

Description

HVOF process (high velocity oxygen fuel) uses a high pressure internal combustion system. This technology produces a miniature rocket engine utilizing fuel and oxygen to produce a supersonic gas in excess of and 2800 C° and velocities of 2000 m/sec. The process uses extreme velocities to impregnate a target substrate with tungsten carbide. The process exhibits very high bond strengths and virtually no porosity. HVOF is a high heat process and great care must be taken not to distort thin materials.

While it is necessary to transfer sufficient velocity to the particles to insure high coating density and bond strength, only enough thermal energy is absorbed by the powder particle to soften the metallic binder and ensure inner-particle adhesion upon impact. The result is a coating with lower residual stress, higher bond strength, reduced oxide content and very high density.

Benefits

- Increase Tool Life
- Extreme Hardness
- High Density
- Low Porosity
- Excellent Heat Resistance

Common Alloys:

- Tungsten Carbide Nickel
- Tungsten Carbide Cobalt
- Chrome Carbide

Applications:

- Wear Plates
- Fans Blades
- Thermal Barrier
- Turbine Vanes
- Chrome Replacement
- Gate Valves
- Rolls
- Shafts

