



Wellbore Integrity  
SOLUTIONS



**DRILCO<sup>®</sup>**

**DRILL STRING  
SOLUTIONS**



# Customized, Customer-Focused Drill String Solutions

For over **70 years**, Wellbore Integrity Solutions' DRILCO brand has been synonymous with excellence and innovation in tubular products and services.

Our DRILCO brand sets the **industry standard** with specific technical training, ensuring the highest level of quality and service.

Our DRILCO product line has a **worldwide infrastructure** to support your operations with product inventory and machine shop facilities strategically located around the globe.

### Our Mission:

Create a **PEOPLE CENTRIC** company delivering profitability, growth, and a greener future focusing on superior technology, value, and **SERVICE QUALITY** for our customers.



### Our Vision:

To be recognized globally, focused on **INNOVATIVE SOLUTIONS** to increase asset value, operational efficiency, and **REDUCE ENVIRONMENTAL RISK** for all our futures.



### Our Values:

**Well-Being and Environmental Stewardship.** Protect our people and preserve the communities and environments where we work.



**Trust and Teamwork.** Conduct business with transparency, inclusivity, and trust.

**Customer Focus.** Strive to exceed customer expectations.

**Deliver Results.** Drive financial performance for WIS stakeholders and customers.

**Enterprising.** Open and receptive to creative thinking.

**DELIVERING  
EXCELLENCE  
AND INNOVATIVE  
SOLUTIONS**





Highly trained and experienced DRILCO machinists provide a variety of services.

## Machining Services

Highly trained and experienced DRILCO machinists provide various services to API or customer proprietary standards.

- API, Tubing, Casing, and Proprietary Connection Threading
- Phosphating
- Cold rolling
- Shot Peening
- Tubular Manufacturing
- Rotary Sub & Stabilizer Manufacturing
- Specialty Tool Manufacturing

## Hardbanding Services

WIS's DRILCO product line offers hardbanding solutions for open and cased hole drilling. We provide three competitive DRILCO hardbanding wire systems:

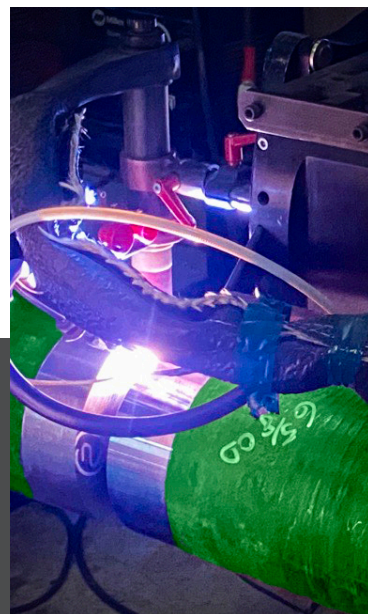
- **Defender MAX** is a metal core hardbanding wire designed to operate with a tungsten drop in normal open-hole conditions.
- **Defender ULTRA** is a flux-cored hardbanding wire that can operate in normal conditions without the use of a shielding gas or with a shielding gas when extreme conditions warrant the use of one.
- **Defender NON-MAG ELITE** is applied to stranded austenitic stainless steels, chromium manganese, and nitrogen-bearing austenitic stainless steels.

DRILCO is also certified to weld multiple third-party hardband wires.

## Specialized Welding Services

DRILCO offers a wide range of specialty welding services, such as Hardfacing and Brazing:

- Flux-Cored Arc Welding (FCAW)
- Gas Metal Arc Welding (GMAW)
- Shielded Metal Arc Welding (SMAW)
- Oxy-Fuel Welding (OFW)
- Plasma Transferred Arc (PTA)
- Tool Joint Build Up
- TCI Tile Inserts



## Highly trained welders. Stringent testing methods.

Through our quality management systems, we deliver consistent performance while complying with industry regulations.

# DRILCO®

## Stub Welding

Wellbore Integrity Solutions' (WIS) DRILCO product line specializes in stub welding of alloy steel and non-magnetic stainless-steel drilling tools. During a drilling tool's life cycle, it will be subjected to many connection reworks or defects, which will take it out of service. Our stub welding services allow adding material to the end of the drilling tool and post-weld machining to bring the tool back to its new dimensional state. DRILCO stub welding services can reduce your overall asset cost by increasing your tools' overall life span.

### Methods of Stub Welding

Our specialized welding methods, such as Submerged ARC, Hot Wire GTAW, and Friction Welding, produce the best weld possible. Our stub welding systems are fully automated, ensuring repeatable welds at the highest level of quality. Each weld is inspected to ensure the absence of any defects in accordance with ASME BPVC Section IX.

**Submerged ARC** is a welding process that requires a continuously fed consumable solid or tubular electrode. The molten weld and arc zone are protected from contamination by being "submerged" under granular flux, which provides a current path between the electrode and the material. This method allows for deep weld penetration; since the weld is under flux, there is no chance of spatter.

**Hot Wire GTAW** is a welding process that uses a tungsten electrode to produce the weld. A constant current power supply is conducted across the arc through a column of ionized gas. This process grants greater control over the weld than other methods, which allows for stronger, higher-quality welds.

**Friction Welding** is a solid-state welding process that generates heat through mechanical friction with the addition of lateral forces to displace and fuse the materials into one part plastically. Friction welding produces minimal and narrow heat-affected zone regions resulting in excellent metallurgical properties in the joint area. There is no melting; hence, no solidification defects such as gas porosity and segregation occur.

### Qualified Materials

- 1340, 4130 - 4145, 4330, 4330V Alloy Steels.
- Non-Magnetic Stainless Steels, such as P530, P550, and 15-15 HS.

## Field Refacing Services

Our field refacing services eliminate unnecessary tubular transportation costs by providing CNC quality lathe refacing on API and Double Shoulder connections at the rig or customer yard location. This reduces tubular movement and increases tubular availability for the next well.

Field refacing services utilizes a dual cutter system that provides CNC quality finishes on both primary and secondary shoulders simultaneously while maintaining the highest level of excellence:

- Maintain tolerances within .0005 inch
- Provides a surface finish exceeding Ra64
- Bevel diameters corrected to the proper dimensional criteria
- Minimizes material removal with controlled cuts, which extends tubular life
- Safer than traditional field refacing methods

# DRILL STRING Solutions



## Rig or Shop Inspection Services

Periodic Inspection, essential for preventing drill string failure, is available from DRILCO at the **rig site** and **DRILCO service centers worldwide**.

We offer inspection services, per applicable standards, for drill collars, drill pipe, Hevi-Wate™ transition drill pipe, and other premium downhole tools through a worldwide network of service centers established to ensure **global coverage**.

### Inspection Services

- Complete thread inspection (TI)
- Visual Inspection (VT)
- Dimensional Inspection (DI)
- Magnetic particle (MT)
- Liquid-dye penetrant (PT)
- Ultrasonic Inspection of rotary shouldered connections (UT-RSC)
- Ultrasonic Inspection of high-stress areas and tube upsets (UTEA)
- Electromagnetic Inspection (EMI)
- Full-length ultrasonic Inspection (FLUT), available at select DRILCO locations
- Phased Array Ultrasonic Inspection (PAUT)
- Tubing and Casing Inspection
- Hoisting & Handling Tool Inspection

### EMI Tubular Inspection System

Our EMI tubular inspection system uses computerized data acquisition, signal processing software, and a proprietary electronics package.

#### Features

- Digital data acquisition and display
- Dual-function defect detection of flaw and wall loss
- Recorded data that can be easily viewed on most computers
- Fast, accurate system calibration
- Double the standard inspection rate
- Automatic defect detection and location

## Drill Stem Inspection Monitoring

Keeping our customers in compliance helps guarantee their drill pipe, BHA's, and specialty tools are kept in premium condition when returning them to drilling or being stored. **Adherence to proper standards and procedures ensures the longevity of your valuable assets.**

WIS' DRILCO monitoring personnel assist our customers with the early detection of any variance from the standard specification such as DS1, API, or customer-specific to prevent future failures by providing oversight during the inspection process.

Our monitoring personnel provides oversight of acceptance or rejection criteria, ensuring accurate inspections to avoid unnecessary costs directly related to the cost of repairs.

We verify each third-party inspector is certified in accordance with SNT-TC-1A and make sure that their inspection equipment is calibrated as per DS1 or applicable standards. Adherence to maintaining the highest industry standards is our priority.

DRILCO sets the standard by employing ASNT Level 3 inspectors to ensure that the proper training, communication, and knowledge are maintained.

## ProScan Wellsite Inspection Service

### ProScan\* Vertical Electromagnetic Wellsite Inspection Service for Production Tubing

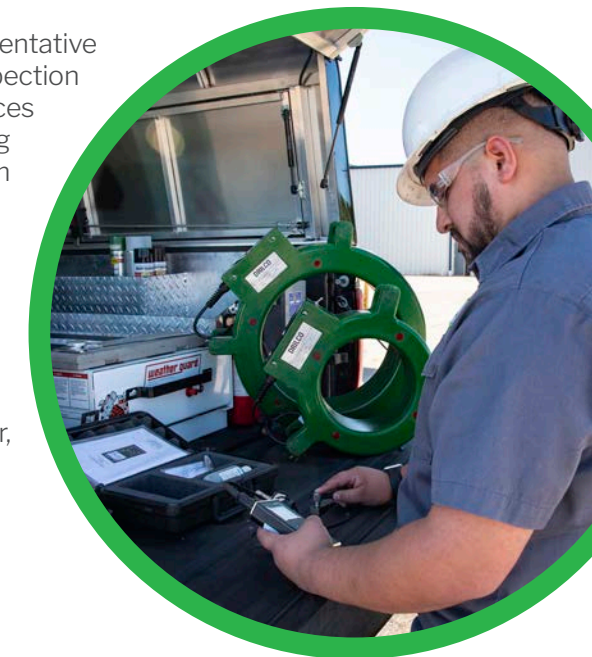
ProScan Inspection at the wellhead can help oil and gas operators improve their short and long-term production goals by reducing tubing failures. The Inspection is performed as the production tubing is pulled from the well, eliminating time-consuming conventional inspection methods.

### The ProScan Advantage Inspections

- Localized wall loss (for pitting)
- Thru-wall splits (open or closed)
- Rodwear loss (body wall monitor)
- Thru-wall hole detection (dedicated channel)

### Customer Benefits

- **Reduce tubing failures:** Preventative maintenance via ProScan inspection services at the wellhead reduces downtime, thus lowering lifting costs and improving long-term oil and gas production goals.
- **Mechanical and wear corrosion data:** Well Profile Report provides corrosion and wall loss (rod wear) information.
- **Reduced well-servicing costs:** Wells stay online longer, reducing workover costs.
- **Experienced personnel:** Extensively trained to ensure accurate, reliable, and safe operations.



# DRILCO® Drill String Solutions



For more information or to contact a DRILCO Expert:  
**[wellboreintegrity.com/DRILCO](https://wellboreintegrity.com/DRILCO)**



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**RED BARON**

**DRILCO®**

**THOMAS  
TOOLS**