

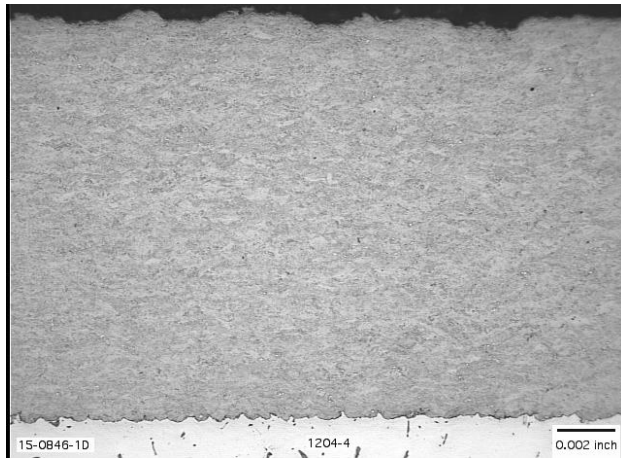


Specialized HVAF Thermal Spray  
Equipment

2016

# What is Kermetico HVAF?

High Velocity Air Fuel (HVAF) – a thermal spray process characterized by a low combustion temperature ( $<2,010^{\circ}\text{C}$ ), high particle velocity (800-1,000+ m/s), resulting in low-oxidized, ductile, non-porous, high-bond carbide and metal coatings with high deposition efficiency.

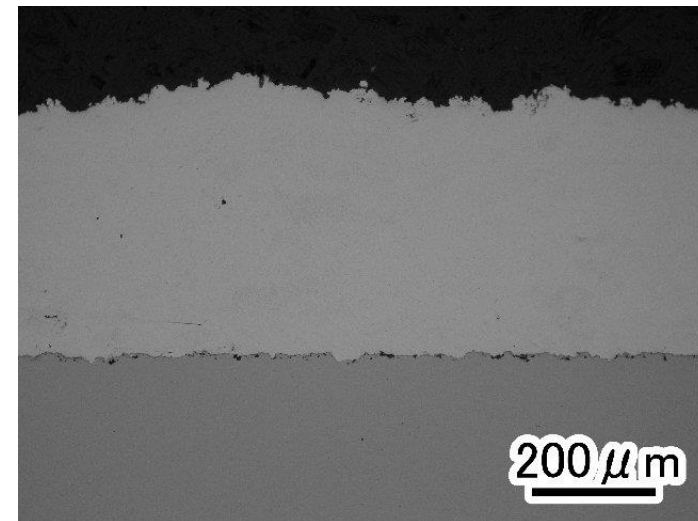


Our systems spray impermeable bulk-like Ag, Al, Cu, Sn, Ti, Zn and alloys.

# Kermetico HVAF SL

Spray system to deposit low melting point metals and alloys:

- Protection against feedstock oxidation
- No material evaporation in process
- No nozzle clogging
- Uniform, dense, high-bond aluminum, tin, copper and zinc coatings
- Deposition efficiency 70% and more
- High spray rate:
  - 6 kg/hour (13 lbs./hour) for Al coating
  - 10 kg/hour (22 lbs./hour) for Cu coating
  - 10 kg/hour (22 lbs./hour) for Sn coating



# Kermetico HVAF SP

**Kermetico SP** – a specialized system to deposit gold or silver coatings with the highest deposit efficiency:

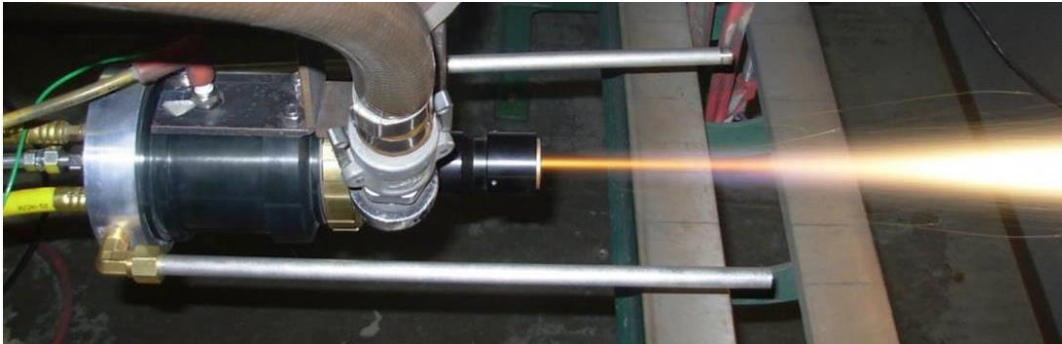
- Highly technologically efficient process
- Precise powder usage measurement
- No material evaporation in spray-process
- High-bond, non-oxidized, highly uniform coatings
- Deposition efficiency up to 85%
- Variable powder sizes



# Kermetico HVAF STi

A Kermetico STi gun is designed to deposit titanium and its alloys

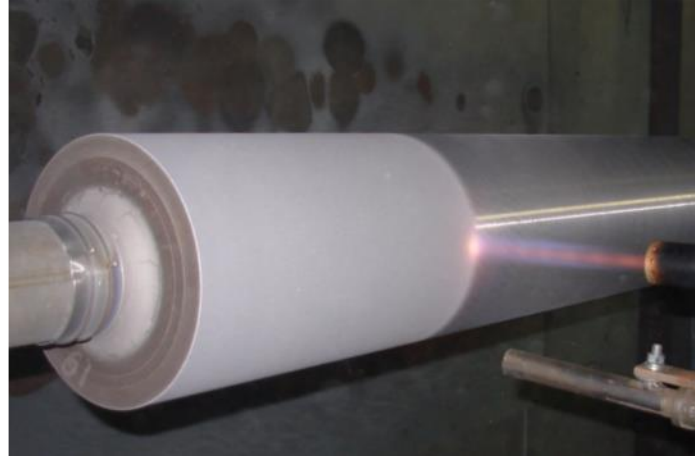
- High-velocity titanium spraying in an inert gas shroud
- Low level of oxidation, silver-like coating appearance
- Dense high-bond coating
- For corrosion resistant coatings and for material build-up



# Made for Excellence

Our systems are designed by sprayers for sprayers:

- ✓ User-friendly controls, several different guns with same system → easy to learn
- ✓ Fine-tuned to spray particular materials
- ✓ High technological efficiency → it is really hard to make a poor coating
- ✓ Axial powder feed + simple design → long-lasting, easy to change spare parts
- ✓ No fumes from the sprayed powder → less health hazards



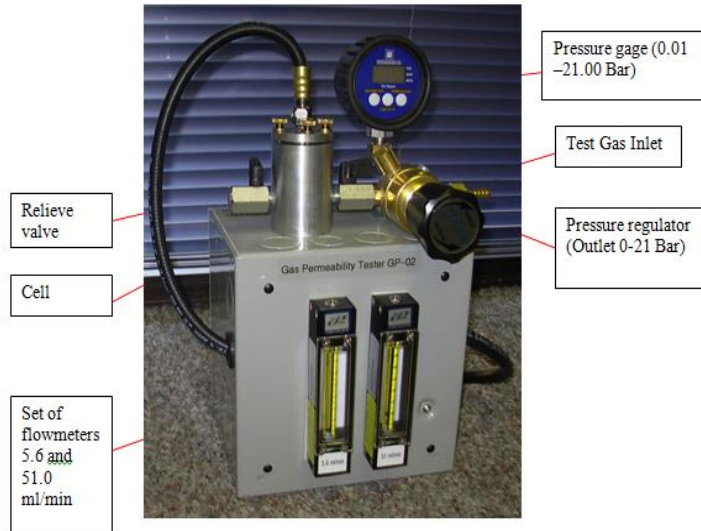
**Blast & Spray with One Gun:  
10x Faster, One Setup**

# HVAF Blasting Grit Feeder



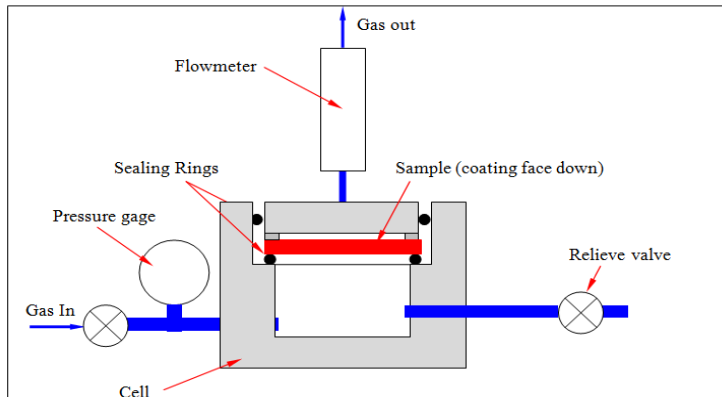
- Grit particle velocity - 1,000 m/s, temperature - over 1,200°C (2,200°F)
- Compared to conventional grit blasting with compressed air:
  - ✓ Blasting rate is 5+ fold faster
  - ✓ Grit consumption over 100-fold less
- The same gun setup is used for blasting and spraying that results in further reductions of time for applying the thermal spray coating.
- An efficient tool for hard coating stripping.
  
- Grit: Aluminum Oxide, Silicone Carbide
- Grit particle size: #220 to #24 mesh
- Grit consumption: 1-8 kg/hour
- Blasting rate: 5-20 m<sup>2</sup>/hour

# Instant Coating Quality Test



## Gas Permeability Tester:

- The easiest way to evaluate coating porosity level
- 1,000-times more sensitive than metallography
- Nitrogen, coating sample, 5 minutes → numerical result





Each of our developers has more than 30 years of coating experience. We have been designing and producing our equipment and technology in California, USA, since 2006.

More than 60 systems are at work worldwide, 20 of them are in Universities and Labs; there are numerous academic papers published showing HVOF superiority over HVOF. We and our partners have sprayed thousands customer parts with no rejection.

**Visit our job shop and watch the process:**

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+1 707-745-3862

**Our distributors:**

- China: [Oriental Renpro](#)
- CIS (Russia): [Plackart](#)
- EU(Italy): [Surface Coating Solutions](#)
- EU (Poland): [TMC Poland](#)
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- Japan: [New Metals and Chemicals Co](#)
- South-East Asia: [Bexxon Global](#)

