



Case Study

Oil & Gas Harsh Environments

How digital automation using RFID is transforming the
business of extraction



Imagine an inspector who walks the line on a busy 2-acre extraction spread every morning. With coffee in one hand and an iPad in the other, he checks the status of more than 13,350 equipment assets.

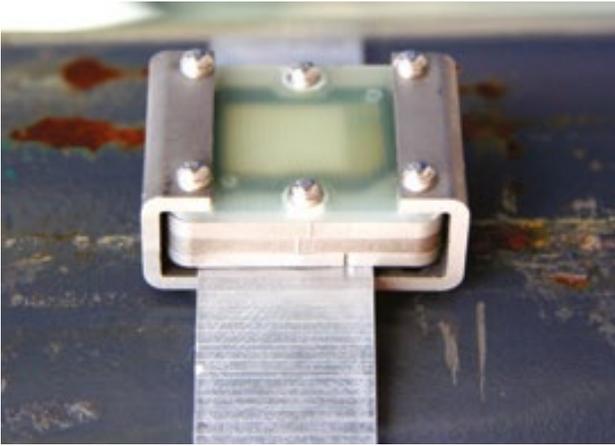
Not only does it all need to be accounted for, but also the inspection status must be up to date. People's safety is at stake.

How can you put eyes on so much equipment every day? The RFID tags throughout the yard "check in" with the app on his handheld device. There's a lot of liability on a working extraction site. Many pieces of equipment need to be serviced or replaced after just 3 to 6 months of use. If a 20,000 lb pressure valve isn't checked, maintained and replaced when it's supposed to be, the resulting accident could turn tragic. Beyond the safety concerns, it's valuable to know and track all your equipment and be able to anticipate its needs. With increased accuracy and information, you can keep fewer spares on hand, because there are fewer failures.

Mega-contractor leads the way to digital

When contracting in various oil yards, there was a strong need to provide visibility of all the equipment and safety status to owners. A global Oil & Gas company sought to automate that tracking with RFID. To achieve their transparency and efficiency goals, the organization moved forward with Omni-ID. Together, they established a viable path for digital transformation, integrating with their existing ERP system, and securing rugged, reliable RFID hardware that could survive in the harsh drilling environments. Today, just in their North American operations alone, the contractor has more 500,000 RFID tags in the field, all feeding information into their mobile- and desktop-enabled app, which then sends key data points to an SAP dashboard. Now that the system is working well and saving money, the plan is to take it to their eastern hemisphere operations.





Adept 400

Inspection cycles vary by type equipment. For instance, a fluid end can go 3 months to a year, but generally should be replaced every 6 months if being used.

Omni-ID passes the sledgehammer test

Perhaps the biggest reason this oil-and-gas contractor prefers tags from Omni-ID is the rigorous testing they've done together. Of course, there are other factors to the cooperative relationship: consulting, sharing of best practices for data integration, extensive training services, and a willingness to customize tag features and software integration as needed.

"Because we knew they are thinking about global applications, we suggested a tag originally developed for the Department of Defense," says Kathy. "It meets the needs of systems around the world. So their operations will be seamless, even on the other side of the globe."

The steps on their digital tracking journey

1. Started tagging equipment already in the field
2. Evolved to embedding tags on new equipment in manufacturing process — now equipment is designed with dedicated, protected locations for the tags
3. Pushed the software down to certification partners, so everyone who inspects and certifies iron in the yard has access to the information
4. Transition from time-based maintenance triggers to usage-based — because it's the usage that really jeopardizes equipment integrity, not just elapsed time
5. No more dedicated handheld devices — moved to a mobile device iOS based application

“We hit the tag with a sledgehammer multiple times, and it’s survived countless hours of rigid testing.”

Kathy Gannon,
Omni-ID’s Industry expert

Digitizing provides key data automatically

The passive tags being used for this energy extraction application, relay key points of data:

- Last inspection date
- Next inspection date, which indicates if the equipment is ready for use
- Location of the equipment within the yard

<p>Designed</p> <ul style="list-style-type: none"> High UV tolerance Label should adopt as little dirt as possible (slippery/low moisture absorption) Weight below 23 grams 	<ul style="list-style-type: none"> Label pull strength above 15kg If the label is removed, it should be visibly damaged and not be reusable RFID performance should be the same or better as with the red tag 	<p>Tested</p> <ul style="list-style-type: none"> Water resistance (non emersion: exposure to rain and watering of plants) Resistant to solvent and chemicals used in agriculture grower and retail operation (like chloring solutions) Storing temperatures from -30 to +70, operating temperatures from - 10 to +60 Material tested for the automotive industry
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Visit www.omni-id.com to learn more or email sales@omni-id.com for all product or technology inquiries and we will be pleased to get in touch.

Omni-ID is the leading supplier of passive, low-profile UHF RFID solutions. Through our patented technology, Omni-ID “cracked the code” to overcome the problems traditionally associated with RFID, enabling a broad range of new applications that improve accuracy and efficiency in asset tracking, supply chain management and work-in-process. Our family of versatile RFID tags works reliably in the harshest environments, including on, off, and near metal and liquids and excels in solving tracking and identification challenges with unprecedented accuracy. With offices in the USA, UK, Asia and India backed up by a purpose-built manufacturing facility in China, our mission is to drive the widespread adoption of RFID and wider IoT technologies as the optimal tracking and identification devices.