

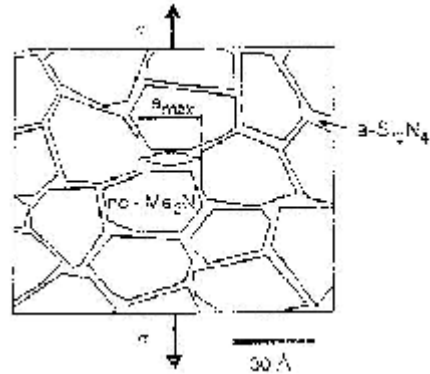
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ECI
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Product Data Sheet nc-TiN/a-Si₃N₄ Nanocomposite Coating

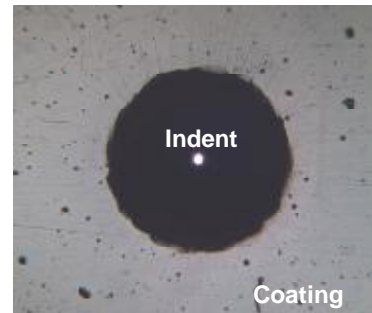
nc-TiN/a-Si₃N₄ Nanocomposite Coating Description

- Nanocrystalline (nc) TiN Surrounded by Amorphous (a) Silicon Nitride Layer
- Nominal Composition: ~4 At.% Si, 34 At.% Ti
- Deposition Technique: Enhanced-Plasma Reactive-Deposition From Unbalanced Magnetrons With Ti and Si Targets.



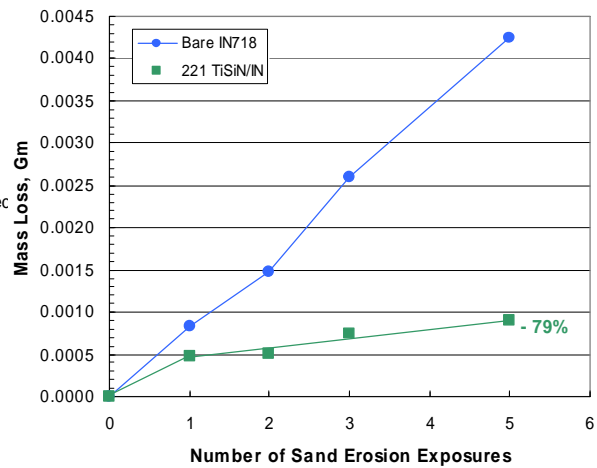
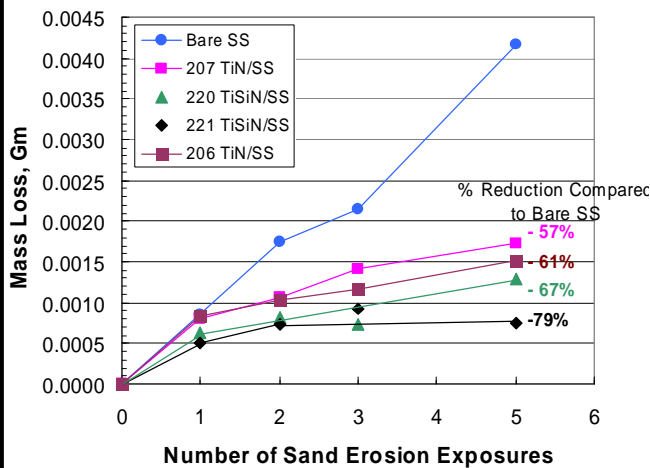
Benefits

- High Hardness
- Excellent Adhesion, Indent Toughness
- High Sand-Erosion Resistance
- Excellent High-Temperature Capability
- Thick PVD Coating
- Scalable for Complex-Shaped Blades, Blisks



Excellent Adhesion to High-Load (331-Lb) Indentation, No Flaking

Sand-Erosion Summary



Reduction in Mass Loss For RT Erosion Tests of ECI nc-TiN/a-Si₃N₄ Coatings on SS (Left) and IN718 (Right)