

D I A  P A C

SUSTAINABLE WEAR SOLUTIONS

## WEAR RESISTANT SURFACE COATINGS

### MATERIALS

- CEMENTED TUNGSTEN CARBIDE PELLETS
- MONO TUNGSTEN CARBIDE
- CAST TUNGSTEN CARBIDE
- SPHERICAL CAST TUNGSTEN CARBIDE
- CRUSHED CEMENTED TUNGSTEN CARBIDE
- CARBIDE POWDERS FOR THERMAL SPRAY
- COMPOSITE RODS
- TUNGSTEN CARBIDE STEEL TUBE RODS
- TUNGSTEN CARBIDE NICKEL ALLOY RODS
- NICKEL ALLOY POWDERS

### PROCESSES

- OXY-ACETYLENE WELDING AND BRAZING
- PLASMA TRANSFERRED ARC (PTA)
- FLAME SPRAY
- LASER CLADDING
- HIGH VELOCITY OXY – FUEL (HVOF)
- HARDBANDING
- CASTING
- WELDING

### APPLICATIONS

- DOWN HOLE TOOLS
- PLUNGERS
- SHAFTS
- AGRICULTURAL / MINING EQUIPMENT
- VALVES
- TURBINE BLADES
- TOOL JOINTS
- EXTRUDER BARRELS & SCREWS

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CERTIFICATE NUMBER  
6847



### Proven Performance

DiaPac™ is an internationally recognized leader in high performance products that include tungsten carbide powders, wear resistant surface coatings and cemented carbides for use in oil & gas production, mining, construction and manufacturing operations.

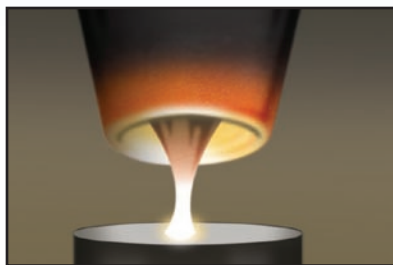
## Wear Resistant Surface Coating Processes



### Oxy-Acetylene Welding and Brazing

**Products Offered:** Tungsten Carbide Based Composite Rods, Steel Tube Rods, Nickel Alloy Rods

Applications: Down Hole Tools, Plungers, Shafts, Agricultural / Mining Equipment



### Plasma Transferred Arc (PTA), Flame Spray, Laser

**Products Offered:** Cast Tungsten Carbide, Mono Tungsten Carbide, Cemented Tungsten Carbide / Cobalt Pellets, Crushed Cemented Tungsten Carbide / Cobalt, Spherical Cast Tungsten Carbide

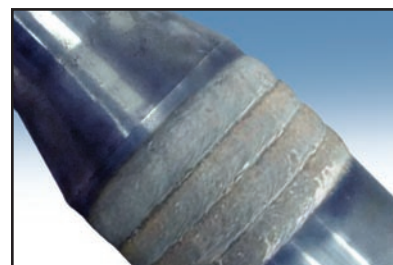
Applications: Down Hole Tools, Valves, Plungers, Shafts, Agricultural / Mining Equipment



### High Velocity Oxy – Fuel (HVOF)

**Products Offered:** WC / Co, WC / Co / Cr, WC / Ni  
Customer Specific Blends and Requests Available

Applications: Down Hole Tools, Valves, Turbine Blades

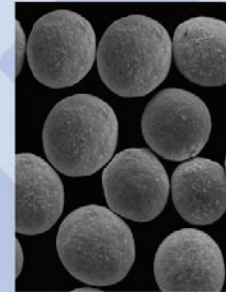


### Hardbanding, Casting, Welding

**Products Offered:** Cast Tungsten Carbide, Mono Tungsten Carbide, Cemented Tungsten Carbide / Cobalt Pellets, Crushed Cemented Tungsten Carbide / Cobalt, Spherical Cast Tungsten Carbide

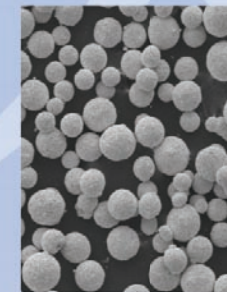
Applications: Tool Joints, Extruder Barrels and Screws, Industrial & Agricultural Wear Parts

## Wear Resistant Surface Coating Materials



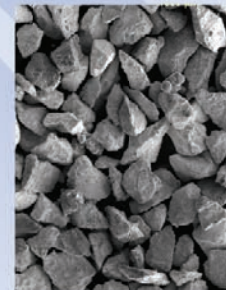
### • Cemented Carbide Pellets

- Cobalt Content 5 – 7%
- Available in Sizes 10 – 60 U.S. Mesh
- Spheroidal Morphology



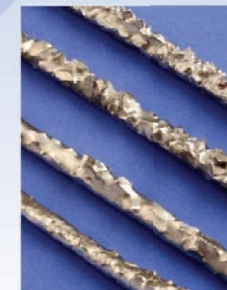
### • Carbide Powders for Thermal Spray

- WC / Co, WC / Co / Cr, WC / Ni
- Available in Sizes 140/325 U.S. Mesh, 45/10µ



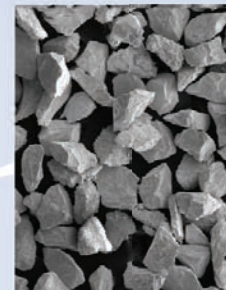
### • Mono Tungsten Carbide

- Carbon Content 6.0 – 6.2%
- Available in Sizes 40 U.S. Mesh and Down



### • Composite Rods

- Crushed Cemented Carbide in a Cu / Ni / Zn Alloy
- Available in Carbide Sizes 3 U.S. Mesh and Down



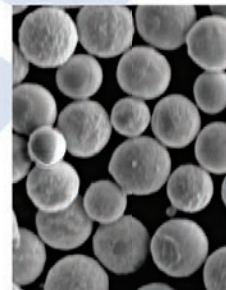
### • Cast Tungsten Carbide

- WC / W<sub>2</sub>C Carbon Content 3.7 – 4.2%
- Available in Sizes 10 U.S. Mesh and Down



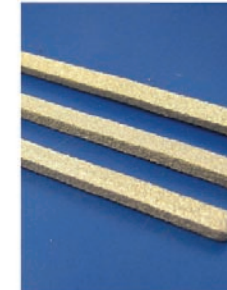
### • Tungsten Carbide Steel Tube Rods

- Blends of Tungsten Carbide Particles in a Steel Tube Rod.
- Standard Diameter 1/8" and 3/16"



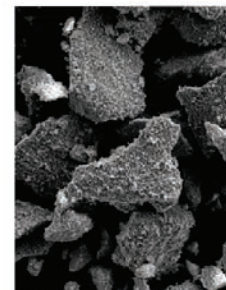
### • Spherical Cast Tungsten Carbide

- WC / W<sub>2</sub>C Carbon Content 3.7 – 4.2%
- Available in Sizes 40 U.S. Mesh and Down



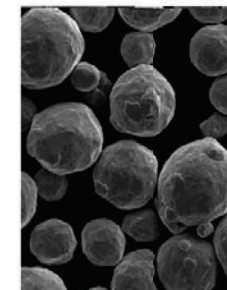
### • Tungsten Carbide Nickel Alloy Rods

- Tungsten Carbide Particles in a Nickel Alloy Matrix
- Available in Carbide Sizes 10 U.S. Mesh and Down



### • Crushed Cemented Carbide

- WC / Co with 6 - 9.5% Cobalt
- Available in Sizes 3 U.S. Mesh and Down



### • Nickel Alloy Powders

- Ni / Si / Cr / B Based Alloys Suitable for Blending with Tungsten Carbide Powders