TOUGH CMN MAX

Resources unity

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TouGH CMn MAX®

TouGH CMn is carbides technology carried out on manganese matrix that combines the positive properties of two material groups, namely compatible metallic alloy column (of no non-metallic content) and manganese parent metal.

The hardness, wear resistance, thermal and chemical stability of metallic alloy paired with the impact resistance and flexibility of manganese parent metal produces an ultimate wear life in the most extreme high impact and abrasive working conditions.

It is an advancement from previous conventional ceramic composite inserts that contained non-metallic elements that restricted sizes in making and bonding strength in steel casting.

TouGH CMn technology overcomes the contradiction between hardness and durability, where hardness has always worked against durability in product making.

Resources Unity played a leading role in this technological advancement. TouGH CMn combines the advantages of impact toughness of manganese steel with the superior abrasion resistance of the carbides at its wear areas. The TouGH CMn technology was developed on the basis of metallurgical bonding between parent metal and carbides, where one merges into the other to form an inseparable one-piece steel casting, with no adhesive or chemical agents involved.

Features of TouGH CMn Carbides INSERT

- High levels of hardness and toughness
- No porosity in micro-structure
- No variations in strenghth as it hardens
- Low density
- Low thermal conductivity
- No breakage, chipping or peeling during application

Resources Unity company does not offer and/ or sell TouGH CMn Carbides INSERT.

TouGH CMn MAX®

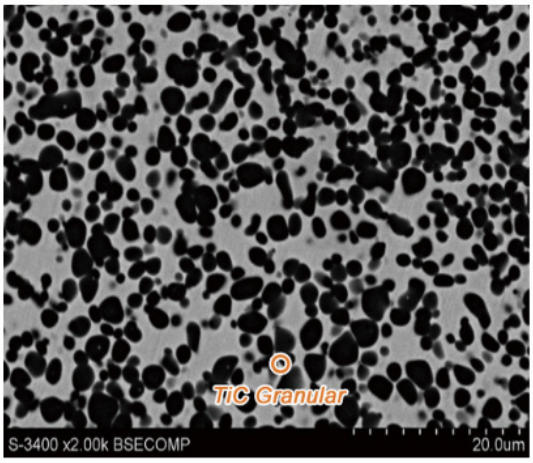
TECHNICAL ASPECTS

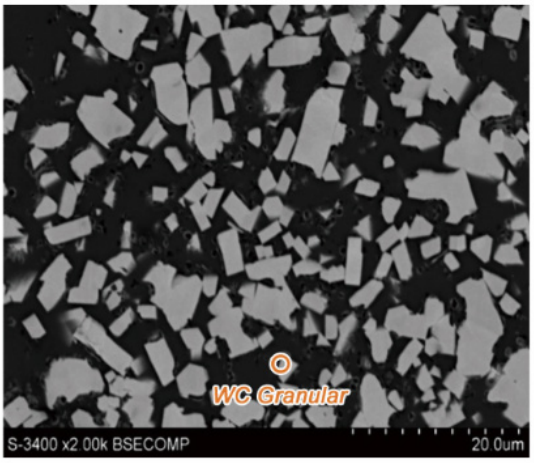
TouGH CMn Carbides INSERT

The micrographs below show the micro-structure of the Carbides. By taking a closer look, the carbides material shows no sign or porosity or defects. Unlike conventional product making technology, TouGH CMn Carbides is created via a vacuum roasting process, which provides a sealed product making environment and produces a flawless final product.

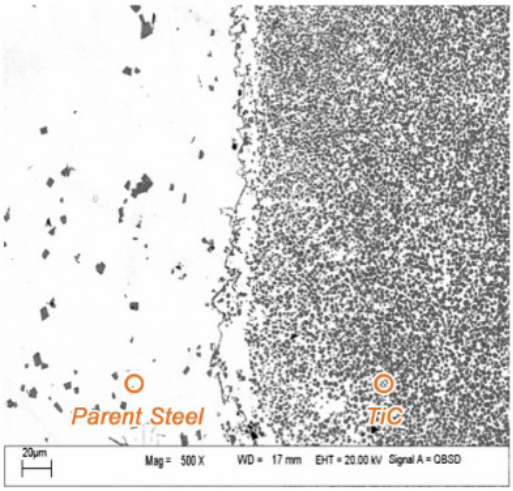
HOW IT WORKS

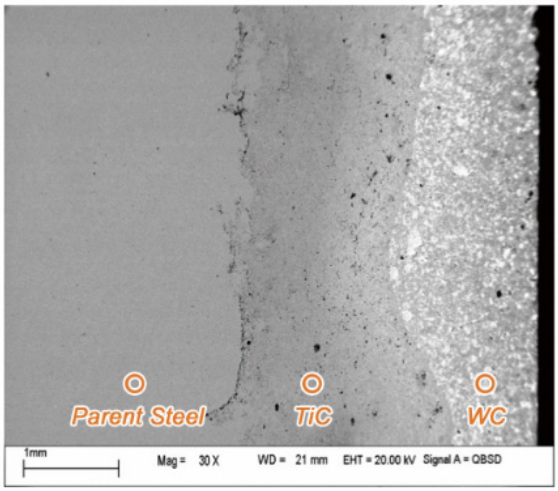
Resources Unity constructs steel casting from scratch. Resources Unity casts TouGH CMn Carbides into manganese parent steel and manurfactures this product at its own factory.





TouGH CMn Carbides and parent steel performs a metallurgical bonding in the making process, known as synthesis. The micrographs below demonstrate the bonding, which we refer to as typical absorption, where carbides merge into parent steel. This bonding becomes seamless and inseparable, which provides the ultimate guarantee of reliability in real applications.





ToughGH CMn MAX®

ToughGH CMn technology revolutionizes the casting industry and offers a final up-to-date solution for steel casting wear liners, where product life, overall cost reduction and reliability can be accomplished all at once. ToughGH CMn technology minimizes the product trial turnaround period. It is the most efficient and effective package to set a complete new beachmark for wear liners throughout the entire operation.

If you're tired of trying out different profiles in an effort to extend your product life, contact us for different strategy options. Our dedicated team will travel to your site and collect the necessary data to come up with the perfect profile for your project.

The ToughGH CMn technology ensures reliability at the highest level. No chipping or peeling occurs during metallurgical bonding.

TOUGH CMN APPLICATIONS

- Crusher Liner
- Impact Chute Liner
- Various Impact Wear Liner
- ToughGH CMn Jaw Crusher Plate
- ToughGH CMn Hammer Crusher Hammer
- ToughGH CMn Cone Crusher Liner
- ToughGH CMn Wear Plate

ToughGH CMn Jaw Crusher Plate

ToughGH CMn Hammer Crusher Hammer

ToughGH CMn Cone Crusher Liner