

Saint-Gobain - Coating Solutions

TUF-COTE Grade A *hard facing cord*

SAINT-GOBAIN Coating Solutions produces the TUF-COTE hard-facing flexi-cords in order to solve severe abrasion & wear problems for many industries such as oil drilling, ore mining, power generation, dredging, waste treatment, foundries, steel making, bricks & tiles, cement, wood industries...

Every wear problem does not necessarily involve the same solution and we carefully study each situation to offer the optimum product and application.



TUF-COTE description

TUF-COTE is a continuous flexible cord, made of tungsten carbide particles mixed within a self fluxing nickel matrix.

The tungsten carbides are cast and crushed. On request, we supply sintered carbides, spherical shape carbides or different matrix compositions, different matrix hardness... contact us.

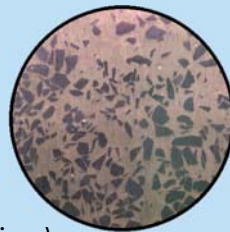
Features

Features of the cord material before brazing:

- Cast Tungsten Carbide 0.1 to 1.6 mm,
- Average Hardness of the Tungsten carbides: 2200 to 2400 Hv300 (before brazing)
- Hardness of the matrix : 40 HRc +2 (before brazing)

Features of the TUF-COTE coating:

- Density : 14 g / cm³ or 0,5 lbs / inch³
- Weight per surface unit : 140 g / dm² for 1mm thick
7,2 lbs / feet² for 0,1 inch thick.
- Deposition rate
2 kg/h – 4,4 lbs/h on large surface (bucket wheel, wear plate...)
max 3,5 kg/h – 7,7 lbs/h on small surfaces (edge, patch...)



Extrusion



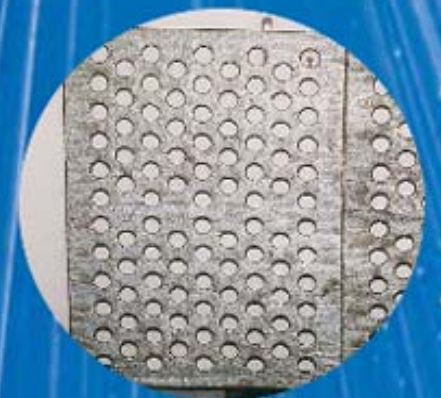
Feeding



Tunnelling - drilling



Screening

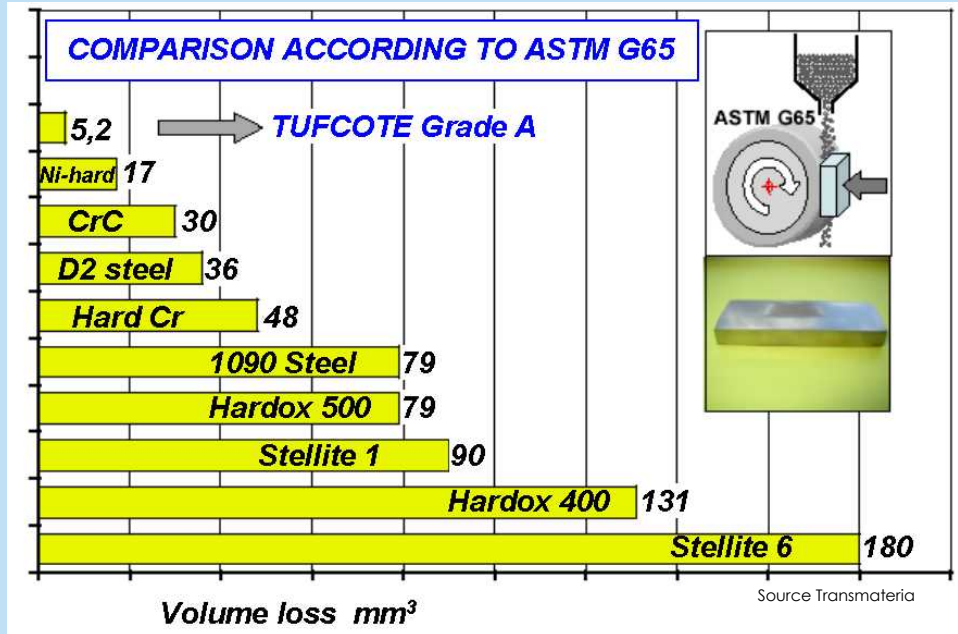


Digging - dredging



Benefits

- TUF-COTE increases the lifetime of the tools.
- TUF-COTE contains large WC particles up-to 1.6mm, which provides the highest abrasion resistance (not possible with TIG, MIG, electrodes).
- TUF-COTE shows the lowest volume loss under ASTM G65 test, compared to the main wear resistant metals.



Crushing - pulverizing



- TUF-COTE decreases the maintenance frequency.
- TUF-COTE is applied on mild carbon or low alloyed steels (the use of special and expensive steels is not necessary).
- No capital investment is required to apply the TUF-COTE brazing flexi-cord (only a flame torch is required).
- TUF-COTE application procedure is easy to learn.
- TUF-COTE can be applied on the site or in any job shop.

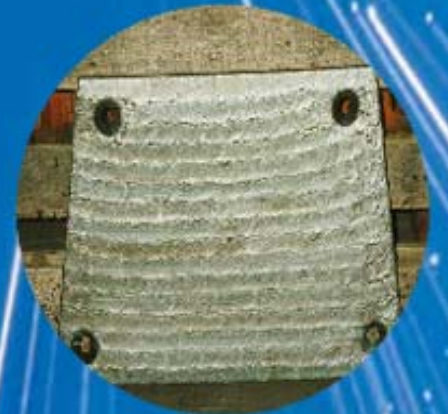
Procedure to apply TUF-COTE

Tuf-Cote is applied with a standard oxygen-acetylene torch like any brazing material. Preheating is required before brazing.

The following alloys can be hard-faced :

- Most of carbon steels, low alloyed steels, stainless steels, lamellar grey cast iron, spheroid cast iron.
- INCONEL, Creusabro up-to #40000, Mn steels can be also hard faced under specific procedure. Contact us for more details.

Lining



Mixing



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