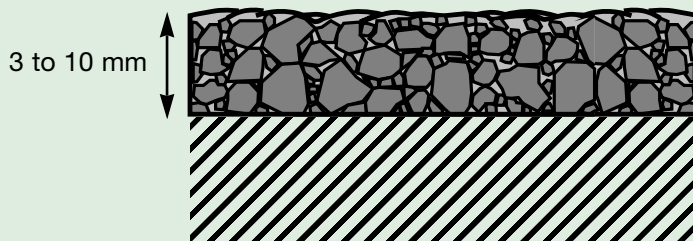


HIGH PERFORMANCE TUNGSTEN-CARBIDE BASED HARDFACING



Hardness of carbides 1800/2200HV

TECHNODUR® GN

Flexible length on reels for Oxy-acetylene welding
3 to 10 mm thick coatings

Main Application

Shovel or bucket teeth.

The users of dredger buckets, e.g. for baked clay, will find in TECHNODUR®GN the ideal solution for good protection of bucket teeth.

Exceptional resistance to abrasion, resistance to impacts, ease of repair, absence of cracking.

Description

TECHNODUR®GN is a flexible length made of a small diameter nickel core wire with a thick coating.

The coating contains a specially formulated matrix of molten tungsten-carbide particles, blended with a high nickel content alloy.

Characteristics and Properties

1° Tungsten-carbides :

The hardfacing coatings are made with a mixture of tungsten-carbide particles of different sizes.

With TECHNODUR®GN, the main dimension of the majority of the particles lies between 0.4 and 0.7 mm, with a proportion of secondary particles graded to obtain a compound that is as compact as possible.

2° Bonding Alloy :

Nickel alloy

Hardness : 40-44 HRC

3° Average Expansion Co-efficient :

6 to 7 10^{-6} cm/cm/°C (estimated)

4° Coating Density :

13,6 g/cm³

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WEAR PROTECTIONS

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5° Tungsten-carbide Concentration

The tungsten-carbide concentration depends upon the space left free by the arrangement of tungsten-carbide particles. It is possible to reduce this space by an appropriate grading of tungsten-carbide. In the course of welding the particles are deposited in a relatively compact arrangement. The excess brazing alloy used to prevent oxidation during welding rises to the surface of the coating, giving it a smooth finish. That is evidence of proper welding and of optimum particle arrangement.

TECHNODUR®GN provides an optimised concentration of approximately :

$$\frac{\text{Carbide weight}}{\text{Carbide weight} + \text{Alloy}} \times 100 = 68$$

6° Chemical Resistance :

No corrosion has been recorded, even at high temperatures.

Other Typical Applications

- Moulding press augers (ceramics industry)
- Armouring
- Hammers for fireclay mills
- Foundry scrapers
- Rolling-mill roll and roller scrapers

Application

TECHNODUR®GN is applied with an oxyacetylene torch. We recommend the use of the Techno 2000 torch, which is simple to use and easy to maintain.

For volume applications, the FD 2000 automatic device increases the hourly coating rate by 20% to 30%, with a corresponding reduction in consumption of welding gas.

It is recommended to spray MB 40 powder over the work surface prior to applying TECHNODUR®GN (using the Techno 2000 torch).

The surface to be coated should be ground before hardfacing.

Successive layers of TECHNODUR®GN can easily be welded upon each other.

20 kg coils

Diameters : 4, 6 and 8 mm.

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