



# IntelliGuard™ corrosion evaluation service

## FEATURES

- Continuous output high-definition frequency (HDF) transmitters
- High-resolution and primary array—each with up to eight frequencies
- E-line, RELAY™ digital slickline system, and memory conveyance
- Combinable with all Intelli-portfolio services

## BENEFITS

- Accurate corrosion monitoring in up to seven concentric pipes
- Continuous HDF transmitters improve signals in all pipes—including alloy
- Real-time, neural network-derived total thickness
- Single-pass diagnostics reduces operating costs
- Fast processing turnaround to assist rig operations



IntelliGuard™ corrosion evaluation service accurately monitors metal loss in up to seven concentric pipes. The continuous transmitting high-resolution and primary arrays deliver more power to improve signal response. IntelliGuard corrosion evaluation service works in steel and alloy pipes.

## Overview

The Halliburton IntelliGuard™ corrosion evaluation service quantifies metal loss in one to seven concentric strings of pipe in a wellbore using accurate high-definition frequency (HDF) technology. This capability enables customers to reduce diagnostic time and have comprehensive information for monitoring programs. It helps identify any nonconformity in their completion.

IntelliGuard corrosion evaluation service is the only 1.69-in. outside diameter electromagnetic tool in the industry that can evaluate up to seven concentric pipes. It operates with the induction of HDF electromagnetic energy into the surrounding pipe. This propagates through the concentric well strings with no influence from wellbore fluids or cement. The magnetic field interaction with the iron in the pipe returns electrical signals to the tool and yields information about the metal loss present in the tubulars.

The magnitude and location of corrosion-induced defects are identified by the use of HDF variance algorithms. This information leads to a quick total-thickness calculation determining the overall condition of the pipe structure. Information about each individual string is captured by the receiver arrays and measures metal loss in each pipe.



## Tool dimensions and ratings

| General tool specifications      |  |                                 |
|----------------------------------|--|---------------------------------|
| Max temperature                  |  | 350°F (177°C)*                  |
| Max OD                           |  | 1.69 in. (4.29 cm)              |
| Tool length                      |  | 12 ft (3.66 m)                  |
| Maximum pressure                 |  | 15,000 psi (103 421 Kpa)        |
| Minimum restriction              |  | 1.8 in. (4.57 cm)               |
| Tool weight                      |  | 87 lb (39.46 kg)                |
| Tool housing                     |  | Corrosion resistant             |
| Operational specifications       |  |                                 |
| Combinability                    |  | All Halliburton 1553 tools      |
| Tool positioning                 |  | Centralized                     |
| Maximum logging speed (1 string) |  | 15.0 ft/min (4.57 m/min)        |
| Memory deployment                |  | Halliburton Memory Pack (HMP)   |
| Digital slickline deployment     |  | RELAY™ digital slickline system |

## Tool specifications

Based on test fixture configuration.

| Barrier                 | Accuracy | Minimum detectable fault |
|-------------------------|----------|--------------------------|
| 1 <sup>st</sup> tubular | 0.6%     | 0.5 in.                  |
| 2 <sup>nd</sup> tubular | 1%       | 1.2 in.                  |
| 3 <sup>rd</sup> tubular | 3%       | 2.0 in.                  |
| 4 <sup>th</sup> tubular | 4%       | 2.5 in.                  |
| 5 <sup>th</sup> tubular | 5%       | 3.6 in.                  |
| 6 <sup>th</sup> tubular | 9%       | 7.0 in.                  |
| 7 <sup>th</sup> tubular | 14%      | 10.0 in.                 |

For more information, contact your local Halliburton representative or visit us on the web at [www.halliburton.com](http://www.halliburton.com)

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