

## Riser Renewal Services

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InSituCheck<sup>SM</sup> High-Accuracy Onboard  
Inspection Services For Marine Drilling Risers





## OVERCOME THE LIMITS OF TRADITIONAL INSPECTION METHODS

Riser renewal has never been so efficient, with inspection services for marine drilling riser systems *onboard* the vessel. AFGlobal's InSituCheck<sup>SM</sup> marine drilling riser inspection service easily overcomes the challenges of traditional methods—inadequate capacity, limited yard space at facilities, complex logistics management, and the high cost of full drilling riser disassembly. For marine drilling riser inspections, the reliable, high-accuracy *InSituCheck* system offers valuable advantages over traditional methods.

### UNMATCHED BENEFITS WITH INSITUCHECK<sup>SM</sup> SERVICE

A unique set of benefits unavailable from any other inspection source completely changes the way marine drilling riser inspections and certifications are performed.

**Avoid rig downtime.** Inspecting isolated riser joints onboard the vessel ensures riser is ready for service, avoiding any drilling delays.

**Eliminate costs.** *InSituCheck* service eliminates the logistical problems and transportation costs associated with moving risers onshore for inspection.

**Recertify existing systems.** AFGlobal can recertify any drilling riser system, regardless of source. We can also build aftermarket parts that integrate seamlessly into existing drilling riser system and match API standards of quality and performance.

**Retain Certification.** All riser joints approved by inspection will have the Certificate of Compliance issued by AFGlobal,

and are witnessed by the ABS or DNV. The rig notation class is also attended. This is the industry's most efficient and cost-effective way to retain your marine drilling riser system's current class certification, regardless of your riser's source. We follow stringent industry guidelines, codes and processes, while ensuring our customers' specifications are met or exceeded.

**Eliminate environmental impact.** Our proprietary equipment and processes allow us to perform onboard inspections safely, without impact to the environment.

**Ensure effective inspections.** *InSituCheck* service is more than technology. Highly trained, experienced inspection experts using our advanced tools and techniques offer the best guarantee for finding small problems before they become large problems.

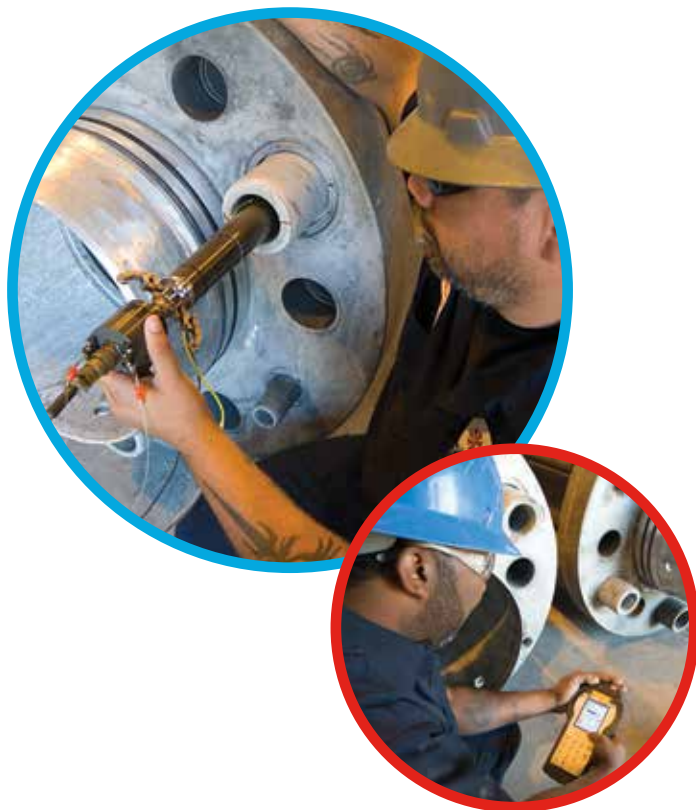
**Mitigate risk.** Whenever complex processes are eliminated, such as moving an entire riser system to shore, and disassembling each joint to inspect it once it is there, substantial personnel risk can be avoided.

## RELIABLE, HIGH-PERFORMANCE ONBOARD INSPECTION TECHNOLOGY

AFGlobal's automated tube and pipe inspection technology allows for quick and accurate evaluation of wall thickness and weld integrity—without removing external attachments. A special UT immersion head with adjustable range capability is used with proprietary UT Scan technology.

*InSituCheck* service provides other valuable benefits:

- Data is presented in graphic and tabular formats using Microsoft® Excel for ease of customized analysis and reporting
- Remote control scanning system and custom data outputs. Pocket UT system (see below) allows programmable inputs that drive data acquisition and two-dimensional motion control components of the scanning system;
- True state and condition of the components being scanned. Typical B-Scan and C-Scan outputs clearly show the presence of anomalies that may warrant more detailed scans and further evaluation;
- Accurate, detailed data collection, in real time;
- Compact, easy setup. Eliminates large, complicated tool packages that are difficult to transport, calibrate and operate.



## OPTIMIZED AND INTEGRATED SYSTEM COMPONENTS

The system performs high-speed, ultrasonic wall-thickness mapping for a wide range of tube and pipe sizes. Complementary software tracks the inside wall position relative to the transducer to eliminate the effects of errors due to tube ovality.

Proven AFGlobal inspection components are optimized as an integrated system configured specifically for onboard inspections. *InSituCheck* system is a clean-sheet-of-paper rethinking of how to optimize riser inspections and eliminate the problems associated with traditional methods.

### Automated tube and pipe scanning head assembly.

The scanning head consists of an ultrasonic immersion transducer assembly with an adjustable diameter range. The small transducer tool does not touch the pipe, reducing probe wear and permitting high-speed operation.

**Handling tool.** This compact and efficient assembly pulls the scanner head through the tube.

**Pocket UT system.** This complete, battery operated ultrasonic 2-D, C-Scan system programs and powers the rotating scanning head. This portable unit can operate in the basic 'A-Scan' and 'B-Scan' methods of inspection, but also has an advanced inspection method called 'C-Scan'. The Pocket UT can connect to a two-axis scanning unit and control the X-Y positions. This additional method provides the thickness data over a defined area.

RISER SYSTEM INSPECTION SIZE LIMITS	
Internal Diameter	External Length
2.5 in. to 30 in. (65 mm to 1.5 m)	Up to 100 ft (30 m)
	With access from both ends: Up to 200 ft (60 m)



## ABOUT AFGLOBAL

For decades, AFGlobal has created reliable, highly effective solutions to difficult challenges in the oil and gas industry. Our unique approach combines conventional OEM processes and technology with unconventional thinking, to quickly find the best solutions for our clients.

Technologies and products for the oil and gas industry are trusted by many of the industry's best known companies to reduce downtime, mitigate risk, and improve ROI. Our proven solutions are packaged intelligently and delivered with the highest levels of customer service.

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