

SPRAYTIME®

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Institute of Materials, Malaysia



The Institute of Materials, Malaysia (IMM), registered in 1987 in Malaysia, is a non-profit society of professionals whose aims are to promote honorable practice, professional ethics and encourage education in materials science, engineering and technology. In collaboration with Materials Technology Education Sdn Bhd (MTE), the institute has been regularly conducting certificated courses in coatings, corrosion and welding catering specially to the Malaysian oil and gas industry. To-date, IMM has trained and certified more than 2000 skilled workmen. Some of IMM certification program are specified as a requirement in the Technical Specifications of PETRONAS, the national oil company of Malaysia.

The IMM Coatings Committee has been very active in the promotion of coatings technologies and advancement, including thermal spray technology. In March 2011, during the IMM Green Materials Seminar, the committee presented a paper on "Thermal Spray Coatings for a Better Environment" highlighting improved maintenance cycle and costing with less impact on the environment.

In April 2011, a paper titled "Thermal Spray Coating for In-Situ Maintenance" was presented at the 3rd Regional Materials Technology Conference (3RMTC) in Miri, the first oil town of Malaysia located in the state of Sarawak. The one-day conference and exhibition attracted 30 papers and more than 100 participants.



Thermal spray coating on jacket's splash zone section.

International Zinc Association



Thermal sprayed zinc corrosion protection: An opportunity
"Market development project for ships and other marine structures including offshore oil production structures"

The International Zinc Association (IZA) is developing the market for thermal zinc spraying to protect steel, with a focus on ships and other marine structures including offshore oil production platforms and windmill power generators.

IZA's market research indicates that there could be potential to increase the use of zinc for corrosion protection in this sector. IZA would like to move into the second phase of this project and hold a meeting of technical experts to identify the technical and marketing issues involved in developing new market opportunities for thermal spraying of zinc.

For whom could it be interesting?

IZA welcomes companies from each stage of the supply-chain, notably:

- companies who supply zinc consumables, such as wire and powders
- machinery makers, who supply spraying equipment such as flame or electric arc sprayers or similar equipment
- companies which are specialized in preparing steel surfaces
- companies who can apply the coatings to the steel (both in their plant and also at the location of the customer)
- university people who can conduct testing
- engineering companies who would make the specifications.

Who is the International Zinc Association (IZA)?

The International Zinc Association (IZA) was founded in

continued on page 4

continued on page 5

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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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Joe Stricker Technical Editor

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IMM continued from page 1.

In May 2011, IMM organized a seminar based on the theme "Green Technology Developments" that was held in conjunction with the visit of officials from Society for Protective Coatings (SSPC) USA. This seminar serves to create awareness amongst the fraternity of the commercialization, latest development and education of the green coatings technology. Here again "Thermal Spray Technology" was presented.

In November 1, 2011, the IMM Coating Committee and the Society for Protective Coating (SSPC) will jointly organize a one day symposium entitled "Advanced Coatings Standards and Technology". This symposium will have presentation papers on the various technologies and will set the pace to promote the learning, understanding and advancement in the coatings industry. One of the Technologies to be presented will be on thermal spray coatings i.e. the different spray equipments for application of low temperature thermal spray.

The IMM Coatings Committee will be supporting the 8th International Materials Conference and Exhibition (IMTCE2012) which will be held in July 2012 in Kuala Lumpur, Malaysia. The theme for IMTCE2012 will be "Green Technologies for Sustainability and Innovations in

Materials". The event will coincide with the celebration of the 25th Anniversary of IMM. The IMTCE, held biennially, is the flagship of IMM. More information may be obtained from <http://imtce2012.com/>.



Thermal spray coating on process equipment.

IMM Coatings Committee has been actively conducting various training, certification and assessment courses on coatings technology covering surface preparation, paint application, equipment handling, inspection, quality control and assurance and health and safety including application in thermal spray coatings, intumescent coatings, and fusion bonding coatings.

IMM courses such as Coatings Inspector (CI) Course – Level 1 and 2, Blaster and Painter Assessment course and Blasting and Painting Supervisor courses are conducted regularly and are recognized by the Oil and Gas operators (PETRONAS, Carigali, ExxonMobil, Shell), contractors, fabricators and inspection companies in Malaysia.

Other coating related courses conduct regularly includes

- Protection Coating Technician
- Coating Quality Control Technician
- Corrosion Control by Cathodic Protection
- and many other tailor-made courses.

The IMM is a supporting member of the International Thermal Spray Association.

The Institute of Materials, Malaysia (IMM) would like to invite all members of the thermal spray community to participate and support the upcoming IMM events.

For more information, please contact IMM Secretariat at email: IOmm@po.jaring.my or visit website <http://www.iomm.org.my/v3/>

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Gemini Expands Thermal Spraying Services With Metallisation Equipment

Gemini Corrosion Services Ltd is a world leader in protecting steel structures, pipework and subsea pipelines against corrosion. Gemini, a long term customer of Metallisation, is committed to the Metallisation ARC528E system for the effective and efficient application of protective coatings.

Gemini, based in the north east of Scotland, has been providing high quality, cost effective surface preparation and protective coatings to the oil and gas industry for nearly 30 years. Gemini first used the Metallisation ARC528E equipment back in 2005, when the company purchased an automated pipe spraying machine. Since that time, Gemini has continually expanded its use with more and more of its customers.

A recent contract win by Gemini requires the company to thermal spray 4.3 miles (7 km) of subsea oil industry tubulars with aluminium.

Ian Guthrie, Managing Director at Gemini, says: "Gemini's reputation is built on delivering quality, value and integrity to its customers, which is clearly demonstrated by our loyal and extensive client base. By utilising professional, efficient thermal spraying equipment, as supplied by Metallisation, we have grown our client base to embrace a wide range of industries. Metallisation is one of the leading



Blasted pipe.

manufacturers of thermal spray equipment and it is a pleasure working with them."

Gemini has a purpose built, fully automated, computerized thermal spray facility at its Montrose base, which was designed and installed by Metallisation. The pipe manipulation system is flexible and can cater for different pipe sizes, enabling a full range of pipes to be sprayed



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using just one machine. The equipment can be used to spray pipes varying from 4 in. to 48 in. (102 mm to 1.22 m) in diameter and from 6.6 ft up to 50 ft (2 m to 15.24 m) in length.

The automated process is operated through the control box, which allows up to 20 preset programs, including pipe rotational speed and carriage traverse rates, to ensure an even coating thickness. The pipes are loaded onto the carriages of the thermal spray system and move through the facility, while rotating, to enable the arc spray guns to coat every inch of the pipe. The automated process reduces coating times, increases material efficiency and eliminates operator fatigue.

A video showing subsea pipes being thermal sprayed at Gemini's automated thermal spraying process facility is available for viewing on the Metallisation website www.metallisation.com/videos/library

In line with standard practice, the surface of the pipes is prepared by grit blasting to industry standard cleanliness SA3, prior to thermal spraying to ensure effective coating adhesion. Every pipe is checked for profile and cleanliness. Using two ARC528E systems, the external surfaces of the pipes are thermal sprayed with aluminium to a typical thickness of 0.0098 in. (250 µm), although this can be varied to suit the customer's specification. Finally the pipes are sealed to the individual customer's specification.

During the spraying operations, various quality checks are performed and recorded. Sample plates are sprayed under identical conditions to the pipes and tested to check they meet the coating adhesion requirements. Many specifications require 1305.34 to 1740.45 psi (9 -12 Mpa), with Gemini coatings exceeding 2610.68 psi (18 MPa), proving that the preparation and application of the coating is second to none. The coating thickness of the pipes is routinely checked as the spraying is performed and the coating is visually inspected at random under 10x magnification.

The Metallisation ARC528E system consists of an ARC528E servo driven gun, a supply package and a 450 amp switched voltage energizer with inbuilt closed-loop wire speed control unit. The aluminium wire is dispensed from production packs, which reduces downtime for wire changes, and is also supplied by Metallisation.

Stuart Milton, Sales and Marketing Manager, Metallisation Ltd, says: "We have been working with Gemini for many years and are very proud of the feedback we receive from them regarding our service, prompt response and working relationship. Metallisation is committed to excellent customer support through the delivery of effective surface protection solutions and equipment. We are pleased to see that this recent contract win for Gemini clearly demonstrates the flexibility, capability and reliability of our thermal spray systems and equipment."

For more information please contact Stuart Milton, Sales and Marketing Manager, +44 (0) 1384 252 464 or visit www.metallisation.com



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Superior Shot Peening Expands

Superior has just completed the first successful year and a half of operations at their new 30 acre facility in Cleveland, TX, which is ISO 9001: 2008 Certified, and is still operating the original facility in Houston, TX which has doubled their capacity, as well as their 4 year old facility in Changzhou China, giving their customers the best turn-around capabilities in the industry.



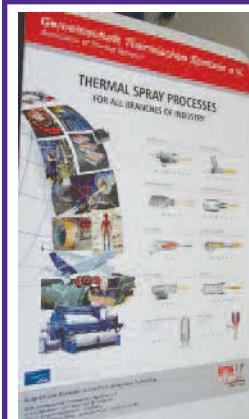
Cleveland, TX facility.

Superior was founded on the mantra of service, quality, and reliability, and continues with this operating philosophy. The new facility provides robotically controlled plasma, HVOF, twin arc spray, and spray and fuse processes, and applies virtually all metallic and ceramic coatings, coupled with an extensive grind shop.

The combination of thermal spray, automated shot peening, phosphate coating, as well as organic and powder coatings, gives Superior's customers the largest selection of component life extending processes available with one company in the United States and China.

For more information, contact Albert Johnson, ajsspi@aol.com, phone 281.449.6559, or visit website www.superiorshotpeening.com

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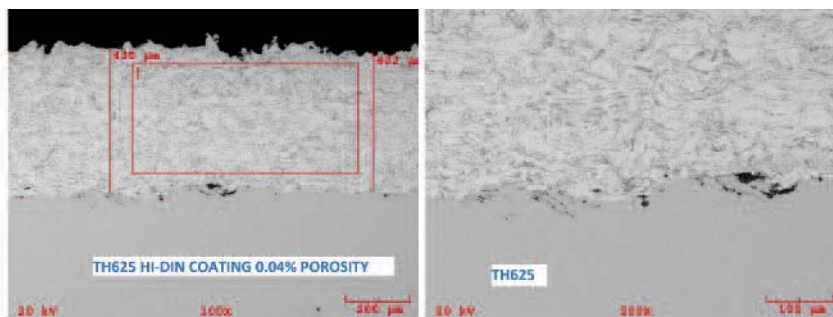
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Thermion Introduces HighDensity™ Twin Wire Arc Spray Process

Thermion Inc. of Poulsbo, WA USA (thermioninc.com) introduces a new Twin Wire Arc Spray Process that produced coatings of less than 0.3% porosity for 420SS, and 0.04% porosity for the coating of Inconel 625 which is shown in the below macros. Move over Cold Spray and HVOF, Thermion's HighDensity™ twin wire arc spray-produced coatings with porosity lower than 0.5%.



Northwest Laboratories of Seattle, Incorporated

SAMPLE ID	POROSITY %	OXIDE %
TH625 (Inconel 625 Wire)	0.04	3.5
TH420	0.28	6
TH420/95-5 Bond	0.23	5.7

Thermion's new twin wire arc spray process utilizes the simplicity and economics of standard twin wire arc spray principles. The above coatings were sprayed using ordinary compressed air as the atomizing gas in open air with spray distances near six inches, the coupons were rotating on a fixture and the spray gun was mounted.

Process Concept:

In this concept, the high electric arc energy is used to ionize and expands gas inside a small vessel which exits at high velocity. This high velocity gas is used to atomize the wires and propel them to the substrate.

Spray Equipment:

The HighDensity™ twin wire arc spray system has the same appearance as Thermion's AVD spray systems which is a push style feeder with Thermion's jet force front end assembly; the HighDensity™ technology is not visible to the observer it is contained within the electrical and mechanical designed features of the system. This system is designed to automatically adjust to system variables for the purpose of maintaining the arc gap at optimum consistency for perfect atomization.

Possibilities:

- A low cost process for chrome plating replacement, at porosity levels of 0.04% for Inconel 625, applications requiring a few mils of coating is now possible.
- With high density coatings the overall coating thickness can be reduced for many applications as imperviousness can be obtained with less coating.
- Overall coating thickness can be reduced as cleanup can be achieved with less coating removal.
- Final finished coatings look like solid metal.

Availability:

The High Density Twin Wire Arc Spray System is available directly from Thermion Inc. and provisions can be made for providing sprayed samples for your personal evaluation, or to test your wires, or coat a component for service evaluation.

For more information, contact Dean Hooks, Sales and Marketing VP, 360-265-3649, dhooks@thermioninc.com, www.thermioninc.com

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University of Wisconsin and Noise Barriers Announce Spray Booth



Noise Barriers, LLC, has announced it has designed, built and installed a 10 ft x 10 ft x 8 ft QuietMod™ spray booth for the University of Wisconsin at Madison, WI. The United States based company manufactures spray booths for the thermal spray industry, along with other sound enclosure product lines for the construction, medical, automotive and transportation industries.

Noise Barriers partnered with McLaughlin & Associates Thermal Spray, Inc. to design, service and support the enclosure. Earlier this year, UW Madison was awarded funding to conduct cold spray research. UW Madison plans to use the booth to conduct scientific research with their new cold spray metalizing system. Scott McLaughlin, President of McLaughlin & Associates said, "It has been an exciting project working with UW on the new cold spray technology. We expect UW will be expanding the market for metalizing with new cold spray applications."

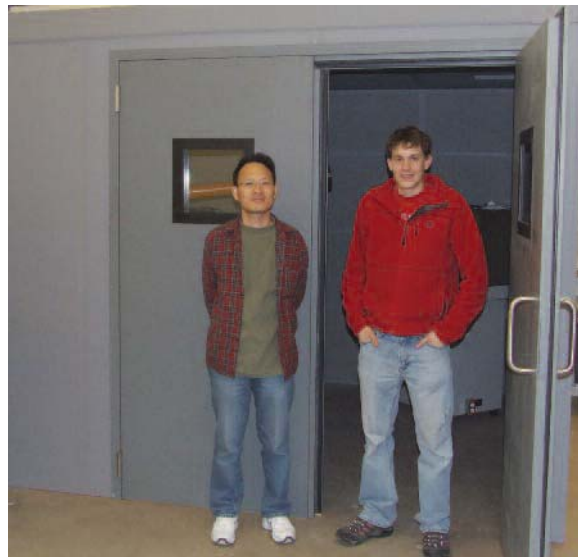
Noise Barriers has provided training and technical assistance to McLaughlin & Associates in order to fully support their mutual thermal spray customers. Noise Barriers manufactured the components for the enclosure in their new 48,000 square foot Libertyville, IL manufacturing plant. "Thermal spray represents a key strategic market for Noise Barriers. We expect to see significant growth from thermal spray as the economy recovers and the demand for new spray systems increases", says Steve Mitchell, Managing Director of Noise Barriers.

Ben Maier, Research Intern in the Engineering Physics Department at UW said, "The installation went quickly, was professional and we are happy with the end result."

Both Noise Barriers, LLC. and McLaughlin & Associates are looking forward to seeing the advancements UW will make in cold metalizing research made possible with the addition of the new spray booth enclosure.

About Noise Barriers, LLC

Noise Barriers, LLC. was formed by a group of highly motivated and experienced individuals with the desire to provide a vast array of noise control products and services. Noise Barriers, LLC. specializes in the unique needs of the thermal spray industry. Products and services that today's market place is demanding. Combined, the team brings



University of Wisconsin Youngki Yang (left), Research Associate and Ben Maier, Research Intern.

nearly 100 years of experience in both product development and noise control solutions. Noise Barriers, LLC. is based in Libertyville, IL.

For more information please visit www.noisebarriers.com, or email info@noisebarriers.com.

About McLaughlin & Associates Thermal Spray, Inc.

Incorporated in January 2008 McLaughlin & Associates offers assistance to the thermal spray industry with dust collection, sound enclosure spray booths, grit blast systems, overspray metals recycling, thermal spray equipment and spares, consumable wires and powders. McLaughlin & Associates also can assist with application development and new product consulting. McLaughlin & Associates is located in Naperville, Illinois.

For more information, contact Scott McLaughlin, scott@mclaughlinthermalspray.com

Cold Spray At University of Wisconsin

The Department of Engineering Physics at the University of Wisconsin, Madison is pleased to announce the inception of Cold Spray Technology program in May 2011.

The cold spray system is a CGT-GmbH Kinetik 4000-34 unit procured through ASB Industries, Barberton, OH, and the robot for the operating the spray gun was procured from Antennen, in OH.

The cold spray process uses high velocity powder particles in solid state to deposit coatings and even fabricate monolithic parts. The facility will be used for a basic and applied research, and for product development.

For more information please contact Ben Maier brmaier@wisc.edu or Kumar Sridharan kumar@engr.wisc.edu

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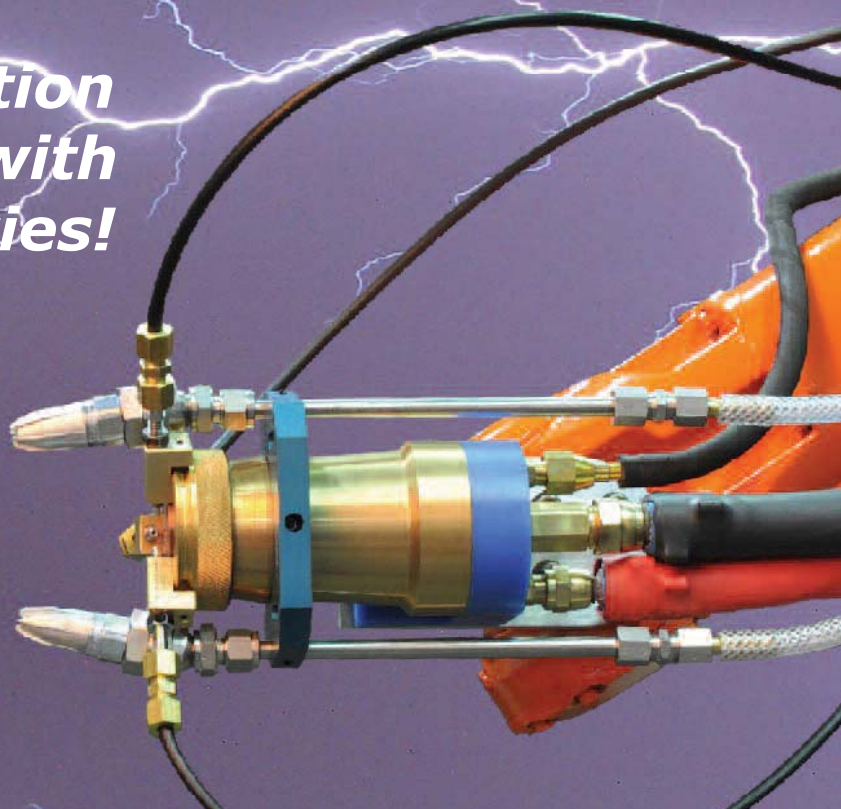
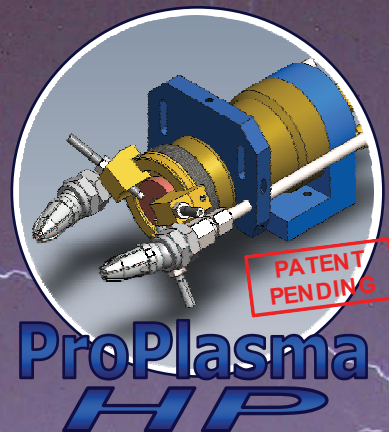
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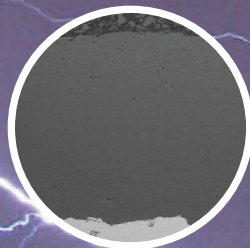
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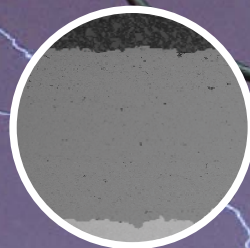
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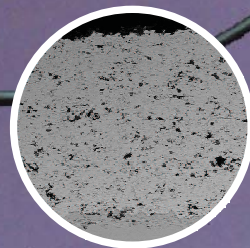
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2% porosity - 57% DE
9.06 lbs/h deposition rate
15.9 lbs/h feed rate



SG-DV1196 - Al₂O₃
2% porosity - 65% DE
6.48 lbs/h deposition rate
9.92 lbs/h feed rate



SG 2525 - Cr₂O₃
2% porosity - 51% DE
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15.9 lbs/h feed rate



SG 204 - YZ
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SAINT-GOBAIN
COATING SOLUTIONS

Kinetic Metallization Featured at Beijing Institute of Technology (BIT) 北京理工大学



(left to right) Professor Xian-Jin Ning, BIT, Professor Quan Sheng Wang, BIT, Howard Gabel, Inovati, and Zhi Gang Li, AMS

Professor Quan Sheng Wang's Thermal Spray Laboratory is one of the most sophisticated and well equipped in Asia and boasts a comprehensive array of the latest US manufactured HVOF, APS, high-power APS, and FS systems, as well as an array of advanced diagnostic equipment. Thus it was only fitting that in 2010 the laboratory took delivery of a Kinetic Metallization Coating Development System (KM-CDS). Professor Xian-Jin Ning, recently returned from a Postdoctoral Fellowship at RIST, was assigned the task of building a dedicated Kinetic Metallization spraying facility in a new suite of laboratories.

To celebrate the one year anniversary of the installation of the KM equipment, Inovati President Howard Gabel presented was invited to give a seminar on Kinetic Metallization technology. Following the seminar Professor Ning conducted a demonstration of the KM-CDS to illustrate some of the points made in the seminar.

Professors Wang, Ning, the BIT staff, and Inovati's distributor in China, AMS, did an outstanding job of organizing and hosting the meeting. Over 30 attendees from the leading aviation engine, sputtering target materials, companies in China attended the full day lecture and KM spray demonstration at BIT. Inovati is the only US based manufacturer of Kinetic Metallization systems, which are sold throughout the world.

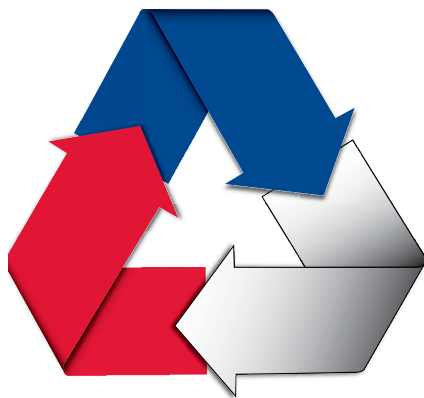
For more information, visit the Inovati website at www.inovati.com.

NEW "Supporting Societies" Membership

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.

See the Supporting Societies listing on page 17.

This is ideal for membership exchange between organizations. Contact Kathy Dusa at the headquarters office via email to itsa@thermalspray.org



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- Thermal spray, Plasma spray, Cold Spray, and HVOF overspray powders, dusts, solids, and sludges containing chromium, cobalt, copper, indium, molybdenum, nickel, rhenium, and tungsten carbide
- Certified parts destruction

Corporate offices are located in Shaker Heights, OH. Facilities are located in Augusta, GA; Cleveland, OH; Houston, TX; and Phoenix, AZ

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Wall Colmonoy Awarded a Multi-Year, Multi-Million Dollar United States Air Force Contract

Wall Colmonoy's - Aerobraz Engineering Technologies, Oklahoma City, announced today that the United States Air Force has awarded it a multi-year, multi-million dollar contract for the re-core of heat exchangers to support the F-15 global fleet. The highly maneuverable F-15, designed to fly combat missions, is considered the premier air superiority fighter jet.

Ed Ridge, Chief Operating Officer,

Aerobraz Engineering Technologies indicates "As a major manufacturer of re-cored heat exchangers for the USAF for more than 28 years, we are proud to provide further support to the United States Air Force. This new award signifies our ongoing commitment to increasing customers' efficiency and cost savings in extending the life of critical parts and components for the aerospace industry."



Re-cored Heat Exchanger.

Wall Colmonoy developed high temperature furnace brazing which is used extensively in the heat exchanger manufacturing process. Having developed the first heat exchanger repair procedures, Wall Colmonoy's brazing expertise has resulted in significant cost savings for the USAF. Deliveries are scheduled to begin in fall of 2011.



F-15 Eagle Fighter Jet.

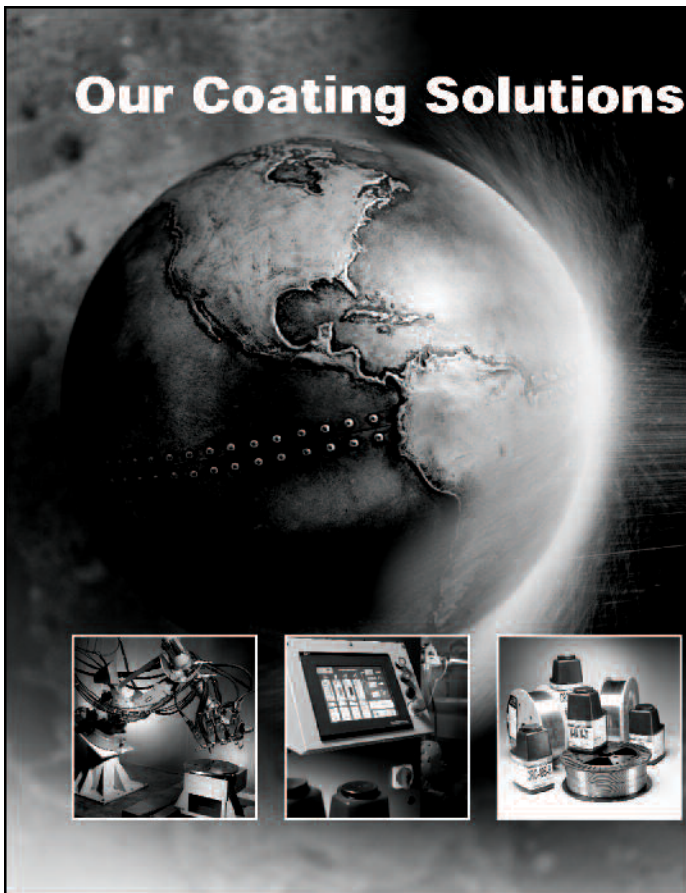
About Wall Colmonoy: Wall Colmonoy is a global materials engineering group of companies engaged in the manufacturing of surfacing and brazing products, cast products, and aerospace engineered components.

Known for our unique proven way of creating superior performing alloys that enhance engineered components, we pride ourselves on long-term strategic customer collaboration that produces value-added ideas and creative solutions.

Combining more than 70 years of engineering technology with a progressive, visionary outlook, Wall Colmonoy offers customers trusted, customized expertise that results in smart innovation and shared growth.

For more information visit www.wallcolmonoy.com.

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Cover the World

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www.praxair.com/thermalspray



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TAFE Incorporated
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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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Visit us at www.thermalspray.org



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



Chairman Wright

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.

Officers

Chairman: **David Wright**, Accuwright Industries, Inc.
 Vice-Chairman: **Jason Falzon**, FW Gartner Thermal Spraying
 Treasurer: **Bill Mosier**, Polymet Corporation
 Corporate Secretary: **Kathy Dusa**
Executive Committee (above officers plus the following)
Dan Hayden, Hayden Corporation
John Read, Cadorth Plating Ltd.
Joseph Stricker, St. Louis Metallizing Company

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 Thermal Spray Pavilion and Conference, Weldmex Mexico, PowerGen, Society of Vacuum Coaters and TurboExpo).

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.



CeralUSA to Market Liburdi's Environmentally Friendly Aluminum Silicon Coating – LSR Sialoy



CeralUSA, LLC, manufacturer of environmentally friendly coatings, and Liburdi Engineering Limited, a provider of specialized technologies, systems, and repair services to industry, announced today the formation of a strategic alliance focused on making Liburdi's chrome free Aluminum Silicon Sermaloy J alternative available to the coatings industry. In addition to the health and environmental benefits of using the chrome free coating, LSR Sialoy provides superior performance and versatility compared to Sermaloy J. Liburdi's LSR coatings have long been marketed as a coating service during component repair at Liburdi's Dundas, Ontario, Canada facility. Liburdi's decision to make the coating material available to the public is a departure from their customary business model and reflects their response to market demands.

"We recognize an industry need for a chrome-free Aluminum Silicon Diffusion Coating alternative and feel that the time is right to make a small piece of our IP portfolio available to the market", stated Bob Tollett, Liburdi's Director of Marketing. "LSR has served us and our customers very well since we developed it back in 1999. We feel quite certain that it will be well received by the marketplace."

Suzanne Bodger, Principal of CeralUSA, LLC stated, "We are very excited to have the opportunity to further solidify our

relationship with Liburdi. We have worked with and for Liburdi for many years and have always found them to be a complementary partner".

The product will be manufactured at CeralUSA's Oklahoma City production facility and marketed under the "LSR Sialoy" trade name.

About Liburdi: With its head office in Dundas, Ontario, Canada, Liburdi provides a diverse range of turbine services, metallurgical analysis, mechanical design, performance monitoring, repair development and corporate research and development. Liburdi has pioneered in the development of several unique vapor coating processes capable of depositing wear resistant and oxidation resistant coatings.

For further information about Liburdi, send an email to rtollett@liburdi.com or visit www.liburdi.com.

About CeralUSA: CeralUSA is a Woman Owned Small Business based in Oklahoma City, Oklahoma. In the short time since its inception in 2008, CeralUSA has become well known for its "green" aerospace coatings, making waves with Ceral 3450, the low-chrome drop-in replacement for legacy Aluminum Ceramic coatings such as Sermetal W.

For further information about CeralUSA, LLC, or for detailed information regarding LSR Sialoy, write to info@ceralusa.com or visit www.ceralusa.com.

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system into our unique coating application," says a casting equipment customer. "Training was outstanding, and the system is awesome."

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Curtiss-Wright Acquires IMR Test Labs Establishes New Technical Service Offering for Metal Treatment Customers



Curtiss-Wright Corporation (NYSE:CW) announced today that it has acquired the assets of IMR Test Labs (IMR), a leading provider of mechanical and metallurgical testing services for the aerospace, power generation and medical markets. IMR had sales of approximately \$14 million in 2010. This business will become part of Curtiss-Wright's Metal Treatment segment.

"This acquisition is consistent with our strategy of diversifying Curtiss-Wright's portfolio of metal treatment services," said Martin R. Benante, Chairman and CEO of Curtiss-Wright Corporation. "The addition of IMR enables us to enter a highly technical service niche in the manufacturing value chain for components used in premium industrial markets. Material testing is utilized in the on-going quality assurance of raw materials for production manufacturing as well as for the validation of new component designs.

"IMR will become the cornerstone of a new engineered service business unit for Curtiss-Wright that is synergistic

with our Metal Treatment segment's current capabilities," Mr. Benante added.

IMR's complete range of testing capabilities includes fatigue testing, metallurgical analysis, chemical analysis, mechanical testing, failure analysis and training. Its facilities are A2LA and Nadcap accredited. IMR is also certified by major original equipment manufacturers across the U.S. With a staff of 115 that includes 29 engineers and chemists, IMR has expertise in non-metallic materials, including composites and ceramics, which will facilitate Metal Treatment's expansion into other high technology markets and services.

IMR is headquartered in Ithaca, NY and operates state-of-the-art laboratory facilities in NY, Louisville, KY, and Portland, OR. The company also is in the process of opening a facility in Singapore to support the growing Asian aerospace industry.

About Curtiss-Wright Corporation

Curtiss-Wright Corporation is an innovative engineering company that provides highly engineered, critical function products, systems and services in the areas of flow control, motion control and metal treatment to the defense, energy and commercial/industrial markets. The legacy company of Glenn Curtiss and the Wright brothers, Curtiss-Wright has a long tradition of design and manufacturing innovation along with long-standing customer relationships. The company employs approximately 7,700 people worldwide.

For more information, visit www.curtisswright.com.

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About Curtiss-Wright Metal Treatment Segment

Metal Improvement Company, headquartered in Paramus, NJ, is the Metal Treatment business segment of Curtiss-Wright Corporation. This business segment provides precision shot peening, laser peening, heat treating and protective coating services to the aerospace, automotive, power generation and general industrial markets through a global network of locations.

For more information, visit www.metalimprovement.com.

Thermal Spray - Value Addition For Automotive Components in India

The introduction of LPG (Liberalization, Privatization and Globalization) in 1991, changed the whole scenario of Indian corporations and their workings. Manufacturing firms which earlier, were hunting for only customers,



started searching for quality improvements and new process developments in their products. The entry of global players with advanced technologies created a bottleneck competition which subsequently created high pressure on manufacturing firms to improve the quality of their



Shifter fork coating.

products. Automotive is one of the industries which has gone through most vigorous developments under a concrete competition scenario.

The demands in automotive industries are taking a up surge day by day, so all the manufacturers needed to offer high quality products with cost limitations. Since the automotive parts are to be mass produced, it is necessary that the stable supply of large quantity of materials, uniform quality, low cost/high performance are ensured. Some major problems which industry must cope with are for reduction of fuel consumption, weight reduction of component parts and reduction of friction of sliding parts. Being critical kinetic components, automotive parts are always under the risks of destructive factors like corrosion, wear, abrasion and erosion.

Continued on page 22.

Practical Cold Spray Coatings

CenterLine's Supersonic Spray Technologies supplies a full range of patented cold spray metal coating systems to rebuild and repair high-value parts and equipment thus preserving structural properties and saving significant overhead costs. You can depend on SST Cold Spray to protect, repair, restore, refinish and recoat manufactured products. Call us today to discuss your challenges.

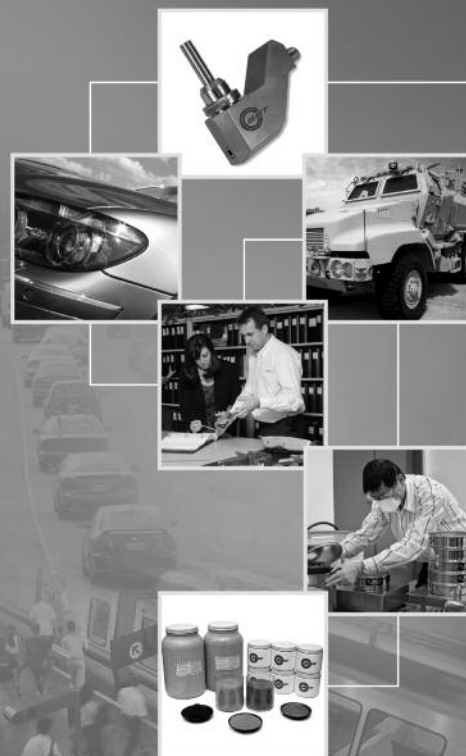


- corrosion protection
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- conductive coatings
- dimensional restoration
- surface restoration
- nanocoatings
- solid-state surface engineering

Visit our updated website at www.supersonicspray.com



Supersonic Spray Technologies
655 Morton Dr., Windsor, Ontario N9J 3T9
Tel. 519-734-8330, Toll Free 800-268-8330
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centerline

Supersonic Spray Technologies is a division of CenterLine Holdings Inc.

Continued from page 21.

With the availability of various processes, thermal spray coating has shown a significant lowest cost/ performance ratio. Parts like shifter fork, crank- shaft, valve, piston, piston ring, fuel injection nozzle, synchronization ring etc. are treated by this coating. Shifter forks, while working, face problems of sliding wears, Plasma sprayed dense self lubricating and wear resistance coating improves its performance and life. This coating and its processes has provided automotive manufacturers with the opportunity of creating a Point Of Difference (POP) in their components.

For more information, contact Metallizing Equipment CO. PVT. LTD., www.mecpl.com, email: mecpl@sancharnet.in

ITSA On Facebook

Dear Thermal Spray Colleague,

The International Thermal Spray Association now has a very basic Facebook Page. If you are a Facebook user, you can simply type in thermal spray in the top search engine. At that point, select "like" and you will be connected to the ITSA page. Right now, we have our ITSA promotion video on the page, plus a few recent messages. We are not sure how and to what extent this will be used, but it was apparent by some recent and continuing requests that we be there. If you are a Facebook visitor, enjoy.

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Praxair Reintroduces the CoArc™ Spray System and 9935 Advanced Arc Spray Gun

TAFI Incorporated, a Praxair Surface Technologies company, has reintroduced the next generation twin-wire CoArc spray system and 9935 Advanced Arc Spray Gun.

The CoArc system utilizes several new improvements in arc spray technology to improve the quality, repeatability, and versatility of arc spraying. These include a user-friendly touch-screen interface, closed-loop control of the spray process, and the new robust TCV 400 power supply for smoother operation and higher deposit efficiency. The CoArc control console incorporates a programmable logic controller **CoArc™ Arc Spray System with 9935 Gun.**

adjusts the power supply voltage, spray air pressure and wire feed rate. New standard features include closed-loop control and wire feed counter to ensure superior application management by delivering precise control of the arc spray process during the entire duration of the spray run.

The 9935 Advanced Arc Spray Gun, backed by over 30 years of arc spray experience, was **9935 Advanced Arc Spray Gun developed as a precision with TAFAGlide wire delivery system.**

duty arc spray gun. The 9935 can be machine mounted or hand-held and is 350 Amp capable. Design features include a reliable DC servo motor wire drive, an integrated high velocity, focused spray pattern alignment housing, and a proven, robust drive design. Consistent superior coating quality is ensured by the new TAFAGlide wire delivery system which provides smooth, stable wire feeding characteristics eliminating the need for complicated and expensive "Push-Pull" wire feed assist.

For more information on these products, visit website praxairsurfacetechologies.com

CoArc is a trademark of Praxair Technology, Inc. in the United States and/or other countries.



LinkedIn Has Thermal Spray Group

The business social network "LinkedIn" has a group titled "Thermal Spray Coating" **currently with 431 members** and some discussions.

If you are interested, please visit www.linkedin.com and join the network and then join the group.

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CALENDAR OF EVENTS

NOVEMBER 2011

14-17 Chicago, IL USA *FABTECH Int'l & AWS Welding Show with a Thermal Spray Pavilion and Conference* - visit

www.fabtechexpo.com

15-16 San Jose, CA USA *ISTFA 2011 37th Int'l Symposium for Testing and Failure Analysis* - visit www.istfa.org

28NOV - 2DEC Boston, MA USA *2011 MRS Fall Meeting* - contact Materials Research Society, info@mrs.org, www.mrs.org/fal/2011

DECEMBER 2011

7-9 Limoges, France *5th RIPT: Int'l Workshop on Thermal Spraying* - contact Lech Pawlowski, lech.pawlowski@unilim.fr, www.unilim.fr/spcts

13-15 Las Vegas, NV USA *Power-Gen International* - visit www.power-gen.com

2012

JANUARY 2012

30JAN-2FEB Tampa, FL USA *SSPC 2012* - www.sspc.org

FEBRUARY 2012

1-4 Jeddah, Saudi Arabia *Metal & Steel 2012* - visit website <http://www.metalsteeleg.com/metal>, email jeddah@arabiangerman.com



29FEB-1MAR Houston, TX USA *LAM*

2012 Laser Additive Manufacturing -

visit Laser Institute of America www.lia.org

MARCH 2012

27-29 Los Angeles, CA USA *Westec 2012* - visit www.westeconline.com/2012

APRIL 2012

9-13 San Francisco, CA USA *2012 MRS Spring Meeting* - contact Materials Research Society, info@mrs.org, www.mrs.org/spring2012

11-14 Osaka, Japan *Japan Int'l Welding Show* - visit www.weldingshow.jp/english

22-25 Las Vegas, NV USA *IBSC 2012 5th Int'l Brazing and Soldering Conference* - visit website www.asminternational.org/content/Events/ibsc

28APR-3MAY Santa Clara, CA USA *55th SVC Annual Technical Conference* - visit www.svc.org

MAY 2012

2-4 Mexico City, Mexico *Weldmex Expo Industrial Mexico 2012* - visit www.expoindustrialmexico.com.mx

7-10 Atlanta, GA USA *AISTech 2012 Association for Iron and Steel Technology* - visit www.aist.org

21-24 Houston, TX USA *ITSC 2012 Int'l Thermal Spray Conference* - visit

www.asminternational.org/itsc

23-26 St. Petersburg, Russia *Essen Welding Pavilion* - visit www.schweissen-schneiden.com

JUNE 2012

10-13 Nashville, TN USA *PowderMet*

2012 Int'l Conference on Powder Metallurgy - visit

www.mpif.org

11-15 Copenhagen Denmark *ASME*

TurboExpo 2012 -

www.turboexpo.org,

igti@asme.org

11 JUN - 4 JUL Munich, Germany *European Thermal Spraying Specialist (ETSS) Course* - email slv@slv-muenchen.de, visit

www.slv-muenchen.de

12-14 San Diego, CA USA *Mega Rust 2012:*

U.S. Navy Corrosion Conference - Teresa

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18-21 Charlotte, NC USA *AeroMat 2012* - visit www.asminternational.org

JULY 2012

8-14 Denver, CO USA *65th Annual Assembly IIW International Conference* - Contact-IIW General Secretariat , email l.durand@iiwelding.org

10-11 Lumpur, Malaysia *8th Int'l Materials Conference and Exhibition IMTCE 2012* - visit www.imtce2012.com

OCTOBER 2012

12-14 Las Vegas, NV USA *FABTECH with a Thermal Spray Pavilion and Conference*  - visit www.fabtechexpo.com

23-27 Hanover, Germany *EuroBLECH 2012 22nd Int'l Sheet Metal Working Technology* - visit www.euroblech.com

29-31 India *Essen Welding Cutting Surfacing with Metallurgy India and Tube India* - visit www.schweissen-schneiden.com

NOVEMBER 2012

8-9 Munich, Germany *9th HVOF Colloquium High Velocity Oxy-Fuel" Flame Spraying* - contact GTS hvof@gts-ev.de, web www.hvof-gts-ev.de 

2013

MAY 2013

TBD Salt Lake City, UT USA *Int'l Thermal Spray Association Annual Membership Meeting and Technical Program* - contact itsa@thermalspray.org 

SEPTEMBER 2013

16-21 Essen, Germany *Int'l Trade Fair Joining Cutting Surfacing* - visit www.schweissen-schneiden.com

 **International Thermal Spray Conference 2012**
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Finishing Online Website Now Includes Thermal Spray

The website "Finishing Online" (www.finishingonline.com) now includes "thermal spray" in an "industries" area. Everyone is eligible for a basic free listing for one year. Go to their website to register and get your free listing.

Journal of Thermal Spray Technology®

A publication of the *ASM Thermal Spray Society*
Copper Surface Coatings Formed by the Cold Spray Process: Simulations Based on Empirical and Phenomenological Data

A. Trinchì, Y.S. Yang, A. Tulloh, S.H. Zahiri, and M. Jahedi

Copper surface coatings produced by the cold spray process have been simulated by means of a two-dimensional computer simulation and compared with experimental data in terms of their porosity. During cold spray, solid state powders containing micrometer-sized particles are accelerated to supersonic velocities and fired onto a substrate, whereupon they undergo plastic deformation and subsequently adhere. Many factors may determine the resultant coating properties, among which include the particle size distribution, velocity, stagnation temperature, and pressure. The approach taken herein differs from those traditionally employed for modeling particle deformations and the subsequent formation of a surface coating. Such approaches rely heavily on the distribution of kinetic energy, elasticity, and fluidity of particles impacting the surface. Consequently, they are computationally impractical to simulate a bulk sample with statistical distributions of particle shape, size, and various experimental conditions. Rather than modeling the physical processes involved in particle deformations, our approach relies on correlating empirical and phenomenological statistical relations of particle sizes and velocities obtained from experimental data to simulate coatings several hundreds of micrometers thick. In doing so, it enables the porosity of the coating to be related to both the temperature and particle size of the cold spray powders.

Read the entire article in the September 2011 Issue

Visit www.asminternational.org/tss

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NEW "Supporting Societies" Membership

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.

See the Supporting Societies listing on page 17.

This is ideal for membership exchange between organizations. Contact Kathy Dusa at the headquarters office via email to itsa@thermalspray.org

Camfil Farr Appoints Greg Schreier



Camfil Farr Air Pollution Control (APC), a leading producer of industrial dust and fume collectors, has appointed **Greg Schreier** to the newly created position of Metalworking Market Manager. Schreier will work with the company's worldwide sales and distribution network on applications involving ambient weld fume systems,

plasma and laser cutting systems and other metalworking processes. He will also focus on helping customers comply with applicable EPA, OSHA and other governmental regulations affecting the metalworking market.

Schreier brings 26 years of sales, engineering and production management experience in industrial dust collection and air pollution control to the new post. Prior to joining Camfil Farr APC, he was a long-time manufacturer's representative for the company, serving since 1998 as an owner and general managing partner of Glacier Technology, Inc., (Plymouth, MN), an equipment distribution firm specializing in custom dust collection and air filtration systems for manufacturing and medical products companies.

Schreier holds a MBA from the University of Minnesota, Carlson School of Management (Minneapolis) and a Bachelor of Science degree from Bemidji State University (Bemidji, Minn.).

Camfil Farr APC is a leading global manufacturer of dust collection equipment and is part of Camfil Farr, the largest air filter manufacturer in the world.

For general information in the U.S. and Canada, contact Camfil Farr APC at (800) 479-6801 or (870) 933-8048; e-mail filterman@farrapc.com; web www.farrapc.com.

For general information outside the U.S. and Canada, visit www.camfilfarrapc.com.



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Photo by: Cees van Rooden
Wonderful Copenhagen

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D E N M A R K

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Jim Morris Joins DiaPac™



Jim Morris has joined DiaPac™, Houston, Texas as part of their Sales and Marketing Team

DiaPac™ are global suppliers and innovators of tungsten/tungsten carbide materials. Their products and services are used across a broad array of industries and applications with the oil and gas exploration market

drawing focus from their Houston headquarters. The foundation of the company was built on the recovery of tungsten carbide materials, but their capabilities have expanded over time enabling them to offer an extensive array of hard metal products and services. DiaPac™ has manufacturing sites in Texas and Montana to support our global market activities.

Jim will be involved in the sales and marketing of tungsten carbide and tungsten base alloy powders for use in wear and erosion environments.

Prior to joining DiaPac™ Jim spent 10 years with North American Höganäs, Johnstown, PA and 25 years with

Kennametal Inc. Latrobe, PA involved in sales and marketing roles for metallurgical powders

For more information please contact Jim Morris via email jmorris@diapac.com

ILMO Announces new Roles and Promotions in Propane, Purchasing, and Specialty Gas Departments



ILMO Products Company announces the recent addition of **Doug Gandy** and **Jayna Hunt** and the promotion of **Josh Crews** to the ILMO team. Each of these industry professionals will serve the company and its customers in newly developed roles, and for one, to start up a new division.

Doug Gandy joins ILMO as Program Manager for the newly-formed ILMO Propane. Among responsibilities for the start-up of ILMO Propane in current and new territories, he will also oversee the division's long-term growth and sales strategy. Gandy has 13 years of experience in sales propane and management for FerrellGas, and holds a BA in Business Administration from Greenville College.

Jayna Hunt takes on a new position at ILMO Products as Purchasing and Inventory Control Manager. In addition to

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focusing on improving costs, on-time delivery, and service from our suppliers and leading our purchasing, inventory control, and shipping and receiving personnel to provide excellent customer service, she will manage efficient purchasing, shipping, and inventory operations for ILMO's hard goods. Hunt's background includes 18 years of purchasing and materials management roles in manufacturing and distribution companies, including Panduit and The Pampered Chef. She holds certifications in both Purchasing (CPM) and Materials Management (CPIM), and graduated with honors with a BS from University of Massachusetts and an MBA from the University of Hartford.

Josh Crews has been promoted to Analytical Lab Technician for ILMO Specialty Gases, ILMO's ISO 17025 accredited gas laboratory in Jacksonville, IL, to oversee laboratory analysis practices and fulfillment operations for domestic and international customers. He has been with ILMO for 5 years as a Purchasing Assistant overseeing common carriers, price control, and haz-mat compliance and training for shipped gases. Crews has a BA in Environmental Biology and Ecological Studies from Illinois College and holds hazard control and security certifications from the Department of Transportation and the International Air Transport Association.

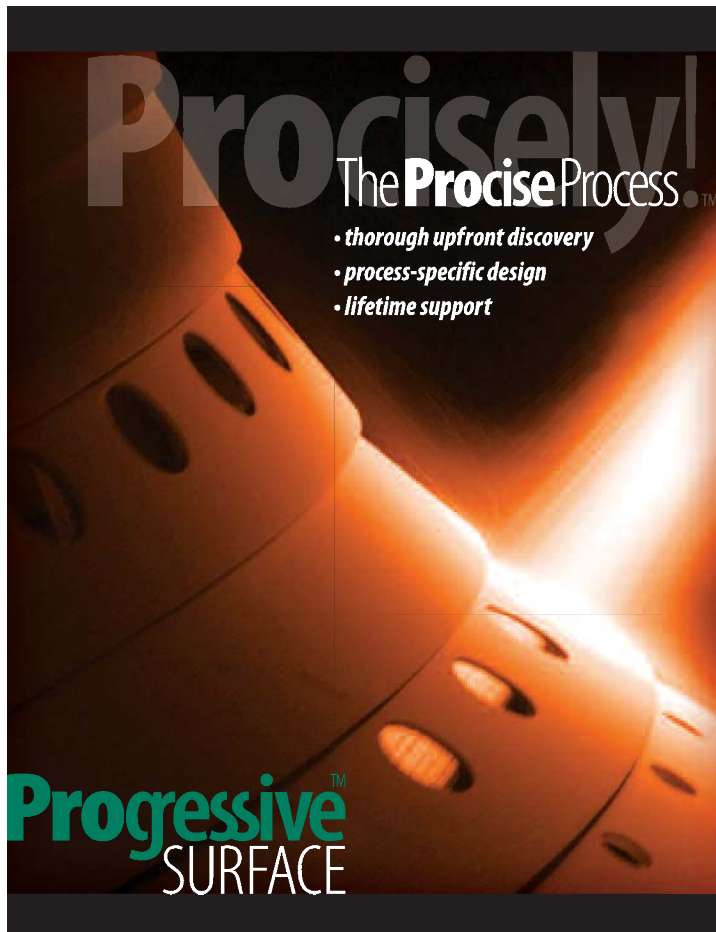
"We are pleased to add Doug and Jayna to our team of talented professionals and look forward to the

contributions that they will make to our operations", said Brad Floreth, President. He added, "And Josh's proven talents will continue to improve the way we serve our customers, now in the Specialty Gas lab."

About ILMO Products Company: Since 1913, ILMO Products Company has been a family-owned distributor of industrial, specialty, and medical gases in bulk, micro-bulk, and cylinder solutions, as well as retail sales of welding and safety equipment, accessories, and welder repair services. Our Industrial and Specialty Gases groups service diverse markets such as fabricators, thermal spraying, coal producers, power plants, steel contractors, chemical processors, manufacturing facilities, cryogenic and research laboratories, and beyond. ILMO Specialty Gases' ISO/IEC17025:2005 Accredited Gas Laboratory serves customers across the U.S., Canada, and South America, while ILMO Medical Gases provides medical and device gases and gas systems for all related industries. ILMO has over 90 employees across 9 locations in Illinois and Missouri.

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Paul Kammer Retires

Paul Kammer has retired as Technical Editor of SPRAYTIME after 13 years and is winding down his working career of more than 50 years in the welding and thermal spray fields.



Paul received a B. Met. Eng. (1959) from Rensselaer and a MS (1966) and a MBA (1967) from Ohio State. Upon graduation from Rensselaer he served as an officer in the US Navy before beginning his technical and business career. He most recently worked in his consulting business, Kammer Associates, and before that was employed in industry by Battelle, McKay, and Eutectic in the US; and Castolin in Switzerland. While at Castolin he managed the global expansion of their thermal spray business which included the acquisition of TAFA (subsequently sold to Praxair).

He served on many committees of the American Welding Society and of the ASM Thermal Spray Society, including a term (1998-2000) as President of the latter. Paul was named a Fellow of both AWS (2001) and ASM (1996) and was named an Honorary Member of AWS (1995).

Paul has published more than 35 technical articles in the welding and thermal spray fields and is the primary inventor for several patents on welding and thermal spray consumables; including two that covered the first atomized self-bonding thermal spray powders. This group of powders included a 95Ni-5Al alloy that was approved by the aero-turbine industry at a time when most of the industry believed that only composite powders could possess a true self-bonding characteristic.

Paul has been married to his wife Margaret for 50 years and they have three adult children and two grandchildren.

Applause, applause! Thank you Paul for your industry contributions and especially for all your expertise with SPRAYTIME over the past thirteen years!

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***SPRAYTIME archives are searchable
Visit www.thermalspray.org and choose SPRAYTIME
to search previous issues for data.***

Karen Hitchcock Honored

Thermal Spray Technologies (TST) Quality Assurance Manager, **Ms. Karen Hitchcock** was honored by the U.S. TAG (Technical Advisory Group) to ISO/TC 176 for outstanding professional achievement.

Ms. Hitchcock was recently honored with an outstanding professional achievement award at the ISO/TC 176 group's spring meeting. Ms. Hitchcock has spent much of her professional career in the area of quality. She has served as a member of the U.S. TAG ISO/TC 176 committee for over six years.



Ms. Hitchcock is a key member of the TST management team and has been the driving force in the growth and improvements to TST's quality systems and practices as embodied in the ISO 9000 series of quality management and assurance standards.

ISO/TC 176 is the committee responsible for the ISO 9000 series of quality management and quality assurance standards that have been developed and continue to be developed. For more information about the ISO/TC 176 organization, visit their website at www.tc176.org.

Thermal Spray Technologies applies a wide range of materials using thermal spray processes to enhance the properties of our customer's products. Thermal sprayed coatings improve component performance and value resulting in longer product life and reduced machinery downtime. Please visit our website at www.tstcoatings.com to learn more about our coatings and thermal spray.

For additional information please contact Brad Wagner, Director of Sales, bwagner@tstcoatings.com, 608-825-2772 ext. 238

Join the ASM Thermal Spray Society Online Community Forum

ASM TSS members welcome visitors to register and access the new **searchable** forum, as well as explore the new online community.

To subscribe, visit <http://tss.asminternational.org>, choose networking and forum for instructions.

Thermal Spray Jobs listed at "For Hire" www.thermalspray.org

LinkedIn Has Thermal Spray Group

The business social network "LinkedIn" has a group titled "Thermal Spray Coating" **currently with 431 members** and some discussions.

If you are interested, please visit www.linkedin.com and join the network and then join the group.

In Memoriam

Scott R. Goodspeed of Greenville died peacefully with family at his side on August 8, 2011 after a courageous battle with cancer.



From the Goodspeed Family:

Formerly of Grafton Massachusetts, Scott moved to Wells Maine after marrying his wife Cheri Coulton Goodspeed. They ran their restaurant "Merriland Ridge" in Wells for ten years before moving to Greenville, Maine; where they have since revived the old

Moosehead Lake Indian Store into what is now known as Kamp Kamp, with their brother Randal Coulton.

He is survived by his wife of 20 years, Cheri, daughter Kelly, her husband Chas Allen, children Tabitha and Sam of Hardwick Mass, son Dale of North Grafton, Mass and his wife Danielle and their children Cadence and Wesley, daughter Erica Rose of Ogunquit, Maine and Scott and Cheri's furry, loving, companion Lily. Many special family members and friends supported Scott during this battle with what we called the "Little C" and he thanks you all for your loving thoughts and prayers.

Scott lived life to the fullest, full throttle most would say. He was not here "for a long time but a good time" and anyone that had the privilege to know him could attest to that! He took up skydiving at 60 years of age. He loved the thrill and speed that he also had from his restored Corvette.

Scott was passionate about his work and at times was teased that his cell phone meant more to him than anything else. His career took him all the over the world and most recently he worked for Farr Air Pollution Control out of Jonesboro Arkansas and truly had found his niche. His contributions to the Thermal Spray community for over 38 years will be missed. He worked with companies like Pratt and Whitney, General Electric, Rolls Royce and made lasting relationships and friendships that he cherished. He was a call fire fighter in Grafton Mass and retired as a lieutenant for Ladder Company 1 after 25 years before moving to Maine. He was most proud of the fact that he was an Eagle Scout in Grafton Mass and was the youngest to ever attain that honor in Troop 107 at Grafton, Massachusetts at that time.

He was affiliated with many organizations in his line of work which included the International Thermal Spray Association (ITSA), the American Welding Society, the ASM Thermal Spray Society and ASM International. Scott was an officer with ITSA for twelve years and an active contributor with the association for his entire thermal spray career.

In lieu of flowers please make donations in Scott's Memory to one of our local charities of your choice in GreenvilleMaine: CA DeanMemorialHospital; Greenville Junction Depot Friends; Moosehead Historical Society and Moosehead Marine Museum-Katahdin

Thank you all again for all your support, he went peacefully and without pain with all of us with him. hugs to you all and goodnight from the castle...

"The kids and I would like to again thank you all for your support and love, it is a wonderful thing that we have with all of you and it will never be duplicated!"

Cheri, Kelly, Dale and Erica Rose oxooxooxox

A Memorial Cruise to honor Scott's life was held on a beautiful evening on Moosehead Lake with almost 200 people aboard the Historic Katahdin. It was a magical moment when everyone toasted Scott, looking at his castle on the hill and then a Bald Eagle flew out over the bow of the Katahdin.

You may send cards to The Goodspeed Family, 51 Moosehead Isle Rd, PO Box 1262, Greenville, ME 04441

From Camfil Farr

(August 8, 2011) "It is with great sadness that I inform all of you that today we lost a great friend, colleague and mentor, Mr. Scott Goodspeed. I won't go into what a great career and history Scott had within the Thermal Spray industry because most of you know this history much better than we do at CF APC. But for the past three years we at CF APC were truly blessed to be associated with this man. His technical knowledge of the industry, his built-in network of most of the great people within the industry, and his ability to teach this to all of us was unsurpassed, but his true gifts to us were his honesty, his sincerity, his work ethic and most importantly, his friendship.

Traveling with Scott to visit an existing client, a prospective client, or the many ITSA/TSS forums was always a treat. As most of you know, there weren't many people in the industry that Scott didn't know. However, he was never cavalier about this, always humble and simply matter-of-fact. It made it fun to be able to walk into most Thermal Spray shops and watch the people gather to talk to Scott. Rarely was the discussion about Thermal Spray. Often, it was to reminisce about great times had in the past. He was loved by many.

As most of you know, he leaves a beautiful family and many, many friends. Scott and Cheri, aka Dorothy, aka, Honey, were amazingly strong and so optimistic throughout this whole battle which began almost a year ago. Their main concern always seemed to be about others and not themselves. They have taught us all how to handle this very difficult situation with strength, optimism and love.

We at Camfil Farr APC raise a toast to Scott Goodspeed (aka Scott Goodspray) today and celebrate the time we had with him; because that's the way he would have wanted it."

Note to readers: There was such an incredible response from colleagues and friends with stories and salutations for Scott Goodspeed that we could not print them all.



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