections**

Equipment used in oil and gas production facilities is subject to rigorous inspection procedures. Regular inspections ensure that the equipment is operating normally, and help ensure the safety of the facility and the workers. With manual processes, it can be difficult to correctly identify each of these items (which can include dozens or even hundreds of identical couplings and valves, for example) and update the inspection record. Fujitsu's RFID solutions can provide fast, accurate identification of assets and equipment to speed the inspection process.

#### **Rugged, Scalable RFID Solutions**

Fujitsu provides a one-stop shop for your AIT needs, including rugged RFID tags, RFID readers from leading providers, application software, middleware and deployment services.

With Fujitsu RFID Tracking Pro, you can quickly create RFID applications that can be easily

## **Easy integration with existing systems**

## **Pre-built applications for fast deployments**

## **Durable tags designed for oil and gas environments**

integrated with legacy enterprise systems. It includes a middleware component with the native ability to accept RFID, bar code, text and sensor input. RFID Tracking Pro parses the input and provides properly formatted data to the enterprise systems that need it.

RFID Tracking Pro works with all GS1 EPCglobal Gen 2 readers that support the Low Level Reader Protocol (LLRP), and has extensive tag reading and filtering capabilities that are user configurable. That allows you to control what information is passed from tags to readers and software applications.

RFID Tracking Pro also includes a pre-built client/server part tracking application that can automatically track and populate a back-end database for work-in-process, tracking,

inventory control, equipment inspections, and other aerospace applications.

Fujitsu also offers a full line of durable RFID tags built to withstand the rigorous oil and gas production environment. Our 64KByte RFID tag is the highest-capacity tag on the market, and provides industry-leading performance on metal surfaces. The Fujitsu 8KByte RFID tag is a high memory tag that can perform on metal. These tags can store asset and maintenance data, providing anywhere, anytime access even in remote locations. They can also operate safely in volatile oil and gas production environments where the tags are exposed to contaminants and the weather.

Oil and gas companies face unique traceability challenges that can be addressed using rugged RFID solutions. Fujitsu's RFID solutions can help improve asset utilization and process optimization, enhance profitability, and improve safety.

For more information about how Fujitsu's RFID solutions can improve your manufacturing and supply chain operations, contact us today.



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