MOGAS Surface Technology Datasheet

MS-221 "Spray and Fused Tungsten Carbide with Cobalt Binder"

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General Description:

This coating is used to minimize wear, erosion and friction on balls and seats in severe service trim. Hardness is derived from complex carbides which form with Chromium, Tungsten, Iron and Boron. It differs from HVOF Chromium Carbide in that carbides of many metals are formed during the fusion process rather than pre-existing in the spray metal.

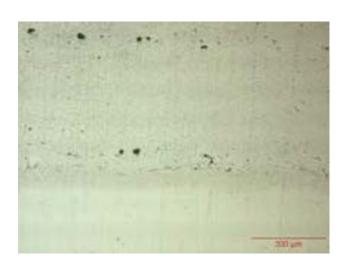
The metallurgical bond makes this coating suitable for extremely high temperature service and extremely high thermal shock applications. This coating has displayed excellent wear resistance in elevated temperature cyclic service. The minimal porosity in this coating is closed, providing complete corrosion protection of the base metal.

Application Method:

Spray and Fuse

Typical Chemistry:

2% Boron 2% Carbon Chromium 12% Cobalt Balance Nickel 9% Silicon 2% Iron 1% Tungsten 35%



Typical Mechanical Properties:

Hardness > 58 HRC average
Finished Thickness 0.009" to 0.023"

Porosity 2% maximum

Useful Temperature up to 1000°F (538°C)

Bond Strength > 40,000 psi

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