

Industry-Leading Hardbanding Services



Highly Productive Tools. Time Saving Efficiencies.

Mobile Hardbanding solutions for open and cased hole drilling.

Industry-Leading Hardbanding

Wellbore Integrity Solutions' (WIS) DRILCO product line has established an international reputation for **premium hardbanding** that provides OD wear protection on drill collars, drill pipe, heavy wall drill pipe, and other tools used in drilling applications. Our industry-leading hardbanding service is available in an **advanced mobile hardbanding unit**, which can be set up and operated at a permanent facility or rig location.

Mobile hardbanding systems **eliminate the freight costs** associated with transporting tubular products from remote jobs or permanent facilities to a maintenance center. Beyond convenience, the portable hardbanding systems are capable of keeping drill string components in top condition.

Application Process Ensures Adhesion of Wear-Resistant Material

Mobile hardbanding system applies wear-resistant material using an automatic, metal-arc, inert gas shielded, consumable electrode process, which closely controls pre-heat and post-heat conditions.

Select tubular **product maintenance** when and where it's needed.



A Premier Mobile Hardbanding System

Application-Specific Hardbanding Material

WIS's DRILCO product line offers hardbanding solutions for open and cased hole drilling. Conventional hardbanding material, used to increase the durability of open hole tubulars, consists of granular tungsten carbide particles, which are automatically fed into a molten puddle. This enables the even distribution of protective particles during the application process, which maximizes tubular wear resistance.

We also offer two outstanding core hardbanding wire systems. The **Defender MAX** is a metal core hardbanding wire that is designed to operate with a tungsten drop in normal open-hole conditions. **Defender ULTRA** is a flux cored hardbanding wire able to operate in normal conditions without the use of a shielding gas or with a shielding gas when extreme conditions warrant the use of one.

For cased hole drilling, there is a selection of casing-friendly, non-tungsten carbide hardbanding from industry-approved suppliers. The following certifications have been acquired through these suppliers by maintaining the highest level of quality management:

ARNCO

- 150XT
- 200XT
- 300XT
- 350XT

LIQUIDMETAL

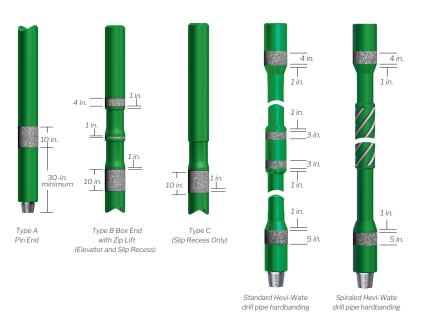
- M-Star
- NOV
- TCS-8000
- TCS-Titanium

POSTLE Industries

- Duraband
- Tuffband
- Postalloy BU-SA

Hardbanding Application Standards

Some types of hardbanding may require the removal of old material before the application of new hardbanding material in order to maintain the integrity of the weld. This requires specialized processes which may require the material to be serviced in one of our certified facilities. In order to provide the highest quality product, we suggest discussing with one of our hardband specialists.



- Hevi-Wate* transition drill pipe: Hardbanding placed on the tool joints and center wear pad will increase abrasion resistance and extend service life.
- Drill Collars: Drill collar hardbanding is the most effective way to retard the OD wear that occurs under normal open hole drilling conditions.
- Drill pipe: Tungsten carbide and non-tungsten carbide hardband materials are available upon request.
- Other applications are available, consult with your WIS DRILCO representative for more information.

The preheating of tubulars prior to handbanding process is done to ensure the correct and consistent applications of hardbanding material is achieved.

Find out more about Mobile Hardbanding for select tubular product maintenance at wellboreintegrity.com/drilco.

System Advantages

- Standard tungsten carbide premium hardbanding materials and casing-friendly products offer a wide range of protection options.
- Advanced portable equipment enables high-quality application of hardbanding materials.
- Superior abrasion and wear protection extends drilling tubular life.
- Fully automated hardbanding unit enables precise hardband applications.
- Fully trained, qualified personnel ensure quality-controlled application.
- Mobile application increases use of, and reduces freight costs for, tubular inventories.
- Global operation centers provide 24-hour mobile hardbanding service.

Other Available Services

Tubular Inspection Services

Our qualified personnel offer a full range of inspection services, which include third-party and customer-defined standards.

Machine Shop Services

Whether it's a common tubular connection, or a proprietary one requiring licensing, we stand ready to recut and repair tubulars 24/7.

Tubular Management Services

Our tubular management services provide tubular inventory visibility, storage location management, and centralized maintenance to reduce repair time.



MOBILE HARDBANDING

For more information, contact your local WIS representative:

wellboreintegrity.com/drilco



Wellbore Integrity Solutions (WIS) 1310 Rankin Road Houston, Texas 77073 USA

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WIS-BR-MKT-035_Rev4

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