# Technology and Training CenterX8000™ Encapsulated Screws

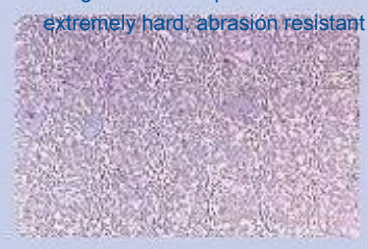

Application Method:

X8000™ is a thermal spray coating. To eliminate risk of delaminating, a second process fuses the nickel/tungsten carbide alloy. This allows for 100% metallurgical bonding to the screw base material. The typical bond strength is 280 megapascals. This exceeds non-fused, mechanical bonds of 70 MPa which is common among all our global competitor’s carbide coating.

X8000™ Carbide Coating

X8000™ is a thermal spray coating applied to the screw.This material complements high abrasive resistant X830 overlay and is well suited for processing highly flled or corrosive resins. It can be applied for the full fight length or only on isolated areas of the screw that are more susceptible to wear.

Tungsten carbide particles- extremely hard, abrasion resistant



Nickel based Alloy with Tungsten Carbide

- Thickness: 0.4 mm (0.020”)
- Hardness of Tungsten Carbides: 1350-2100 HV
- Maximum Processing Temperature: 800° F (425°C)

Standard Surface Finish:
Ra mm = 1.52-1.90 (Ra mi = 60-75)

Polished Surface Finish:
Ra mm = 0.20-0.40 (Ra mi = 8-16)

Bene ts

- Tungsten carbide cladding – improved wear and superior corrosion resistance
- Metallurgical bond – no chipping or delamination issues associated with HVOF carbide coatings
- Complete Wear System – for the ultimate in wear protection:
  - X8000™ carbide cladding on the screw root surfaces
  - X830 carbide hardfacing on screw fight OD’s
  - X8000® patented carbide barrel lining

Rebuilt Screws – X8000™ is repairable and can be applied to your rebuilt screws greater than 50mm diameter

Typical poor adhesion and chipping of competitive carbide coatings
’s X8000™ has a metallurgical bond exhibiting no chipping