HBS Bulletin

HARDBANDING SOLUTIONS by POSTLE INDUSTRIES

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*Postle Industries has provided the best wear solutions for many industries and applications for over 50 years. With that in mind, we are happy to "re-introduce" you to our **Ultraband® NM** non-mag wire and to our recently patented **CoolBanding®** procedure. If you have been reluctant to hardband non-magnetic components, let us show you how easy it is with **Ultraband® NM**. Our patented **CoolBanding®** process was developed for the re-application of Duraband over Duraband without compromising the internal protective coating (IPC). Read on for details.*

Postalloy® Ultraband® NM

U.S. Pat. No. US 9,724,786 B2

Ultraband® NM w/ 20-30 Mesh Cast Carbide

Ultraband® NM is a hard, 100% crack free hardband designed for non-magnetic drill collars and related components. By controlling critical elements during the development of the hardband alloy, **Ultraband® NM** meets magnetic resistance compared to permeability specifications and offers substantially improved wear resistance compared to conventional non-mag welding alloys, like 310 stainless – a 400% to 500% improvement. In addition, the abrasion resistance of **Ultraband® NM** is 400% to 500% better than drill collar base materials.

- Use on non-mag base materials such as P530, AG17, 15-15LC, NMS-100 and others
- Meets all requirements of API Specification 7 - Relative Permeability – less than 1.01 (All tests are carried out according to ASTM A342 Method 3)
- Can be applied in multiple layers without spalling providing the interpass temperatures are properly controlled
- Non-Cracking
- Hardness 40 Rc (Work hardens to 50 Rc)

Ideal for oil and gas industry applications such as non – magnetic drill collars, stabilizers and MWD/LWD drilling tools and related components - optimized for improved wear resistance.

Ultraband® NM can be applied directly on to non-mag tools and over previous layers of 310 stainless. Used by itself, **Ultraband® NM** provides excellent wear resistance. For additional wear protection, a non-magnetic "cast tungsten carbide" may be dropped into the weld. Recommended size is 20-30 or 30-40 mesh at a drop rate of approximately 40 grams per minute. Deposits are smooth and free of any slag. Re-application is easy providing the worn deposit is clean and free of defects. Please contact your Postle support person or Tech Center for the proper procedure and training.

CoolBanding® is a Patented Process

U.S. Pat. No. US 10,267,101 B2

We are pleased to announce that Postle's patent application was approved by the United States Patent Office for the **Coolbanding®** Process. The US Patent Office recognized our unique and novel invention for hardbanding tool joints and Wear Knot™ Drill Pipe. **CoolBanding®** was born out of the idea of applying a hardband without compromising the internal coating on the inside of drill pipe. In previous attempts to keep the tool joint cool during hardbanding re-application and not damage the IPC, some applicators had elected to lower the welding preheat temperatures. Unfortunately, lower preheat temperatures can result in compromising the ductility of the tool joint. Others attempts include circulating unheated water through the pipe during welding operations which can also quench the steel and again compromise tool joint ductility. Postle Industries started the development effort to create a hardbanding procedure to protect the IPC, while maintaining tool joint integrity – **CoolBanding®**. **CoolBanding®** has proven to be a benefit to pipe owners that want to hardband their assets without damage to the expensive IPC.

Please note:

1. CoolBanding is only for the re-application of Duraband over Duraband.

2. CoolBanding requires special training and certification in addition to our standard Duraband certification.

3. Hardbanding units may require some modifications in order to use the CoolBanding process.

Any Certified Duraband hardband applicators that are interested in applying Duraband with the patented **CoolBanding®** procedure, should contact their local Postle support person or Technical Center for training & required separate certification.