

TCS™ Hardbanding

Industry Leading Tool Joint
and Casing Protection

The Next Generation in Hardbanding Technology

The World Leader in Hardbanding

Single Source

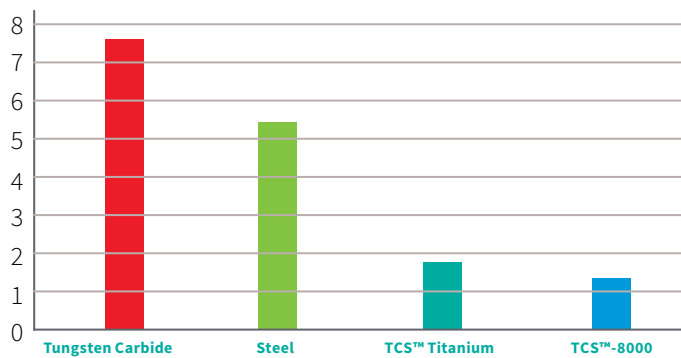
Tuboscope™ is the only oilfield hardbanding service company that offers a single source for wire manufacture, new pipe application, and reapplications worldwide.

Global Reach

With over 80 mobile units strategically located in 25 countries, Tuboscope's TCS™ Hardbanding service is available in major oilfield markets around the world.



Wear Factor



Casing Wear Percentage

Casing Wear Tests were performed in accordance with DEA 42 requirements. (<2 indicated a casing friendly alloy)

Field-Proven Hardbanding Alloys

TCS™-8000 Reduces Casing Wear

With drilling costs on the rise, protecting your investment in drill pipe and casing is more important than ever. Tuboscope is committed to providing the best combination of tool joint wear and casing protection with our TCS hardbanding product line. Tuboscope's original, trouble-free TCS-8000 hardbanding alloy is specially designed and formulated to protect casing. The overlay is visually crack free and can withstand multiple reapplications.

Tungsten Carbide

Tungsten carbide is the original drill pipe hardfacing protection. Tuboscope applies various mesh sizes of crushed and spherical tungsten that is extremely effective on bottom hole assemblies which normally operate in open hole environments.

Full Field Application Capability

When and Where You Need It

Combining qualified personnel with our mobile equipment turns your drill site into our work site. Tuboscope cuts the time necessary to get you back up and running by delivering hardbanding services on new or used drill pipe and heavy weight/drill collars when and where you need it. In addition to the application of our proprietary hardbanding, we have the capability to apply most other hardband products.



Your single source for the most comprehensive package of oilfield tubular services — Worldwide

TCS™ Titanium

TCS Titanium is formulated to provide high stress abrasion resistance along with unmatched resistance to cracking and spalling. Titanium carbides on their own are approximately 40% harder than tungsten carbide. The TCS Titanium microstructure exhibits smooth round particles, which help prevent galling problems on metal-to-metal contact. This combination gives a superb balance between abrasion and crack sensitivity which results in both reduced tool joint wear and casing wear.

Benefits

- Superior casing wear protection
- Crack-free
- Extremely low coefficient of friction
- Extended tool joint life
- High stress abrasion resistance
- No shielding gas required
- Unlimited reapplication in the field
- Superior adhesion properties mean non-spalling



Hardband Material Analysis



Hardband Identification

Hardbanding cannot be accurately identified visually and record keeping is not always exact — making reapplication difficult due to material dissimilarities. Drilling operations can be interrupted and in extreme cases, casing failure may occur. Tuboscope offers precise, immediate onsite hardband identification using a hand-held x-ray fluorescence analyzer. Accurate identification of hardbanding can eliminate costly downtime by determining non-casing friendly hardbands or hardbanding with potential reapplication issues.

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