

SPRAYTIME®

Published by *The International Thermal Spray Association*
Volume 16, Number 4 Fourth Quarter 2009

Thermal Spray Pavilion, Conference and Tutorial a Success

Over 1400 leads were generated by the twenty companies exhibiting in the Thermal Spray Pavilion at the FABTECH International and AWS Welding Show in Chicago.

Over 150 attendees registered for the free "What Is Thermal Spray?" educational tutorial presented by Jim Weber of Xiom Corporation and David Wright of Accuwright Industries.

The first FABTECH thermal spray conference - *New Developments in Thermal Spray Coatings, Processes and Applications* - attracted attendees new to thermal spray as well as knowledgeable individuals from the thermal spray community.

Within the AWS Professional Program, Fred van Rodijnen of Sulzer Metco OSU GmbH gave a presentation on "Thermal Sprayed Aluminum Against Corrosion Under Insulation".

This is the third successful year that the International Thermal Spray Association has collaborated with The American Welding Society and The Society of Manufacturing Engineers to provide thermal spray educational forums for attendees of the FABTECH show.

The 2009 Fabtech International and AWS Welding Show, including Metalform drew some 25,000 visitors through the doors of McCormick Place. The show covered nearly 400,000 square feet of exhibit space and featured a record-setting 1,083 exhibitors.

Despite an economic downturn, there was a positive buzz

on the show floor. Buyers packed the exhibit halls to see what's new, make connections, plan equipment purchases, and close deals. Those who turned out were serious about doing business and exhibitors were pleased with the quality

of attendees who visited their booths. Overall, the mood on the floor was upbeat and optimistic, an affirmation that the manufacturing industry and FABTECH are as viable and important as ever.

Audience highlights include: 46% were first time attendees; 25% had job titles of corporate executive/top-level management or job

shop owner; 12% of attendees came from outside the U.S.; 79% of visitors are involved in some way in their company's purchasing plans; 40% indicated budgets of \$200,000 or more to spend on products and services

Plan now to be part of Atlanta 2010. In 2010, the event heads back to Atlanta, November 2-4, and features a new

Finishing Pavilion sponsored by the Chemical Coaters Association International (CCAI). Exhibit space is going fast! If you have not booked your space already, be sure to contact Welding and Thermal Spray Exhibitor representative Joe Krall of the American Welding

Society via phone (800) 443-9353 ext. 297, email jkrall@aws.org



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Published by
International Thermal Spray Association

Mission: To be the flagship thermal spray industry newsletter providing company, event, people, product, research, and membership news of interest to industrial leaders, engineers, researchers, scholars, policy-makers, and the public thermal spray community.

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SPRAYTIME (ISSN 1532-9585) is a quarterly publication of the International Thermal Spray Association.



Printed on Recycled Paper

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INDEX

ADVERTISERS LISTING20

CALENDAR OF EVENTS22

INDUSTRY NEWS

ASM TSS Safety News	10
AWS/ITSA Thermal Spray Pavilion, Conference and Tutorial a Success	1
CTSR Welcomes Chris Jensen	19
Eutectic Announces Opening of New Services Center in Milwaukee	6
Free Thermal Spray Linde / GTS Poster	20
FST and HCST Strengthen Partnership.....	4
Graduate Student Lorena Bejarano Joins TSS Board	19
GRANTA, MPIF Partnership Expands Access to Global Powder Database	8
Inframat Announces Stephen Glancy as Director of Thermal Spray	19
ITSC 2010 ASM TSS International Thermal Spray Conference 2010 Singapore ..	5
Leading Organizations Team Up To Promote Thermal Spray Industry	11
MEC Announces New ARCJET 96-Dual	6
MPIF New Metal Powder Standards.....	10
PLANSEE Direct Sales of Molybdenum Spray Wire	4
Society of Vacuum Coaters 2010 Conference	15
TurboExpo Gas Turbine Technical Congress in Glasgow, Scotland.....	2
Weldmex Mexico	21

APPLICATION NEWS

Professional Coatings Adds Thermal Spraying to Its Coatings Range	12
---	----

INTERNATIONAL THERMAL SPRAY ASSOCIATION

Company Member Listing and Membership Information	16-18
---	-------

TECHNICAL NOTES

Journal of Thermal Spray (ASM TSS) Technology Abstract	14
--	----

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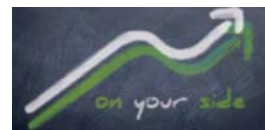
Flame Spray Technologies and H.C. Starck are pleased to announce that they are taking their partnership to the next level in the North American Market. "We have been working together for the past ten years" said Menno Zwetsloot, managing director of FST, "and very closely so (outside the US) in the past five of those years. This cooperation has worked quite well for both companies and we are extremely excited to take it to the next level in North America. Our combined sales team will allow both companies to have more frequent and direct contact with our broad range of customers."



Terry Wilmert, president of Flame Spray Technologies, Inc., headquartered in Grand Rapids, Michigan, states "as a team, we are able to address the complete spectrum of products and services our customers might require, including: powders, wires, tapes, spare parts, equipment, stand alone systems, design, supply and installation of turnkey systems, application and process development, technology transfer, part programming and qualification, system calibration, preventive maintenance and field service of most manufacturers equipment."

In a refreshingly candid assessment, Dr. Hans Keller, vice

president of sales and marketing for Starck's surface technology business, allowed that "when acting separately, our two companies do not have sufficient personnel to adequately cover the large North American market. We admit that, too often, we were slow to respond to customers requests. This is not acceptable; and we are taking steps to resolve the situation. We have increased our sales coverage. We have vested our sales personnel with significantly increased authority to make decisions locally and we have made a commitment at the corporate level to provide responses to all inquiries in 48 hours or less."



Wilmert adds, "Our two companies have expanded from one warehouse in North America to three, including one at our new facility in Grand Rapids. We will work closely with our customers to forecast the correct mix and quantity of materials and spare parts inventory that we need to have on hand to meet their requirements in an expeditious manner."

Menno Zwetsloot makes it clear that this type of partnership is unique in the thermal spray or any other industry, for that matter. One of the primary reasons it is so unique is that it requires genuine effort on the part of the participants to make it work. "We have had our share of differences and bumps in the road," says Zwetsloot, "but we have worked through them and our partnership has emerged incredibly strong. We bring the lessons that we have learned in the international arena and we hope and believe they will benefit our colleagues in North America."

"The key thing for our people and our customers to understand is that whether you are being called on by a direct employee of H. C. Starck or one of FST or one of our independent sales representatives, you are being serviced by both FST and H.C. Starck at the same time."

Please feel free to contact us and let us know how we can serve you better. We look forward to seeing you soon.

For more information, contact Flame Spray Technologies Inc, 616-988-2622, info@fstincusa.com or H.C. Starck Inc, 617-630-5921, ana.mackendrick@hcstarck.com

PLANSEE - Direct Sales of Molybdenum Wire

As of 1 January 2010, PLANSEE Metall GmbH will take over responsibility for supplying customers with high-grade molybdenum spray wire from Sulzer Metco. As far as the customers are concerned, the only change is the point of contact, as Sulzer Metco had always sourced molybdenum spray wire exclusively from PLANSEE.



In the first half of 2009, Sulzer Metco had taken the decision to stop selling molybdenum spray wire in the light of increased competition and the volatility of the raw materials markets.

Michael Androsch, responsible for sales and marketing of molybdenum spray wire at PLANSEE Metall, says:



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PLANSEE High Performance Materials is a worldwide leading manufacturer of products made from refractory metals and metallic composite materials. The owner-managed company stands for more than 85 years of innovation in the field of powder metallurgy and covers the complete production process from metal powders right to the finished product. Materials experts, product developers and local sales contacts guarantee worldwide customer proximity and a high level of advice.

For more information, contact PLANSEE Metall GmbH, Michael Androsch, tel: +43.5672.600.2047, email: michael.androsch@plansee.com, web: www.plansee.com

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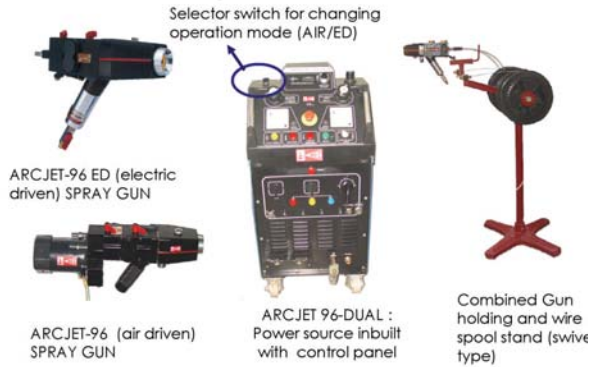
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MEC Announces New ARCJET 96-Dual

Metallizing Equipment Co Pvt Ltd (MEC), a Pioneer of Thermal spray technology is proud to announce their newly developed multi purpose arc spray system ARCJET 96-DUAL.



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- It has air cooled technology (forced air) to keep the air cap, nozzle positioner and spray head cool without spending extra air, thus preventing overheating at higher spray rate (ampere), Close nozzle head assembly with conical air flow ensures high bond and fine spray (patent applied).
- An external interface (digital I/O) is provided for robot control and safety interlocks.

For more information, please contact Girish Mathur, DGM Marketing, M/s Metallizing Equipment co. Pvt ltd, E-101, M.I.A, Phase-II, Basni, Jodhpur-342005, tEL: +91 291 2747601, fax: 2746359

Eutectic Corporation Announces the Opening of a New Services Workshop and Technical Center in Milwaukee, Wisconsin

Eutectic Corporation has expanded its local capabilities with the opening of a new facility in Milwaukee that is home to a services workshop, training laboratory and technical center. This expansion furthers the implementation of the company's strategy of being a complete source of wear prevention and fusion solutions to its customers. The services workshop, which is known by the name CastoLab, utilizes state-of-the-art welding, brazing and thermal spray equipment coupled with proprietary products and applications to provide customers with cost effective repair and wear prevention results. With the technical center also being located in the new facility, the extensive product knowledge and practical skills of Eutectic's technical staff comprised of trained metallurgists and welding engineers further expands the solution based offerings of the CastoLab.

Eutectic is a recognized leader in metal wear and fusion technology resulting from over 100 years of providing field-tested solutions to major companies in a wide range of industries. The new CastoLab is the link that connects these proven solutions to customers dealing with the shortage of skilled technicians along with the increasing trend to out-source maintenance activities. These solutions extend the life of component parts resulting in savings in repair and replacement costs for Eutectic's customers. This is all made possible because CastoLab is a fully resourced workshop staffed by experienced personnel that start by understanding each customer's requirements and then finish the job by applying the proper combination of process, product and equipment. Eutectic customers can benefit from the CastoLab solutions by having work performed at the service center or at their site. This Castolab's primary service market is the Midwest.



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Eutectic has plans to open similar facilities throughout the United States as well as Canada and Mexico.

"Providing the service as well as the technology and consumables for our customers, is simply the next logical step in the growth of our business," said John Kirkwood, President and CEO for Eutectic Corporation.

CastoLab Services starts with failure analysis to determine the wear mechanisms involved, then provides emergency repairs, periodic maintenance, rebuilding, wearfacing and specialty joining services using the latest fusion processes available today. Processes include, manual electrode welding, MIG and TIG welding, semi-automatic welding, twin arc wire spraying, plasma transferred arc (PTA) welding, cold and hot powder flame spraying, high velocity oxy fuel (HVOF) spraying and other processes and fabrication methods. All processes use the most advanced alloys for which Eutectic is well known in the industry.



New facility booth.

CastoLab is also a manufacturing facility for CastoDur® Diamond Plate (CDP) brand wear plate and CastoTube® internally wearfaced tubing. Wear plates can be cut, rolled and formed to customer specifications. Wearfaced tubes are available in various lengths and diameters. Custom configurations can also be fabricated to allow for easy installation in existing process piping. "We have the latest plasma welding, wear plate and tube equipment that we can use to repair or coat parts" said Carlos Esteves, Director of Sales and Marketing for Eutectic. "We can offer customers the completed job, not just the wire or electrodes."

Eutectic provides solutions to companies, both large and small, operating in a wide range of industries including cement, power generation, oil and gas, waste and recycling, mining and steel. A few examples of wear prevention solutions in these industries are Eutronic Arc® twin arc wire spraying of boiler tubes for power generation. The coating can withstand dry or wet erosion by mud or ash and corrosion by oxidizing acids. Large areas can be quickly and cost effectively coated. CastoTube is the solution for abrasion and erosion inside pipes in the cement and construction industries. From raw material processing through the blast furnace and steel forming, Eutectic has innovative solutions for cooling roller trains, pumps and hot shear blades in the steel industry.

About Eutectic Corporation

Eutectic Corporation, headquartered in Menomonee Falls, Wisconsin, is part of the MEC Group. Eutectic has manufacturing operations in Menomonee Falls, Wisconsin and Milwaukee, Wisconsin and a sales network serving North America and Latin America. Eutectic's business is complimented by affiliate companies within the MEC Group that are located throughout the world. For more information, including the latest product and technology offerings, visit www.eutecticusa.com.

About the MEC Group

The MEC Group is a holding company comprised of three operating divisions providing specialized products and services for industrial wear protection and fusion, steel cutting, and medical instruments development and manufacturing. The MEC Group operates globally and is headquartered in Schwalbach, Germany.

For more information about the MEC Group and its operating divisions, visit their websites: www.mec-holding.com, www.castolin.com, www.messer-cs.de, and www.bit-instruments.com

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GRANTA, MPIF Partnership Expands Access to Global Powder Metallurgy Property Database



Granta Design and the Metal Powder Industries Federation (MPIF) have announced that the groundbreaking Global Powder Metallurgy Property Database (GPMPD) will be made available as a data module within the GRANTA MI materials information system.

The GPMPD was launched in 2004 as a joint project between the leading regional powder metallurgy (PM) trade associations, MPIF and its counterpart organizations in Europe (EPMA) and Japan (JPMA). The database contains 3,500 lines of data providing physical, mechanical, and fatigue data for hundreds of materials of relevance to powder metallurgy and metal injection molding.

These technologies, which are based on the high-temperature sintering of a variety of metallic and alloy powders, are continually and rapidly evolving. They are of interest to a wide range of industrial sectors, notably the automotive industry. They are particularly suited to designs with requirements such as near-net shape, single-process production of complex parts, or porosity. The database provides the necessary property and durability data to compare these materials with other options and to enable designers and engineers to make informed choices.

GRANTA MI is the leading system for materials information management in engineering enterprises. It enables the

creation of a single corporate materials information resource, integrating data from in-house testing and design, other proprietary sources, and trusted references. A simple Web browser user interface allows authorized users to quickly browse, search, and apply this data, and to export it for use in engineering design and other software.

Providing the GPMPD as a GRANTA MI data module provides fast, efficient digital access. The data is available alongside other leading materials references and in-house materials data in a single, integrated system. Existing users of GRANTA MI can very easily add the data module to their installation, while other companies now have a powerful new option for sharing access to the GPMPD data across their organization.

"The deployment of the engineering data through Granta MI is of vital importance to the PM industry as we continue to build awareness and familiarity with PM's many sustainable technical advantages," commented C. James Trombino, CAE, executive director of MPIF. "Teaming with Granta will result in expanded reach into existing and evolving markets."

Patrick Coulter, Chief Operating Officer at Granta, said "Granta aims to partner with leaders in materials information across a wide range of materials and application areas. We are pleased to be working with MPIF to further extend the coverage of materials property data available in the GRANTA MI system."

continued on page 10



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continued from page 8
About MPIF

Founded in 1944, MPIF is the internationally recognized trade association for the metal powder producing and consuming industries. Known internationally as a "leading" source of information about the PM industry and PM technology, MPIF serves the interests of the worldwide PM community. Members make metal powders, advanced particulate materials, process equipment, and PM parts and products.

For more information, contact James R. Dale, 609.452.7700, email: jdale@mpif.org and visit websites www.mpiif.org and www.grantadesign.com

New Metal Powder Standards

The 2010 edition of Standard Test Methods for Metal Powders and Powder Metallurgy Products has been published by the Metal Powder Industries Federation (MPIF). The 130-page publication contains 39 standards covering testing of metal powders and PM parts and products.

The 2010 edition contains the new Precision Statement and new Method for Sample Preparation for the Determination of the Total Carbon Content of Powder Metallurgy (PM) Materials (Excluding Cemented Carbides) standard. Of the 39 standards included in the publication, 10 have been revised, edited, or reaffirmed. The publication also includes sources of specialized equipment described in the test methods.



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**5 More Written
 Programs An
 OSHA Inspector May
 Ask To See**

Occupational Safety and Health Administration (OSHA) compliance involves maintaining several mandatory written programs and records.

The following is a management checklist of 5 more of the most common written programs and records that an OSHA inspector might ask to see.

1. Confined Space - Workplaces must be evaluated to determine if any spaces are permit-required confined spaces. If employees enter permit-required confined spaces, a written confined-space program that complies with CFR1910.146 must be developed and implemented. The written program must be available for inspection by employees and their authorized representatives.
2. Portable Fire Extinguishers - Ensure that all portable fire extinguishers undergo an annual maintenance check (CFR1910.157). Record the annual maintenance date and retain this record for one year after the last entry or for the life of the shell, whichever is less. The record must be available upon request.
3. Hazard Communication (HazCom) - Through a formal, written hazard communication program (CFR1910.1200), an employer must assess chemical hazards in the workplace to which employees may be exposed. This information must be readily accessible to all employees of all shifts whenever they require it.
4. Personal Protection Equipment Hazard Assessment - Assess the workplace to determine if hazards are present, or are likely to be present, that necessitate the use of personal protective equipment (PPE). You must verify that the required workplace hazard assessment has been performed through a written certification that identifies the workplace evaluated, the person certifying that the evaluation has been performed, and the date(s) of the hazard assessment. Also, identify the document as a certification of hazard assessment (CFR1910.132).
5. Hearing Conservation - If employees are exposed to noise levels at or higher than 85 decibels for a time-weighted average of eight hours, you must maintain records showing compliance with OSHA's Occupational Noise Exposure Standard (CFR1910.95). The records must contain the name and job classification of the employee, date of the audiogram, examiner's name, date of the last calibration of the audiometer, and the most recent noise exposure assessment for each employee. These records must be provided upon request to the employees, former employees,

representatives designated by the individual employee, and the assistant secretary of OSHA.

(The first "Five Programs" article was published in SPRAYTIME Third Quarter 2009.)

Provided by the

ASM Thermal Spray Society Safety Committee

For more information, contact Chairman Greg Wuest via email: gregory.wuest@sulzer.com

Leading Organizations Team Up To Promote Thermal Spray To Industry

The International Thermal Spray Association (ITSA) and the ASM Thermal Spray Society (TSS) have announced a cooperative effort to aggressively promote the adoption of thermal spray technology throughout industry.

Both organizations include the promotion of thermal spray technology as a fundamental part of their respective missions, and both recognize the need for a significantly enhanced effort to spread the adoption of thermal spray to a broader range of industrial sectors.

By leveraging the unique strengths of each organization – TSS, with its extensive informational and educational resources, conferences, and publications, and ITSA, with its roots among thermal spray applicators – both groups believe that this new effort can result in a multi-faceted approach that will cultivate new ground in thermal spray applications.

"Right now, the turbine market stands alone in the depth and breadth of thermal spray applications, yet the technology has the potential to provide similar advantages to many other industries that have yet to effectively explore its potential," said ITSA President Daniel C. Hayden, president of Hayden Corporation and managing partner of Hayden Laser Services, LLC.

While continuing to show continuous growth in turbine technology and other main market segments, both ITSA and TSS recognize that there are additional opportunities for expanding thermal spray usage within existing industrial markets as well as through global expansion.

"Thermal spray has significant potential for the oil and gas industry and chemical applications, and we are seeing increased global usage particularly in Asia. Together, our two organizations are better positioned to identify these opportunities and encourage thermal spray use," said TSS President Mitch Dorfman, Sulzer Metco (US) Inc.

This effort brings together two organizations that have deep roots in the thermal spray community and many common members both in North America and abroad. "It makes sense for ITSA and TSS to address this challenge together, as the industry is changing, and the market needs support in order to grow," Hayden said.

Discussions between the ITSA and TSS Executive management teams have also led to an agreement in principal to explore potential win-win opportunities for both organizations. Regular meetings are underway in order to explore how both organizations can support each other in

event planning and outreach to designers in order to grow new markets and applications.

"The key is to look forward and not backward," Dorfman said. "There are individuals and organizations active in ITSA and TSS that have the experience and knowledge needed to help move the industry forward, and we can accomplish more together than we can separately."

In addition to event planning, TSS management is also listening and soliciting ITSA representation regarding the society's first-ever certification program, Certified Thermal Spray Operators (CTSO), to be launched next year.

In the coming months, TSS and ITSA Steering Committees will reach out to members of both organizations to participate in cooperative efforts to grow the industry. "The survival and expansion of the thermal spray market is vital to the members of these organizations, and our goal is to be proactive in creating new ways to promote the technology, while remaining responsive to any and all opportunities suggested by our members," Hayden said.

Specific efforts, including joint seminars and educational resources, will be announced via each group's websites and trade publications: ITSA's quarterly SPRAYTIME, and the TSS International Thermal Spray & Surface Engineering (iTSSe), published quarterly within ASM's Advanced Materials and Processes magazine.

For more information about ITSA, visit www.thermalspray.org. For more information about TSS, visit www.asminternational.org/tss.



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Professional Coatings Adds Thermal Spraying To Its Coatings Range

Professional Coatings Limited has purchased a Metallisation Arc 140/S350 system to add thermal spraying as an option to its vast range of paint and powder coating finishes. Professional Coatings, based in Newbury, Berkshire, UK offers superior anticorrosion protective pre-treatment with architectural grade polyester and nylon-plastic coating systems to the manufacturing industry throughout the UK.

In a recent project, Professional Coatings was asked to coat a range of balcony parts including the support columns, balcony decks and curved railings. In total 34 parts were sprayed. The columns and railings were thermal sprayed and then powder coated and the bases were hot dip galvanized and powder coated. The company opted for this system for the bases, as it was impossible to get line of sight to all areas of the bases.

Professional Coatings opted for its preferred method of thermal spraying the railings and supports with zinc, rather than hot dip galvanize before powder coating, as the Metallisation process enables a superior final powder coat finish in comparison to a hot dip

galvanized base coat. Thermal spraying also means that no fettling is required, it gives Professional Coatings control over the quality of the finish and can be scheduled to suit its own timescales, rather than relying on a third party galvanizer. One of the key advantages of thermal spraying

over hot dip galvanizing is that it is a cold process, which means there is no distortion of the railings or any risk of 'spikes' on the handrails, a basic critical requirement in the painting and coating of handrails and balconies from a safety point of view. This system dramatically reduces the 'Carbon Footprint'.

The specification was to blast the balcony parts with steel grit to SA 2.5. Following the grit blasting, Professional Coatings applied 50 – 70 microns of thermal sprayed zinc, which was checked for accuracy using a Positest DFT measuring device. The next stage was to apply a coat of architectural grade polyester powder and green bake it so it was not fully cured, before applying a top coat of the same powder and finish bake both coatings. This achieved a perfect finish without surface blemishes - a standard

demand and expected by Professional Coatings' long-standing and prestigious clients.



Blasted railing.



Zinc thermal spray applied to balcony railing.

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The finished thickness of coating is in the region of 250-300 microns. As per the European standard EN ISO 14713, this coating system has an expected life to first maintenance of 20 years plus in many environments. Professional Coatings guarantees that the powder coating will not flake off. Its confidence in this guarantee has been increased by the higher quality of bond achieved with powder coating over thermal spray as opposed to conventional hot dip galvanizing.

Even as experienced coaters, Professional Coatings had no knowledge or experience of the thermal spray process prior to this project. Having discovered the improved, high quality finish after powder coating, combined with the control provided over the standards and coating finish, the decision to opt for thermal spraying was made easy.

Professional Coatings' whole experience during the set up and initial stages of thermal spraying was very positive. Professional Coatings' operators expected the equipment to be more problematic than it actually was. However, subsequent feedback has been that the arc spray system is particularly easy to use and offers the flexibility to spray different shaped structures. It can be a little messy with



Powder coating applied to railing.

the dust produced, but this has been easily overcome with some minor planning changes. The dust is also easy to clean up as overspray does not stick to the surrounding area. The operators have been surprised by the amount of work achievable and have found that it's not as wasteful of coating material as they previously thought it would be.

Feedback from Professional Coatings' clients has been very positive and has resulted in more regular business, with customers now requesting zinc thermal spray as a base coat instead of hot dip galvanizing. Since March they have done around 15 to 20 thermal spray jobs ranging from balconies to gates and gateposts, fences and various architectural fabrications.

For a number of years Professional Coatings has tested its powder coated systems with test vehicles all over the world, in extreme conditions from the Sahara desert to the arctic. Professional Coatings takes great pride in testing its system to a higher degree than the manufacturers and feels that its coating systems and products could be of tremendous value to other areas of industry.

Aston Martin, Managing Director, Professional Coatings, says: "We are very pleased with the new addition of thermal spraying to our range of coatings. Metallisation has been professional and supportive throughout this project. It has

continued on page 14



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continued from page 13

been a pleasure to work with the team. Our operators have been surprised at how easy the new Metallisation equipment and processes have been integrated into their everyday work. The presales and after-sales support provided is unrivalled and the website has been an excellent source of support in promoting the thermal spray process to our clients and end users. This overall experience has given us confidence in the quality of company we are dealing with. We have found everyone within Metallisation to be very helpful and honest. They don't hesitate in pointing out potential negatives and offering solutions as well as highlighting the positives of the process. We would not hesitate to recommend Metallisation and the thermal spraying process to others."



Finished balcony railing.

For more information, please contact Stuart Milton, Sales and Marketing Manager via email sales@metallisation.com or visit www.metallisation.com

Journal of Thermal Spray Technology®

A publication of the **ASM Thermal Spray Society**

Abstract: Corrosion Properties of Cold-Sprayed Tantalum Coatings

Heli Koivuluoto, Jonne Näkki, Petri Vuoristo

Cold spraying enables the production of pure and dense metallic coatings. Denseness (impermeability) plays an important role in the corrosion resistance of coatings, and good corrosion resistance is based on the formation of a protective oxide layer in case of passivating metals and metal alloys. The aim of this study was to investigate the microstructural details, denseness, and corrosion resistance of two cold-sprayed tantalum coatings with a scanning electron microscope and corrosion tests. Polarization measurements were taken to gain information on the corrosion properties of the coatings in 3.5 wt.% NaCl and 40 wt.% H₂SO₄ solutions at room temperature and temperature of 80°C. Standard and improved tantalum powders were tested with different spraying conditions. The cold-sprayed tantalum coating prepared from improved tantalum powder with advanced cold spray system showed excellent corrosion resistance; in microstructural analysis, it showed a uniformly dense microstructure, and, in addition, performed well in all corrosion tests.

Read the entire article in the March 2009 Issue

Visit www.asminternational.org/tss

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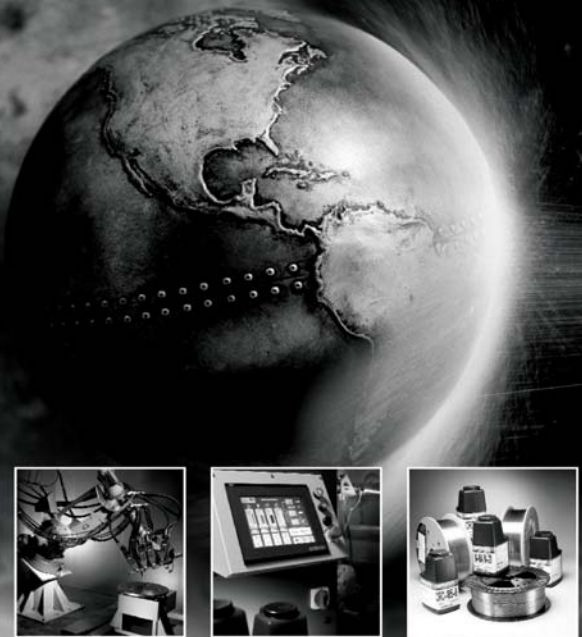
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Chairman Hayden

The **International Thermal Spray Association** is closely interwoven with the history of thermal spray development in this hemisphere. Founded in 1948, and once known as Metallizing Service Contractors, the association has been closely tied to most major advances in thermal spray technology, equipment and materials, industry events, education, standards and market development.

A company-member trade association, ITSA invites all interested companies to talk with our officers, committee chairs, and company representatives to better understand member benefits. A complete list of ITSA member companies and their representatives are at www.thermalspray.org

ITSA Mission Statement

The International Thermal Spray Association is a professional trade organization dedicated to expanding the use of thermal spray technologies for the benefit of industry and society.

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ITSA Scholarship Opportunities

The International Thermal Spray Association offers annual Graduate Scholarships. Since 1992, the ITSA scholarship program has contributed to the growth of the thermal spray community, especially in the development of new technologists and engineers. ITSA is very proud of this education partnership and encourages all eligible participants to apply. Please visit www.thermalspray.org for criteria information and a printable application form.

ITSA Thermal Spray Historical Collection

In April 2000, the International Thermal Spray Association announced the establishment of a Thermal Spray Historical Collection which is now on display at their headquarters office in Fairport Harbor, Ohio USA.

Growing in size and value, there are now over 30 different spray guns and miscellaneous equipment, a variety of spray gun manuals, hundreds of photographs, and several thermal

spray publications and reference books.

Future plans include a virtual tour of the collection on the ITSA website for the entire global community to visit.

This is a worldwide industry collection and we welcome donations from the entire thermal spray community.

ITSA SPRAYTIME Newsletter

Since 1992, the International Thermal Spray Association has been publishing the **SPRAYTIME** newsletter for the thermal spray industry. The mission is to be the flagship thermal spray industry newsletter providing company, event, people, product, research, and membership news of interest to industrial leaders, engineers, researchers, scholars, policy-makers, and the public thermal spray community.

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Become a Member of The International Thermal Spray Association

Your company should join the International Thermal Spray Association now! As a company-member, professional trade association, our mission is dedicated to expanding the use of thermal spray technologies for the benefit of industry and society.

ITSA members invite and welcome your company to join us in this endeavor.

Whether you are a job shop, a captive in-house facility, an equipment or materials supplier, an educational campus, or a surface engineering consultant, ITSA membership will be of value to your organization.

The most valuable member asset is our annual membership meetings where the networking is priceless! Our meetings provide a mutually rewarding experience for all attendees - both business and personal. Our one day Technical Program and half day business meeting balanced by social activities provide numerous opportunities to discuss the needs and practices of thermal spray equipment and processes with one another.

As an ITSA member, your company has excellent marketing exposure by being listed on our website along with a multitude of additional benefits.

ITSA member companies are also highlighted in the ITSA booth at several trade shows throughout the year (International Thermal Spray Conference ITSC, Fabtech International and AWS Welding Show Thermal Spray Pavilion, Weldmex Mexico, and TurboExpo in 2009).

If you would like to discuss the benefits of your company becoming a member of the International Thermal Spray Association, we suggest you contact Kathy Dusa at our headquarters office or visit the membership section of our www.thermalspray.org website.

Inframat® Announces Stephen Glancy as Director of Thermal Spray Sales

Inframat® Corporation, a recognized leader in nanomaterials/nanotechnology, announces the appointment of **Stephen Glancy** to the position of Director of Thermal Spray Sales.



Stephen has over twenty years experience in material science applications and specializes in thermal spray evaluation. Glancy has been involved in numerous ASM, ASTM, and TSS thermal spray activities. His experience in sales and

marketing covers an extensive range from research and development to military to heavy industry.

"With Stephen's background in thermal spray we expect him to become an outstanding contributor to Inframat's® success," says Robert Lee, CEO of The Nano Group, Inc. "He will be instrumental in driving our vision of providing value to our customers by implementing advanced thermal spray technologies and products."

Glancy will be responsible for sales and marketing functions related to Inframat's® advanced thermal spray products.

Inframat® a division of The Nano Group, Inc. Manchester, CT, develops and markets a patented array of thermal spray feedstocks including Infralloy™, Nanox® and SPS™ (solution plasma spray).

For more information, visit the Inframat® website at www.inframat.com or email sglancy@inframat.com

CTSR Welcomes Chris Jensen

In September 2009, **Chris Jensen** joined the Center for



Thermal Spray Research as a Senior Research Support Specialist. Chris earned his Bachelor of Engineering in Engineering Science, with a minor in Materials Science from Stony Brook University in 2003.

After Stony Brook University, Chris worked as a process engineer with eele Laboratories, a Long Island based startup company geared towards the production of etendue efficient lighting systems for projection displays. He was responsible for optimizing a nickel based electroforming process used in the manufacture of precision optical reflectors. Chris was also involved in the development of cold mirror and band-pass coatings deposited on the reflectors via an ion beam assisted electron beam evaporation process. During his time with eele Laboratories, Chris traveled to Taiwan where

he setup a manufacturing facility to produce the thin film coated optical reflectors in high volume to enter into the Digital Light Projection (DLP) markets.

Afterwards, Chris moved to CVD Equipment Corporation where he optimized the Chemical Vapor Deposition processes used to synthesize advanced materials such as carbon nanotubes, silicon nanowires, epitaxial thin films, and transparent conductive oxides. During his time at CVD Chris decided to return to academia to get his masters degree in materials Science which he is now in the process of completing at CTSR.

Chris is excited to become a part of the The Center for Thermal Spray Research and looks forward to bringing his knowledge and experience to the team.

Graduate Student Lorena Bejarano Joins TSS Board of Directors

Lorena Bejarano was nominated and selected to form part

of the TSS Board of Directors in March 2009. She participates on the board as a Student Board Member together with Mr. Viktor Drescher, a graduate student at Technical University of Berlin. "Being part of the TSS Board is a great experience that enables me to learn from



the outstanding group of board members who work hard to overcome issues of the thermal spray community" says Lorena.

She thinks of this opportunity as a very enriching activity not only to advance her own knowledge and gain firsthand experience but also to contribute to the TSS through her participation in board meetings. Board discussions aim to lead The Thermal Spray Society as a robust and well established organization by developing policies, organizing conferences, and proposing standards and certification methods. The Student Board Members were assigned a "board mentor", Mr. Raymond Sinatra from Rolls Royce Corporation, to guide them through this experience. Lorena will be serving as Student Board Member through March 1, 2010.

For more information, visit www.sunysb.edu/ctsr

ITSA Announces "Supporting Societies" Membership Category

The International Thermal Spray Association is pleased to announce a new "Supporting Societies" membership category to establish communication with other associations/societies involved in thermal spray and surface engineering activities worldwide.

This is an ideal method for membership exchange between organizations. For information, please contact Kathy Dusa at the headquarters office via email to itsa@thermalspray.org

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For more information, please contact Jim Howell via email jimncproductions@aol.com or phone 618.292.5836 or

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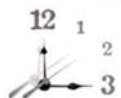
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CALENDAR OF EVENTS

FEBRUARY 2010

7-10 Phoenix, AZ USA *PACE 2010 The Power of Paint & Coatings* - visit www.pace2010.com

14-18 Seattle, WA USA *TMS 2010 Linking Science and Technology for Global Solutions* - TMS Meeting Services, tel: 724.776.9000 x243, email: mtgserv@tms.org, web: www.tms.org

10-12 Mumbai, India - *4th Essen Welding India with 4th International Trade Fair Joining, Cutting and Surfacing* - Visit www.messe-essen.de

APRIL 2010

8-10 San Francisco, CA USA *International Thermal Spray Association Membership Meeting and Technical Program* - contact ITSA, itsa@thermalspray.org, 440.357.5400

17-22 Orlando, FL USA *SVC Technical Conference* - Society of Vacuum Coaters www.svc.org

19-22 Orlando, FL USA *TechCon 2010 Society of Vacuum Coaters 53rd Annual Technical Conference* - contact www.svc.org

21-24 Tokyo Japan *Japan Int'l Welding Show 2010 sponsors include Japan Thermal Spraying Society* - contact email: info@weldingshow.jp

Is Your Event Listed? Send your event notice to spraytime@thermalspray.org



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MAY 2010

3-5 Singapore, Singapore *ITSC 2010*

International Thermal Spray Conference & Expo - contact ASM Int'l tel:

440.338.5151, web: www.asminternational.org, email: customerservice@asminternational.org

11-13 Mexico City, Mexico *AWS Weldmex - FABTECH Mexico - MetalForm Mexico* - visit www.awsweldmex.com (see advertisement page 21)

3-6 Pittsburgh, PA USA *AISTech 2010 The Iron & Steel Technology Conference & Expo* - web: www.aistech.org

JUNE 2010

7-9 Shanghai China - *CISE 2010*

International Surface Engineering Expo -

contact email: surfaceexpo@126.com, web: www.seexpo.net/EN/lxwm.htm

7-10 San Diego, CA USA *MegaRust Navy Corrosion Conference* - visit www.nstcenter.com

11-13 Mexico City, Mexico *AWS Weldmex* - visit www.aws.org

14-18 Glasgow, Scotland *ASME*

Turbo Expo 2010 - Scottish Expo

and Conference Center - visit

www.turboexpo.org

15-17 Aachen, Germany *9th Int'l Conference on Brazing, High Temperature Brazing and Diffusion Bonding* - contact DVS German Welding Society, tel: +49(0)211.1591.302, email: tagungen@dvs-hg.de, web: www.dvs-ev.de/loet2010

21-23 Bellevue, WA USA *Aeromat 2010 Conference and Exposition Optimizing Performance and Affordability of Aerospace Materials* - contact ASM Int'l tel: 440.338.5151, web: www.asminternational.org, email: customerservice@asminternational.org

27-30 Hollywood, FL USA - *2010 Int'l Conference on Powder Metallurgy & Particulate Materials* - visit www.mpif.org

JULY 2010

26-AUG 1 Honolulu, Hawaii USA *17th International Conference on Composites or Nano Engineering, ICCE* - contact David Hui, Professor of Mechanical Engineering Univ. of New Orleans, tel: 504.280.6192, email: dhui@uno.edu

OCTOBER 2010

10-14 Florence, Italy *Powder Metallurgy World Congress & Exhibition* - visit www.epma.com/pm2010

NOVEMBER 2010

2-4 Atlanta, GA USA *FABTECH Int'l & AWS Welding Show and Metalform- with a Thermal Spray Pavilion and Conference* - organized by American Welding Society,

www.aws.org, Fabricators and Mfgs Assoc, www.fmafabtech.com, Soc. of Mfg. Engineers, www.sme.org/fabtech

3-5 Albuquerque, NM USA *SVC 2009 Topical Conference* - Society of Vacuum Coaters, email: svcinfo@svc.org, web: www.svc.org



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