



Ankur Modi (Executive Director)

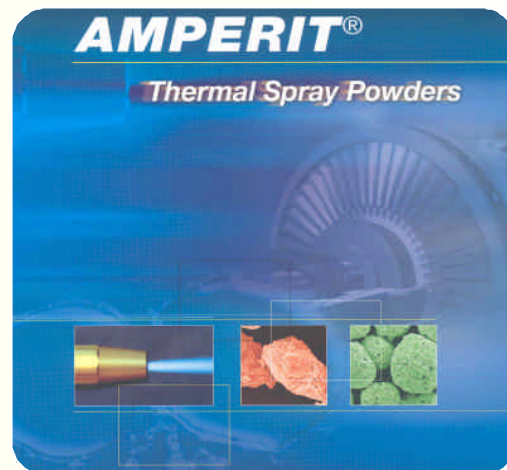
From our Director's Desk

I take the pleasure to greet the people from the surface protecting community for their prominent service to the surface technology. There are number of surface treatment or engineering processes. Of which thermal spray has become the most widely used and rapid developing surface treatment process due to its capability of tailor made material coating.

I wish all thermal spray service industries to take the fruits of technological innovations and provide a safe working environment which reaps in long run.

Dear Readers,

H.C.Starck GmbH, an international group & world leader in offering unique expertise high-tech materials. H.C.Starck is now collaborated with MEC to offer the best choice for innovative high-value products. Refractory metals, ceramics, and electronic chemicals from the core of the wide-ranging products and services that secure the importance of thermalsprayroleineachoftoday'sfastestgrowingindustries.



With fourteen main production sites in America, Asia and Europe and branch locations in more than 30 countries, H.C.Starck today is one of the major manufacturer of Thermal Spray Powders (sold in trade name of AMPRIT & AMPERITWELD) and other consumables for thermal spray processes.

In the engineering ceramics section, H.C.Starck has a wide assortment of ceramic intermediates. The H.C.Starck Ceramics R&D laboratory also conducts material tests and process developments for customers and achieved approvals from GE, Rolls Royce, Pratt & Whitney, Volvo, MTU etc. for coatings on various precise components.

H.C.Starck of Germany has appointed MEC as their INDIAN PARTNER to market full range of thermal spray and welding powders. MEC considers that entry of H.C.Starck powders business will boost up its marketing range for consumables of thermal spray equipments particularly HVOF & Plasma. This collaboration will make it possible to offer more engineered and optimised solutions to our valued customers.

Regards
Editor

H.C. Starck 
Engineered Material Solutions
www.hcstarck.com

Another new partner to complete the AUTOMATION



AS INDIVIDUAL COMPANY, WE ARE STRONG, WITH A NEW TEAM PARTNER, WE ARE STRONGER.

We believe in working with our customers, to find the best solutions for them. Our inhouse developments & technical partnership with technology masters, allow us to identify the problem and to find the perfect solution, within the wide range of products & technologies.

In April, 2007, a new chapter in the long history of MEC started when MEC became system partner of FST. This will change the scenario of Indian Thermal Spray Industry as well as thinking of Indian Users who are presently using JUST thermal spray system. Now this collaboration will provide them a new technology called Fully Automatic & Integrated Thermal Spray System by which all thermal spray processes (HVOF, Plasma, Combustion, Arc) can be controlled by master controller or sub controllers.

Together with our new System Partner FST, we can offer our customers a very powerful range of products and services.



MP-100

MULTI PROCESS THERMAL SPRAY CENTER

MASS FLOW CONTROLLED HVOF / PLASMA SYSTEM

- ✘ HV-50 MASS FLOW CONTROLLED HVOF SYSTEM can operate every commercial HVOF gun including JP-5000, Diamondjet, JetKote.
- ✘ AP-50 MASS FLOW CONTROLLED PLASMA SYSTEM can operate every commercial Plasma gun including F4, F1, 3/7/9MB, 3MB-II, SG-100.
- ✘ Standalone single process thermal spray system.
- ✘ Modular design, closed-loop, mass flow, touch screen controlled controller with (high accuracy & consistency (2) easy to operate, (3) improved safety, (4) superior coating quality.
- ✘ Operator's screen provides continuous display of critical process parameters in two forms, digitally and as bargraph.
- ✘ Integration with auxiliary equipment such as powder feeder, dust collector etc. (5xi/o).

- ✘ MP-100 is FST's top of the line equipment. The MP-100 is capable of controlling all key Thermal Spray Process and Guns.
- ✘ Modular and Multi-Purpose concept ensure tailor-made and best practical solutions for all customer requirements.
- ✘ MP-100 offers maximum flexibility with significant technical and economical benefits.
- ✘ Full integration with auxiliary equipment such as; Powder Feeders, Robots, Indexing Turntables, Dust Collectors, Cooler etc.
- ✘ With Robot as master, all process functions (plasma start, Powder Feeder start, Dust Collector functions, recipe selection) are controlled by the robot with MP-100 as slave.

AP-50 PLASMA SYSTEM



HV-50 HVOF SYSTEM



Wear Resistance Coatings

Thermal spray coatings are often used to protect against abrasion, erosion, adhesive wear, fretting, galling, and cavitation.

Wear Resistance Solutions

Abrasion and erosion are regularly addressed using tungsten carbide coatings along with a series of superalloys. These coatings outwear hard chrome plating by several orders of magnitude. Ceramic coatings may also be used to combat abrasion or erosion, specially in combined abrasive and corrosive environments.



Steam Turbine rotors can now be HVOF coated in situ and a good Chromium-Carbide-Nickel Chromium coating can be applied for high temp. erosion and hot gas corrosion resistance



Hard Surfacing of Engine Block

Adhesive wear can be reduced by carefully considering the bearing match between the two materials that will contact in use, and selecting an appropriate alloy for one of them. A superalloy called triballoy is one that excels in this area.

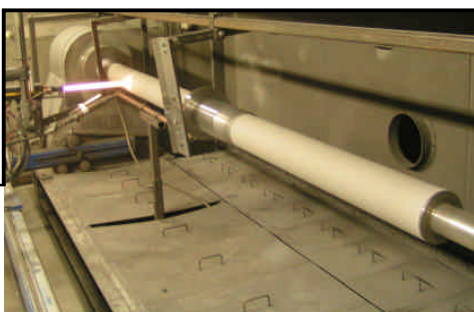


HVOF Coating for hard surface

Fretting can be combated with coatings of copper nickel indium or bronze.

Galling again requires analysis of the bearing match between the two materials that may gall. Given our several hundreds of available materials, it's fairly easy to prescribe an appropriate material.

Cavitation can be addressed by using variety of stainless steels, and several superalloys.



Tungsten carbide coating by HP-HVOF to create an even wear surface texture to drive the paper



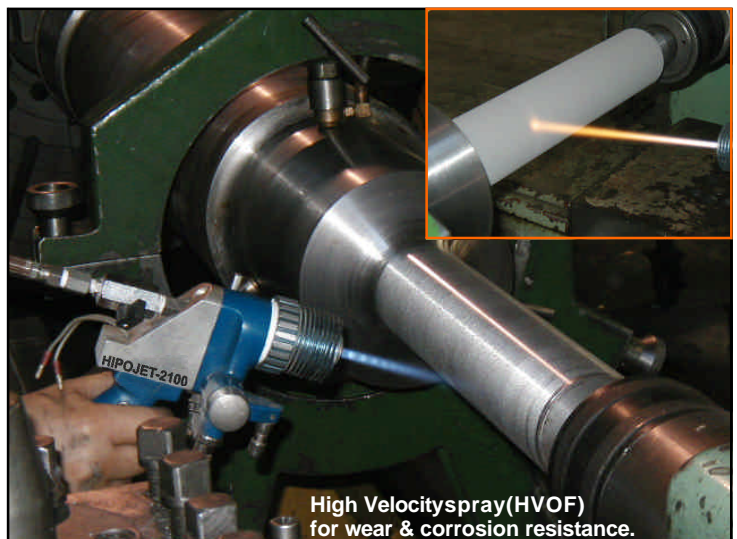
Hard Surface Coating on Pelton Wheel by High Velocity Liquid Fuel Gun

Some examples of coatings that resist wear are

- **Tungsten carbide based material used on pump impellers in applications with extremely abrasive/erosive conditions such as slurry pumps.**
- **Molybdenum coatings on shifter forks that last for many years.**
- **Chrome oxide used on print cylinder that run against miles of very abrasive paper**

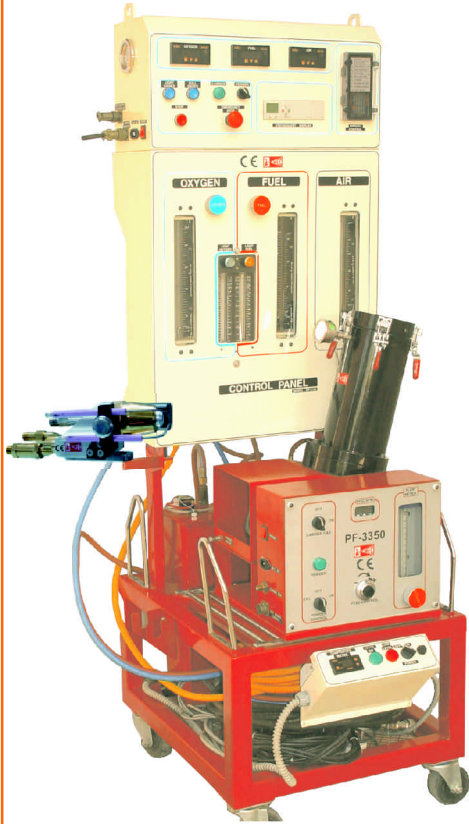


Molybdenum Coating on Shifter Forks by High Velocity Wire Spray Gun



High Velocity spray (HVOF) for wear & corrosion resistance.

Next generation system HIPOJET-2700



MEC introduces the HIPOJET-2700 HVOF System, the next generation in HVOF technology that builds on the proven performance of our popular HIPOJET-2100. This ultra-high performance system features advanced controls, exceptional throughput, and unmatched coating quality.

Incorporating a variety of desirable new features, the HIPOJET-2700 is even more user-friendly. The new HIPOJET-2700 system features the Model AP-2100 Console that is designed for maximum safety, simple operation and minimal downtime.

FEATURES :

- ✍ Ideal for medium to large shops with high-volume surfacing needs and increased quality control requirement.
- ✍ Fully-automatic operation for highly accurate and repeatable HVOF coatings.
- ✍ PLC based controller with Rotameter
- ✍ Compatible with both Air Cooled Hipojet-2700 Gun & high performance Water Cooled (Hybrid) Hipojet-2700 Gun.
- ✍ Built-in monitoring and alarm system with automatic shutdown for safe operation.
- ✍ Interfaces with workpiece handling equipment, gun manipulators, exhaust system and accessories.

Successful Participation in ITSC 2007



MEC participated successfully in world's foremost international conference and exposition for thermal spray technologists, researchers, manufacturers and suppliers which was held in May 14-16, 2007 at the Beijing International Convention Center in Beijing, China.



ITSC, a platform where international delegation of materials and design engineers, research scientists, manufacturers, suppliers and users gathered to exchange ideas on meeting the challenges and opportunities of the year to come.



MEC has got very good response in whole exhibition for their Products & services. We would like to thank all of the visitors who visited our Booth.



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