

RFID IN THE ENERGY & MINERALS INDUSTRY



SPACECODE
ENGINEERING THE FUTURE OF RFID

Specific Requirements of the Energy and Minerals Industry

100% reliability in identifying and tracking goods, on demand and without time delays

Simple to use and implement

Cost effective supply and installation

Ability to be incorporated into existing processes and packaging

100% secure-impossible to counterfeit or reproduce, and difficult to destroy

Excellent data integrity

Ability to identify and capture precious goods in close proximity and multiple orientations

Ability to identify products despite hostile environments ie presence of metal/ aluminium, liquids and organic material

 is a complete end to end Radio Frequency Identification (RFID) company specializing in energy and minerals and related industries. Its patented technology meets energy and minerals needs by providing the total solution: 100% identification and reading accuracy and reliability in liquid, metal or organic material environments, in multiple orientations or close proximity, and in multi-item bulk. Together with its partners and customers,  is engineering the future of RFID in the Energy and Minerals industry.

RADIO FREQUENCY IDENTIFICATION IN THE ENERGY AND MINERALS INDUSTRY

The ever-present dilemma in the oil industry is locating drilling rig assets at any given time. The cause is the extraordinary difficulty in keeping track of rig parts and equipment manufactured then assigned to drilling operations in quantities determined by rig activity. And rig activity itself is problematic: slow activity means accumulation of assets in storage areas and equipment yards with little or no origin or maintenance history; busy activity means oil companies need those assets quickly but their ready location is not known.

RFID is the solution. This superior technology makes it easy for oil companies to track, coordinate and manage their assets in the typically harsh climatic environments in which rigs operate, and knowing asset location also means faster repair and maintenance.

Platform automation, a.k.a the Digital Oilfield, is crucial to keep operations running during a crisis, for example, hurricanes. RFID technology can provide such automation, allowing companies to manage platforms remotely from safe locations instead of evacuating. By automating platforms, companies can experience substantial cost reductions, enhance employee safety, and have real-time data available to make faster decisions.

RFID will also improve mobility through wireless communications for onshore and offshore locations, and security through electronic access control of personnel that eliminates paper credentials, which can be altered.

energy



WHAT IS RADIO FREQUENCY IDENTIFICATION RFID ?

RFID is automated object identification and data capture using radio frequency technology to communicate between objects and systems. The technology consists of two main elements – a tag and a reader, that communicate through radio transmission. The tag contains a small chip and an antenna and can be placed on any object. Information stored on the tag (such as product type, product item identification number, manufacturer, date expiry, etc) can be transmitted to an RFID reader over a distance of a few metres.



RFID and barcodes are currently complementary technologies and will coexist for some time to come. The advantages of RFID over barcodes (such as no line of sight required, simultaneous identification of products, increased information capacity, ability to operate in harsh environments, fast read speed, low labour costs, and ability to update/write information to the tag) may result in RFID being more widely used and pervasive in the future.

BARCODES	RFID
Read individually	The only technology that can read items simultaneously
Line of sight required	No line of sight required
Read manually: high labour costs	Automated: low labour costs Information dynamic read write if required
Information read only Limited information memory	Large information memory (30 fold)
Low Durability – susceptible to harsh environments	High durability – can deal with harsh environments
Easy to replicate for criminals	Difficult to replicate
First pass accuracy not guaranteed	First pass accuracy guaranteed

“We are continuing to experience an extremely high demand for SPACECODE readers.

The company has expanded both its manufacturing lines and product offerings to give our systems integrator and end-user customers the flexibility to innovatively apply RFID solutions in their businesses”



The advantages of Spacecode's solution are ideally suited for the energy and minerals industry

100% reliability and accuracy

Mixed pallet and multi item reading

Excellent performance in metal environments

Outstanding ability to read items in close proximity and multiple orientations

No absorption by organic material such as liquids and food

Total ability to identify items inside large volumes

Full compatibility with any numbering standard

Simple integration with existing IT systems

SPACECODE™ RFID TECHNOLOGY

Spacecode is a complete end to end RFID solutions provided, and owner of patented RFID technology. Spacecode Research Laboratory has been developing RFID technology for difficult/hostile environments; where the focus of activities have been on technical solutions giving 100 % identification and reading accuracy in all environments.

The SPACECODE™ RFID technology works where other solutions and technologies fail. The system is uniquely able to ensure 100% reliable operation with appropriately high read rates. Due to its patent protected technology it is ideally suited for harsh and challenging applications, where many objects need to be identified simultaneously, which are in close proximity, randomly oriented and in the vicinity of metal, water, or other organic material.

REAL TIME BENEFITS OF THE SPACECODE™ TECHNOLOGY

The list of benefits for the energy and minerals industry generated through the use of the SPACECODE™ solution include:



Perfect asset management

- inventory control and distribution
- product availability
- productivity gains in distribution and receiving
- reduced inventory losses and write-offs
- labour cost reductions
- item level RFID tagging
- reduced administrative errors



Visibility and accountability at every point in the business process



Improved and optimized speed and reliability of the business processes



Anti-counterfeiting



Improved security, reduced theft, reduced fraud



Improved information flow and data integrity



Increased visibility thus reduced business logistics process losses



Efficiency gains simply through knowing where what is in the business



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