MOGAS Surface Technology Datasheet

MS-238 “Spray and Fused Chromium Carbide with Nickel Binder”

General Description:

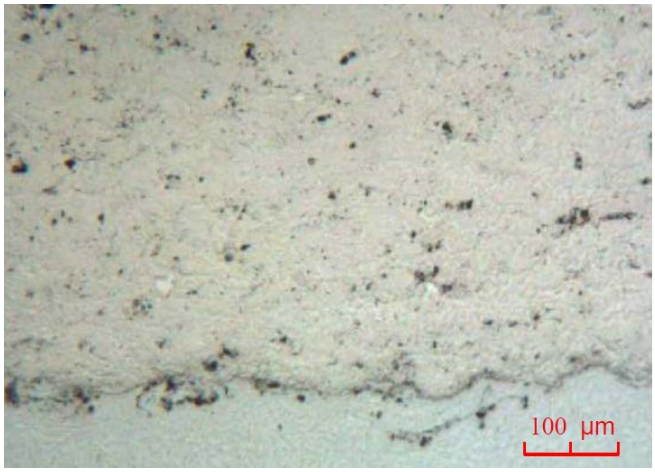
This is a nickel based metallurgically bonded coating suitable for extremely high temperature service and extremely high thermal shock applications. This coating has displayed maximum abrasion resistance and corrosion resistance in elevated temperature cyclic services.

The hardness of this coating is derived from hard phases comprised of Chromium, Tungsten, Boron and Carbon, which allows for toughness, abrasion and erosion resistant properties to remain uniform throughout the coating.

The coefficient of thermal expansion of this coating has a close match to those of high nickel content alloys, including Inconel 718. When metallurgically bonded to Inconel 718, this coating has performed extremely well in power and steam service for 2500 class and higher valves at temperatures to 1300ºF (704ºC).

Application Method:

Spray and Fuse



Typical Chemistry:

Boron	3%
Carbon	1%
Chromium	15%
Nickel	Balance
Silicon	4%
Tungsten	17%

Typical Mechanical Properties:

Hardness	> 59 HRC minimum
Finished Thickness	0.009” to 0.023”
Porosity	2% maximum
Useful Temperature	up to 1300ºF (704ºC)
Bond Strength	> 40,000 psi