

In The News

Publications and Information



International Thermal Spray Association

Spraytime for ITSA

Spraytime is the news sheet of The International Thermal Spray Association (ITSA). It contains conference details, product releases, and information for the general membership, according to Editor Daniel W. Parker.

Circle No. 4 on reader service card

Thermal Spray Technology Homestudy Course

ASM International has published a six-lesson course that provides an understanding of thermal spray processing science, as well as applications and practice. The course is directed toward technologists and technicians and those who desire to learn how thermal spray processing interacts with the materials it is designed to protect.

Circle No. 5 on reader service card

Video Course on Thermal Spray

Also from ASM International, this course has been modeled on the *Thermal Spray Technology Homestudy Course* and is due for release in March 1993. Areas covered include surface science, equipment and theory, processing and design, materials, applications, and testing and characterization. Watch for a review of this course in *JTST* in the future.

Circle No. 6 on reader service card

Course on Thermal Spray Techniques and Technologies

The Hobart Institute of Welding Technology is offering a course on the principles and practices of thermal spray. The course mixes theory and laboratory practice with coating evaluation, testing, and applications.

Circle No. 7 on reader service card

ITSC'92 Proceedings Available

ASM International has published the *Proceedings of the 13th International Thermal Spray Conference*, which was held in Orlando, Florida, from 28 May to 5 June. The proceedings consists of 161 papers in 1044 pages and is extensively indexed.

ITSC Statistics

The 13th International Thermal Spraying Conference was a resounding success; from the viewpoints of both the technical information transfer and the numbers of participants. The workshops and courses were also well attended. The statistics for the conference are as follows:

Total conference attendees	605
Number of exhibitors	70
Basics of Thermal Spray	57
Advances in Plasma Spraying:	
Science and Applications	19
Metallography of Plasma Sprayed Coatings	33

Circle No. 8 on reader service card

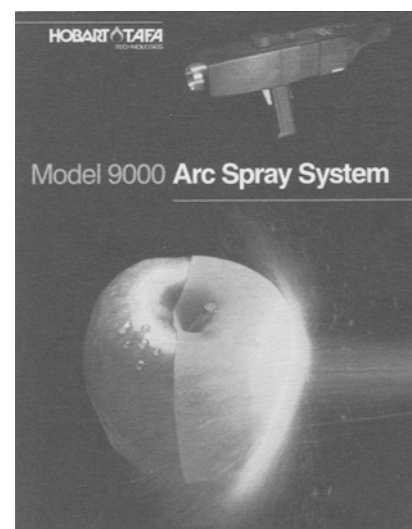
Yttria-Zirconia Powders for TBC's

Metallurgical Technologies Inc. have prepared a 5-page pamphlet entitled "Straight Talk about Thermal Barrier Yttria Zirconia Powders." The paper summarizes the available powders and their physical characteristics, including powder manufacturing methods, color differences, crystallographic characteristics, particle shapes, particle density, apparent density, and Hall flow.

Circle No. 9 on reader service card

New Electric Arc Spray System

A comprehensive 12-page brochure that describes the new 9000 Arc Spray System developed by Hobart Tafa Technologies, Inc., Concord, New Hampshire, is now available on request from the company. Included are data on the completely new Model 9000 arc spray gun, now available after a four-year engineering, design, and field testing program, as well as descriptions/specifications of power and control consoles, articulated arm robots, the HAWCS II software-governed controller



Hobart Tafa Technologies

for complex automated systems, spray cell, and dust collector designs.

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EPRI Information on Specifying High-Temperature Coatings for Combustion Turbines

The Electric Power Research Institute (EPRI) has introduced a guidebook and companion software package to assist personnel in preparing appropriate coating specifications for blades and vanes. *Guidebook and Software for Specifying High-Temperature Coatings for Combustion*

Turbines (GS-7334-L) introduces plant maintenance personnel to the technical aspects of coatings. The guidebook and software are not written for coating experts, but for plant maintenance personnel who need guidelines for specific coating choices.

The guidebook package also includes an Advisor on Blade Coatings (ABC), a knowledge-based system that can be used with IBM-compatible PCs to recommend protective coatings for specific turbines. Both guidebook and software were developed under RP2465-2 by Southwest Research Institute and subcontractors PSG Corp. and Solar Turbines, Inc.

EPRI member utilities can order the guidebook and software package from the Electric Power Software Center, (214) 655-8883. Organizations not eligible for EPRI membership should contact the EPRI Licensing Department at (415) 855-2866. Copyright 1991. Electric Power Research Institute. EPRI RN.GS.39.1.91. *Guidebook and Software for Specifying High-Temperature Coatings for Combustion Turbines*. Reprinted with permission.

Circle No. 11 on reader service card

Equipment and Materials

Cooling on the Move

Nippondenso has developed a portable spot cooler. Marketed under the name "MovinCool," 10,000 and 39,000 Btu/hr (11 to 41 MJ/hr) portable refrigeration units are available. The cooling stream is directed by flexible extension ducts, and the equipment is suitable for cooling equipment operators, the equipment itself, or the process.

Circle No. 12 on reader service card

Metco Introduces Spraying Plastics

A new range of low-temperature plastics have been introduced by Metco. The extensive color range includes blue, black, white, gray, red, yellow, and green. A hardware modification converts the 6P-II combustion system so that polymers can be sprayed. Applications include environmental corrosion coatings, architectural structures, exterior industrial coatings, marine and off-shore structures, pipe coatings, and decorative surface applications.

Circle No. 13 on reader service card

Pin-on-Disk Wear Test System

Implant Sciences Corp. offers an integrated wear measurement device marketed under the name of "ISC-200PC Tribometer System." The measurements include sliding wear and friction for samples up to 7.6 cm (3 in.) in diameter. Test variables are sliding speed, Hertzian applied pressure, disk material, pin material, and lubrication conditions. Control over the testing atmosphere and temperature are options.

Circle No. 14 on reader service card

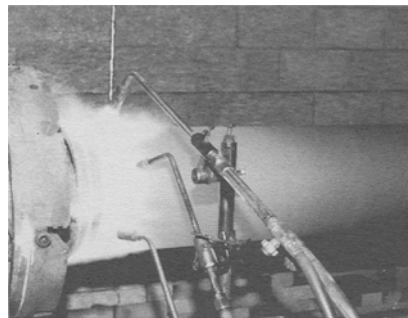
Automatic Spray Guns Offer Big Savings

The new A25 Airspray and ATX Airmix® guns from Kremlin Inc., Addison, Illinois, provide extreme versatility and quick gun changeover because of their unique modular design. Changeover is easy with the A25 and ATX because detachment of the fluid and air lines is not required. Air and fluid hook-ups attach to the gun base, not the gun. A gun can be changed on-line quickly by simply unscrewing four mounting bolts and mounting a new gun to the base. Also, gun position is not affected by the changeover, because the gun base remains stationary, which maintains positioning. In turn, time needed to re-adjust these guns, after re-connection, is eliminated.

Circle No. 15 on reader service card

Wall Colmonoy Introduces Materials for Corrosive Applications

A new nickel-base thermal spray powder, containing chromium and molybdenum



Wall Colmonoy

for high corrosion and abrasion resistance, is now available. Colmonoy 69sc increases the service life of components used in highly corrosive environments, including shafts, sleeves, valve seats, bed knives, and mixer blades used in the petrochemical industries. A large plastic range enables Colmonoy 69sc to resist running and sagging when fused to large components, such as this 28-cm (11-in.) diameter tail shaft used in the marine industry.

Circle No. 16 on reader service card

New System from Browning Thermal Systems

The high-velocity air fuel system, known as the "Aerospray HVAF," does not use oxygen during operation. Oxygen is only used for the initial 10-sec ignition phase of torch startup. Compressed air is used as the fuel gas instead of oxygen. The compressed air cools the torch prior to mixing in the combustion chamber and then burning. This regenerative cooling obviates the usual water cooling and allows a no O-ring design. Aerospray HVAF torches burn fuel oils or propane, which is supplied via an on-board fuel pump.

Circle No. 17 on reader service card

Automated Wear-Resistant Coating from Eutectic Corp.

Eutectic Corp. has announced the formation of a PTA Automation Group. They will focus on solutions to specific overlay problems where robotic plasma transferred-arc welding is appropriate. The group will use the Eutronic GAP® PTA technology and RoboTec® systems to improve coating productivity and reduce use of materials. Projects recently completed

by the Eutectic® PTA Automation Group include a screw tracing machine and a system for rebuilding cylinder head valve seats.

Circle No. 18 on reader service card

Low-Flow Powder Feeder from Eutectic Corp.

The TecFlo® Model 5300 LF powder feeder is now available from Eutectic Corp. It is a gas-operated, precision metering and transport device specifically developed to accurately and reliably feed selected powdered feedstock for laser weld cladding, transferred-arc plasma welding systems or selected thermal spray systems.

Fluidic in design, the 5300 LF allows feed rates of less than 2 g/min (0.07 oz/min) at total gas flows of less than 57 l/hr (2 ft³/hr) while maintaining a high degree of repeatability and reproducibility. Field trials have demonstrated that the system also has



Eutectic Corporation

the capability to deliver up to 4.1 kg/h (9 lb/hr) of selected metal alloys at similarly low total gas flows. The fluid medium is inert gas, usually argon, although it will operate with other gases as well.

The cycle response time during ramp up is 1.5 sec. Electrical controls are provided for system on/off and powder feed on/off.

A remote powder feed on/off pendant is supplied, but the unit is also easily integrated into a user-provided electronic weld or thermal spray control system.

Circle No. 19 on reader service card

Industrial Panorama

Investor Group Acquires Browning Engineering

Browning Engineering has been acquired by a group of investors and renamed Browning Thermal Systems, Inc. The company manufactures the Aerospray® HVAF thermal spray system.

Robert Lalumiere, a long-time associate and employee of company founder James Browning, has been named General Manager of the firm. Lalumiere says the eight

investors who joined to acquire Browning Thermal Systems—all Vermont or New Hampshire businessmen—are committed to strengthening the position of the company in the thermal spray industry. "We have new capital and a fresh commitment to coupling our industry leading technology with improved product reliability and customer service," says Lalumiere.

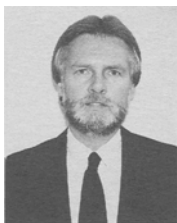
James Browning is employed by Browning Thermal Systems and is developing additional HVAF thermal spray technol-

ogy products. Browning's 40-plus years in combustion-related technology have yielded a rich history of innovations, inventions, and business enterprises. His thermal spray industry credits include invention of the Jet Kote®, J-Gun®, and Plazjet®.

Do you have literature or news you'd like highlighted in this feature? Send your contributions to the Editor.

Notables

Roger Kaufold Joins H.C. Starck



Roger Kaufold has recently joined H.C. Starck, Inc. as a Technical Sales Engineer for Amperit Thermal Spray Powders in the United States. He received a degree in Materials Engineering from

Columbia University and two patents for thermal spray equipment and applications. He also has published numerous papers.

Miller Thermal, Inc. Announces Prize Winners

The winners of the Miller Thermal, Inc. lottery for free powder were drawn during the recent 13th International Thermal Spray Conference in Orlando. The drawing was in appreciation of customers and others visiting the Miller Thermal booth.

Congratulations to the three winners: Zhongjian Chen, The Thermal Spray Laboratory, State University of New York at Stony Brook, Antonio Jose Goncalves, Centro Technologico da Ceramica E Do Vidro, Portugal, and Guy Pontifex, International Sunatco Industries Ltd., Canada.

McPherson Wins Award in Australia

Professor Reg McPherson recently was awarded the Silver Medal Award by The Institute of Metals and Materials Australasia (IMMA). McPherson, formerly of Monash University and now at CSIRO in Melbourne, Australia, was acknowledged for his outstanding contributions to the advances of materials engineering in the area of ceramics. Reg is known throughout the international thermally spraying community for his seminal papers in this area.