



Thermal Spray Coating Processes

Ultra High Velocity Coatings (UHV 8000): Purtech UHV Carbide and Alloy coatings are applied at velocities of 6500-8500 FPS, producing the most dense, well bonded thermal spray coatings available. Carbide coatings closely resemble solid materials in hardness and resistance to wear. Purtech is uniquely capable of applying these coatings uniformly to internal diameters as small as 15" for a length of 20 feet. The best coatings are provided on O.D.'s, irregular and flat surfaces, and I.D.'s down to 15".

High Velocity Oxy Fuel Coatings (Series 'D'): Purtech Series 'D' coatings are produced utilizing HVOF thermal spray technology. Carbide and metal coatings exhibit very high bond strengths and negligible porosity. Through the use of a variety of process equipment including special miniature systems, Purtech can apply these coatings to O.D.'s, irregular and flat surfaces, and I.D.'s as small as 6".

Plasma Flame Spray Coatings: Harnessing the heat of the sun, Purtech plasma flame sprayed coatings include most metal, oxide ceramic, and carbide materials. Unlike flame technologies which are limited by flame temperature, our plasma systems are capable of producing gas temperatures of up to 30,000 degrees F making this technology the process of choice for low porosity high temperature ceramics. Purtech can apply these coatings to O.D.'s, irregular and flat surfaces, and I.D.'s as small as 3".

Twin Wire Arc: Purtech twin wire arc coating systems offer high temperature melting without a flame. This provides a superior method for producing a heavy coating build up without high substrate heating. Designed specifically for applying conductive metal and cermet coatings, wire arc is an excellent low cost alternate for high chrome alloys and cermet wear coatings for non critical applications, as well as, part restoration. The best coatings are provided on O.D.'s, irregular and flat surfaces, and I.D.'s to 8".

Low Velocity Combustion Gas Coatings: Often referred to as flame sprayed coatings, this process is ideal for applying fusible alloy hardsurfacing materials. Utilizing an oxygen fuel gas low velocity flame, coatings of metals, ceramics and carbide materials can be successfully applied. Although alternate methods will provide higher density coatings, coatings produced by this process are often less expensive and may be adequate, if not desirable. Fused alloy coatings are metallurgically bonded and therefore offer the highest bond strength of any coating process. Coatings produced by this process can be applied to O.D.'s, irregular and flat surfaces, and I.D.'s as small as 5".

Wire Metallizing: As the name would indicate, these coatings are limited to materials which can be drawn into a wire. This process is generally employed as a means for restoring part dimension although excellent aluminum and zinc coatings can be produced for preventing atmospheric corrosion. This process is, for all practical purposes, limited to O.D.'s, irregular and flat surfaces.

Machining Capabilities:

Superfinishing: In order to achieve the highest quality finishes possible, Purtech utilizes superfinishing technology. In house, we are capable of finishing metal and carbide parts to a 1 RMS. Finishing capabilities on roll diameters up to 18" diameter x 120" OAL.

Machining: 10 Ft x 24" diameter

Grinding: 20 Ft x 36" diameter