

SPRAYTIME®

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Metallisation Protecting Film Industry Sets



The driftwood was sprayed as a test to see what could be achieved as a decorative coating.

For the first time in its 87 year history, Metallisation equipment has been used to protect film industry sets from damage during filming.

The polystyrene props were first cut to shape and then thermal sprayed with zinc and steel to strengthen them and make them less prone to dents during movement around the set. Metallisation customer and founder of The CNC Factory Ltd, Ed Hladio, has been contracted to create columns, walls and a 3D topographical map for a recent film.

Ed says: "When I work with film sets I regularly have to repair and patch up props due to damage caused while they are moved around, or through contact with actors and filming equipment. For many months now I have been experimenting with thermal spraying on all sorts of surfaces, including apples and wood. So, when it came to creating the new film sets it made perfect sense to me to thermal spray the polystyrene shapes to give them strength and protection."

The 3D map, created for a film, needs to be strong enough to take the weight of the actors who will be walking upon it during filming. This strength and durability is provided by the thermal sprayed finish.

The reason thermal spraying works so well for polystyrene is that the molten particles created during the arc spray process hold only a small amount of heat energy. This heat dissipates very quickly when it comes into contact with the large surface of the polystyrene. During the arc spray process the raw materials, a pair of metal wires, are melted by an electric arc. The molten material, in this case zinc and steel, is atomized by a cone of compressed air and propelled towards the

continued on page 4



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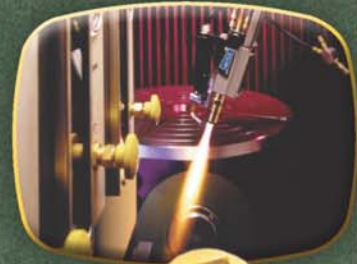
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Mission: To be the flagship thermal spray industry newsletter providing company, event, people, product, research, and membership news of interest to industrial leaders, engineers, researchers, scholars, policy-makers, and the public thermal spray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

Kathy M. Dusa Managing Editor

Paul Kammer Technical Editor

Dan Hayden Editor

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Article submissions (subject to acceptance and edit), advertising insertions, address correspondence, subscription request, back issue copies, and changes of address should be sent to:

Editorial and Production Office

Kathy M. Dusa, Managing Editor

208 Third Street

Fairport Harbor, Ohio 44077

United States of America

voice: 440.357.5400

fax: 440.357.5430

email: kathydusa@thermalspray.org

spraytime@thermalspray.org

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SPRAYTIME First Quarter 2010

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polystyrene. This spray solidifies when it hits the surface of the workpiece to form a dense coating making thermal spraying the perfect solution for protecting items made from polystyrene.

One of the alternatives to thermal spraying is to fill or coat the surface of the polystyrene shapes with hard setting resins. This process is very messy, takes time to cure and requires additional work in sanding the surface to acquire the appropriate finish. With the tight timescales Ed has to work to, thermal spraying provides the most efficient and effective solution.

Ed has previously thermal sprayed polystyrene for other film scenes. These include cutting 'books' out of polystyrene for a library scene. The books were then thermal sprayed for durability and painted to look like a row of books. He is currently experimenting with different colored metals and materials to enable him to offer a range of finishes to his clients. He is also looking at post spraying techniques, such as polishing and acid ageing, to expand the range of finishes available and to increase the durability offered by thermal spraying polystyrene. Ed has also used the Metallisation Arc140 system to spray metals onto boat molds and to produce rotational molds.

Ed continues: "People think of thermal spraying as simply an engineering process. But I have shown that it has a much more creative use if you think outside the box. The most exciting thing is that no one expected me to do this.

I love being challenged and looking for ways to create film sets and props that are durable but realistic. It's all great fun."

As well as being used on polystyrene, thermal spraying can also be used to spray fibreglass and carbon fibre moldings for decorative purposes.

Iris NV Expands Use of Thermal Spraying

Metallisation customer; Iris NV, based in Belgium; has expanded its use of thermal spraying and purchased additional Metallisation equipment to accommodate this expansion. Iris was founded in 1946 as an industrial painting company specializing in the treatment of gas pipes, electrical stations, high tension networks and power pylons.



The services offered by Iris became very popular, very quickly, throughout Belgium and it responded by expanding its services to include the protection of bridges and train stations. The company has continued to develop over the years and, in the late 1990s, built a brand new workshop measuring 328x68 ft (100x20 m), to enable the company to handle structures weighing up to 38.5 tons (35 tonnes) and measuring 377 ft² (35 m²). Iris is now one of the leading companies in Belgium providing surface treatment, particularly anticorrosion, to all types of structures.

Recently two of its most important clients, both in the petrochemical industry, requested thermal spraying for a number of vessels and columns. Iris has been treating one of those clients' pressure vessels, storage tanks and silos since 1964, so has an excellent understanding of the anticorrosion requirements. Thermal spraying was the natural development for the protection of these vessels and tanks, as it's proven to be a very robust coating solution for protecting against corrosion under insulation (CUI) of refinery/process plant vessels and steel fabrications. Both



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Shell and Exxon Mobil have embraced this process for the protection of steel-work against CUI applications.

As a result of the increased demands by many of its clients Iris decided, under the guidance of the workshop foreman, to teach more of its

operators how to thermal spray. The additional operators underwent an intense training course and completed the necessary qualifications to become proficient thermal sprayers. This was critical to the client's demands and specifications. It also ensured more members of the team now meet all of the industry standards and have an excellent understanding of all aspects of thermal spraying.

Prior to spraying the distillation columns, for one of its petrochemical clients, the surface was prepared by grit blasting with steel grit to SA 2.5, with a surface roughness between 3 and 4.3 mils (75 and 110 μm). This was then arc sprayed with aluminium Grade 1350 to a thickness of 9.8 mils (250 μm). A seal coat was then applied to the columns with Sigmatherm paint to a thickness of 1 mil (25 μm).



Metallisation Arc 140/S350-CL.

To meet this high demand Iris is now experiencing from its clients', the company has purchased an additional system, to add to the five Metallisation systems it already uses. The new system, the Metallisation Arc140/S350-CL, will be located in the workshop, where two existing systems are in constant use. The other four machines are frequently used on the job. In the field Iris also uses the wire flame spray equipment. By investing in this extra, state-of-the-art thermal spray equipment the company can now specialize even more in this technique. By specializing in thermal spraying Iris is able to treat all kinds of materials under different, more complicated circumstances. Iris believes in and trusts these long standing techniques, such as aluminium thermal spray, and is happy that this will ensure its leading position in the industrial painting industry.

Established in the UK in 1922, Metallisation is synonymous with thermal spraying to a diverse range of industries around the world. Thermal spraying is a technology, which protects and greatly extends the life of a wide variety of structures, equipment and vessels, in the most hostile environments and in situations where protective surface coatings are vital for longevity.

For more information, please visit www.metallisation.com or call Stuart Milton, sales and marketing manager on 01384 252 464.

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"What is Thermal Spray?" In South Africa



Marc Horeth of Praxair Services GmbH presentation.

With the 2010 FIFA Soccer World Cup less than 100 days away, South Africa was pleased to receive another overseas visitor namely, Marc Horeth of Praxair Services GmbH.

Weartech (Pty) Ltd, the South African agents for Praxair TAFE hosted two technical evening's where Marc discussed "What is Thermal Spray" and it's numerous applications.

The first was in Johannesburg, which is also the host of the opening and final games of the World Cup and the second was in Kwa-Zulu Natal, where a semifinal game will be held.

Many people from various institutes such as SAIW (Welding) and the Corrosion Institute of South Africa attended as well as existing thermal spray vendors. All of the attendees were very impressed and enlightened to thermal spray's capabilities.



"What Is Thermal Spray" audience.

Thermal spraying in South Africa is relatively small when compared to other modernized countries. There are approximately 23 HVOF systems, 15 plasma systems, almost 100 arc systems and a large number of flame spray systems. We have about 15 plasma transferred arc machines running and only one laser cladding system in operation.

For more information, you are invited to visit the Weartech website for more photos and to email me on adam@weartech.co.za if they think their team will win the 2010 FIFA World Cup; and by the way, I don't have any spare tickets.

Author Adam Wintle, Weartech (Pty) Ltd, website www.weartech.co.za, P.O. Box 14125, Wadeville, 1422, 187 Galjoen Road, Wadeville Ext 2, 1428, South Africa, office telephone +27 11 824 6010, fax +27 11 824 6090, mobile +27 82 410 5215, email adam@weartech.co.za



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ProgressiveTM SURFACE

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Progressive Technologies has changed its name to **Progressive Surface**, highlighting the company's core competencies in the design and manufacture of world-class surface treatment machinery.

"Our new name better communicates our focus on surface treatment applications," said Doug Poortenga, executive vice president. "Progressive Surface machines are used all over the world in the most demanding shot peening, grit blasting, ultra-high pressure waterjet stripping, and thermal spray coating applications."

Progressive Surface produces custom and standard equipment used by the aerospace, energy, medical, military, and general manufacturing industries.

Over the course of its 41-year history, Progressive has become known for on-time delivery of complete solutions that meet the specific process requirements of each customer. As part of its name change, Progressive Surface recently formalized and branded its unique design, development, and manufacturing process.

"We call it the **Procise Process**™," said Jim Whalen, vice president sales and marketing. "It begins with our thorough, upfront discovery, where we ask a lot of

questions to understand the customer's precise requirements. We put more time in at the front end to be sure the end result is a process-specific machine that does exactly what the customer needs it to do. Our engineering, process, tooling, software, and automation expertise combine to create a total, integrated solution."

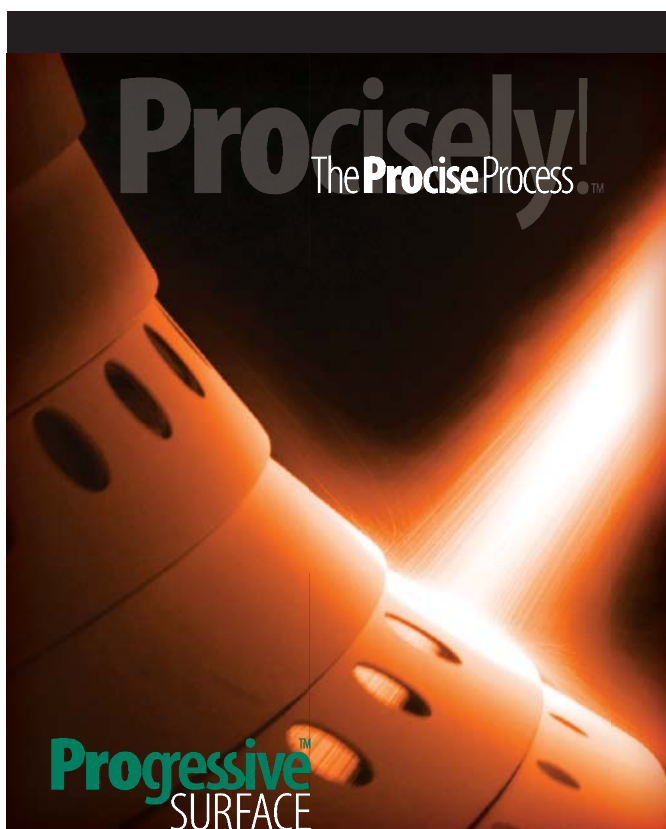
The personalized service of the **Procise Process** continues with lifetime support, provided by a team of technicians ready to serve customers 24/7.

"When we get calls for service, we're typically able to solve the problem over the phone; in some cases, the customer service engineer is the same one who originally installed the machine," said Whalen. Ninety-four percent of customers order from Progressive again.

The Grand Rapids, Michigan company began as Progressive Engineering Company and changed its name to Progressive Blasting Systems in 1972 and Progressive Technologies, Inc. in 1988. Through the name changes and several expansions, ownership and a strong customer focus have remained the same.

For more information, contact Progressive Surface, 4695 Danvers Drive SE, Grand Rapids, Michigan 49512-4018 USA, tel: 616.957.0871, fax: 616.957.3484, website: www.progressivesurface.com

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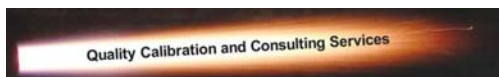
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Quality Solutions for all your thermal spray needs founded in 2010

After serving the thermal spray industry for 17 years as technical service manager for several prominent companies in the industry, **Armand Roy** has founded QCC LLC. Armand has developed service and calibration procedures for the equipment of most manufacturers in the thermal spray industry. His approach has been widely acclaimed as a significant improvement over previously accepted industry standards (not only for the calibration procedures but also for the manner in which the results are presented). In his capacity as technical manager, Armand has developed testing and repair departments, managed quality assurance, provided engineering assistance and technical phone service and has traveled all around the world to clients' facilities for the installation of complete systems, education of operators and technicians on system operation, troubleshooting and maintenance and to resolve equipment failures of all types.

One area of special expertise is the JP5000. As a Sr. R&D Technician, Armand helped design and refine the JP5000

and developed many of the original JP-5000 coatings. QCC has experience servicing Metco, Miller/Praxair, TAFA, JetKote, FST and GTV equipment. They consult on coating problems to assist and resolve issues and train spray technicians and management in proper thermal spray operations from taping and blasting to handling and application.

Armand is partnering with leaders in the industry and is surrounding himself with good people. He started in thermal spray in 1974, working 14 years in job shops in most of the positions imaginable, where he gained invaluable hands on experience that helps him understand most challenges his customers will ever meet.

As mentioned earlier, Armand has been a key designer of calibration programs and certification sheets to provide you the most useful information possible. QCC is now moving forward to advance those procedures and records using modern equipment to remove possible technician recording errors. Our calibration sheets are locked so only data points can be inserted. Our NIST certified flow meters are tested using critical orifices (before we start our work) to assure they have not been damaged during shipment. If we find them out of tolerance, a backup set will be shipped overnight to the technician so the work will not be delayed. Our service technicians will carry a copy of the NIST certifications with them (for your review) should you request to see them.

continued on page 10

INDUSTRY NEWS



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SPRAYTIME Newsletter First Quarter 2010 Circulation Report

We are proud to announce that since 2007 our distribution
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Geographic Breakout for <i>SPRAYTIME</i> Newsletter – 2010 First Quarter issue*						ASIA MIDDLE EAST		Bahrain	2
NORTH AMERICA			ZIP CODE	STATE	Distribution	Iran			5
United States			955-999	AK	17	Israel			7
ZIP CODE	STATE	Distribution	980-994	WA	215	Kazakhstan			1
010-027	MA	189	970-979	OR	35	Kuwait			4
028-029	RI	38	900-961	CA	382	Pakistan			2
030-038	NH	110	967-968	HI	6	Saudi Arabia			9
039-049	ME	28	Pacific		655	Turkey			16
050-059	VT	15	008-008	VI	0	United Arab Emirates			13
060-069	CT	263	U.S. Territories		0	ASIA MIDDLE EAST TOTAL			59
New England		643	UNITED STATES TOTAL			5740			
070-089	NJ	102				AFRICA		Algeria	1
100-149	NY	527	Canada B0-		NS	2	Egypt		3
150-196	PA	476	C0-C9Z		PE	2	Ghana		2
Mid-Atlantic		1105	G0-J9Z	QC (PQ)	224	Kenya			1
430-459	OH	526	K0-P9Z		ON	195	Nigeria		2
460-479	IN	182	R0-R9Z		MB	20	Republic South Africa		24
480-499	MI	270	S0-S9Z		SK	4	Zimbabwe		1
530-549	WI	138	T0-T9Z		AB	80	AFRICA TOTAL		34
600-629	IL	167	V0-V9Z		BC	54			
East No. Central		1283	Canada Total		581	EUROPE		Austria	59
500-529	IA	31				Belgium		41	
550-569	MN	121	Mexico Total		37	Croatia			1
570-579	SD	3	NORTH AMERICA TOTAL			6358	Czech Republic		20
580-589	ND	9				Denmark			8
630-659	MO	157	SOUTH AMERICA			Estonia			3
660-699	KS	31	Argentina		7	Finland			33
680-693	NE	4	Brazil		51	France			108
West No. Central		356	Chile		5	Germany			506
197-199	DE	5	Colombia		0	Greece			10
200-205	DC	30	Ecuador		3	Hungary			2
206-219	MD	76	Panama		1	Italy			70
220-246	VA	92	Peru		5	Latvia			1
247-269	WV	15	Venezuela		14	Lithuania			1
270-289	NC	152	SOUTH AMERICA TOTAL			86	Malta		1
290-299	SC	98				Netherlands			101
300-319	GA	53	CENTRAL AMERICA			Norway			9
320-349	FL	179	Guatamala		3	Poland			14
South Atlantic		700	CENTRAL AMERICA TOTAL			3	Portugal		4
350-369	AL	60				Republic of Ireland			6
370-385	TN	45	ASIA			Romania			3
386-399	MS	13	China		118	Russia			15
400-429	KY	48	Hong Kong		0	Slovenia			19
East So. Central		166	India		78	Spain			57
700-715	LA	31	Japan		183	Sweden			47
716-729	AR	42	Korea		13	Switzerland			112
730-749	OK	67	South Korea		38	Ukraine			5
750-799	TX	407	Singapore		35	United Kingdom			215
West So. Central		547	Syria		1	EUROPE TOTAL			1476
590-599	MT	8	Taiwan		8				
800-819	CO	39	Thailand		15	OCEANIA			
820-831	WY	1	Vietnam		2	Australia			110
832-839	ID	20	ASIA TOTAL			491	Indonesia		7
840-849	UT	43				Malaysia			8
850-869	AZ	91	Caribbean Cuba		1	New Zealand			9
870-889	NM	66	Jamaica		1	Philippines			114
890-899	NV	17	Dominican Republic		2	OCEANIA TOTAL			248
Mountain		285	CARIBBEAN TOTAL			4			
(* Source for all information contained on this statement is "Publishers Own Data")						SPRAYTIME TOTAL		8759	

continued from page 8

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For more information, contact Armand Roy, QCC LLC, 8921 W. Hwy 96, Hortonville, WI 54944, tel/fax: 920-574-3283, cell: 920-574-7624, email: armandR@aol.com



Use the Free CSB Safety Video for Safe Gas Cylinder Handling Training

In June 2006, the United States Chemical Safety and Hazard Investigation Board (CSB) released a DVD depicting their investigation and conclusions of a fire at a gas filling and distribution facility in 2005. A small fire from one propylene cylinder caused by a venting relief device on a cylinder stored in direct sunlight, spread to other cylinders at the facility causing some to explode.

Hazards associated with gas cylinders and their contents include a danger of fire or explosion; reactivity, toxicity, or asphyxiation hazards; and the large amount of potential energy resulting from compression of the gas makes the cylinder a potential rocket or fragmentation bomb when

improperly handled or exposed to fire.

As the CSB DVD clearly shows, errant cylinders can penetrate brick walls, spin and ricochet completely out of control, explode with tremendous force, and become virtually unstoppable. Leaking cylinders can also displace or enrich extremely large areas, and immediately freeze exposed skin.

According to the conclusions reported by the CSB, the cause of the catastrophe at the facility was the result of relief valve settings that were too low for containerized gases stored in direct sunlight. The community impact from the catastrophe, according to a Safety Bulletin released by the CSB in June 2006 was that,

"Dozens of cylinders and cylinder parts were propelled into the community and were found on sidewalks, front yards, backyards, courtyards, parking lots, and under cars. Damage included a burned-out empty commercial building, fire-damaged cars, and destruction to residential and commercial buildings. Cylinder parts traveled as far as 800 ft from the area of the explosions. The fire plume spread asbestos from ruptured acetylene cylinders over a 1/3-mile wide and 1-mile long area."

This free DVD makes an excellent safety training resource. Download or request a free copy of the DVD by visiting the Chemical Safety and Hazard Investigation Board Video Room at www.csb.gov, and view a free downloadable PowerPoint presentation on compressed gas cylinder handling at www.charleshowes.com.

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ASM Thermal Spray Society Safety Committee

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



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Certification and Thermal Spray: A Standard for Growth



The nearly 100 year-old thermal spray industry is poised to expand into new applications and markets.

"Thermal spray technology isn't new," said Luc Pouliot, vice president, thermal spray at Quebec City-based Tecnar and chair of the TSS Thermal Spray Certification Committee (TSCC). "Its use has slowly been expanding from aerospace, automotive and gas turbine applications to industries such as printing, paper, power generation, food processing and more."

Industry Standard

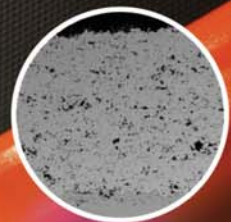
As part of this growth, real and imminent, TSS and leaders in the industry recognized the need to establish a standard of quality and consistency among thermal spray operators. So industry conversations began swirling around the concept of a certification program.

"You see certifications across most manufacturing disciplines, such as welding. It became apparent that TSS needed to implement a similar program to ensure operators met certain minimum requirements and consistent results," said Pouliot.

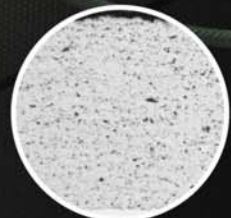
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continued from page 10

Outreach to other certification bodies, including GTS which administers a thermal spray certification program in Europe and AWS which administers the welding certification program, was a central core of the market research prior to and continuing during the development of this certification program.

Benefits of Certification

TSS realized a certification program could benefit the industry in three major ways: It allows companies to tout its thermal spray services as reliable and consistent. This in turn improves the perception and acceptance of thermal spray processes, thus opening up its uses to additional industries (thereby ensuring its growth). And lastly, it creates a self-directed, industry-created hallmark of excellence.

Among those requirements for a properly functioning industry is a means of distinguishing the qualified from the unqualified. Certifications do that through ensuring that there is industry involvement from the very beginning. Their involvement means that the program will be based on the actual practice.

Program Progress

Last year, TSS asked Pouliot and several other industry leaders to sit on a certification committee, whose responsibility would be to develop the thermal spray operator certification process. Together the group developed a profile of the candidate operator and an outline of the myriad tasks that operator is expected to do. From this, an online survey for operators was developed to ensure that the TSSC and the rest of the thermal spray industry are in agreement. The results of the survey were examined by the TSSC and an examination blueprint was developed.

"The industry input was invaluable, helped us understand how to prioritize the operator's job responsibilities and how they should be weighted in the certification process," said Pouliot. The resulting exam blueprint is based on five domains of practice (Figure 1) and weighted according to the survey feedback.

Figure 1: Exam blueprint for CTSO program.

Domain 1:	Safety and Environmental Concern – 20% of examination
Domain 2:	Set up and Part Preparation – 20% of examination
Domain 3:	Spray Equipment Operation and Maintenance – 20 % of examination
Domain 4:	Application of Coating – 30% of examination
Domain 5:	Record Keeping and Quality Control – 10% of examination

While there are examinations along the certification pathway, they should not be a cause for apprehension. The examination test questions are based on what the candidate operator is expected to know. No test item is based on material outside the scope of practice. For example, candidates may be asked questions about ensuring their personal safety during their daily work. They will not be asked to balance any chemical equations for NiCrAlY; that's not normally part of the operator's everyday responsibilities.

Grandfather Program

Meantime, experienced thermal spray operators (those with 15 years' experience in coatings application, five of which can be education-based) are invited to apply during

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the limited time CTSO grandfather program, which begins in April, 2010. Eligible grandfathered applicants will waive the general knowledge exam. However, all candidates must take a process performance exam before being awarded the CTSO. This program is designed to recognize those operators who have over their years of practice more than met the fundamental knowledge requirement.

CTSO Future

The CTSO program is a work in progress, but the candidate awarded the CTSO will be an operator who is versed in the fundamental knowledge of thermal spray, as well as possessing an in-depth knowledge and performance for a specific process. Those who wear the CTSO pin fashioned after the logo the Certification Committee adopted, will be proud of their accomplishment and able to visibly show that they have reached the national industry standard for thermal spray operators.

"It's an exciting time for thermal spray," said Pouliot, "and through this certification we can continue to grow our profile and expand our customer base across multiple industries."

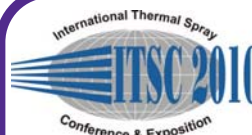
For more CTSO information, visit <http://asmcommunity.asminternational.org/portal/site/tss/Certification/> or contact Certification Program Manager Louise Wehrle, email: certification@asminternational.org

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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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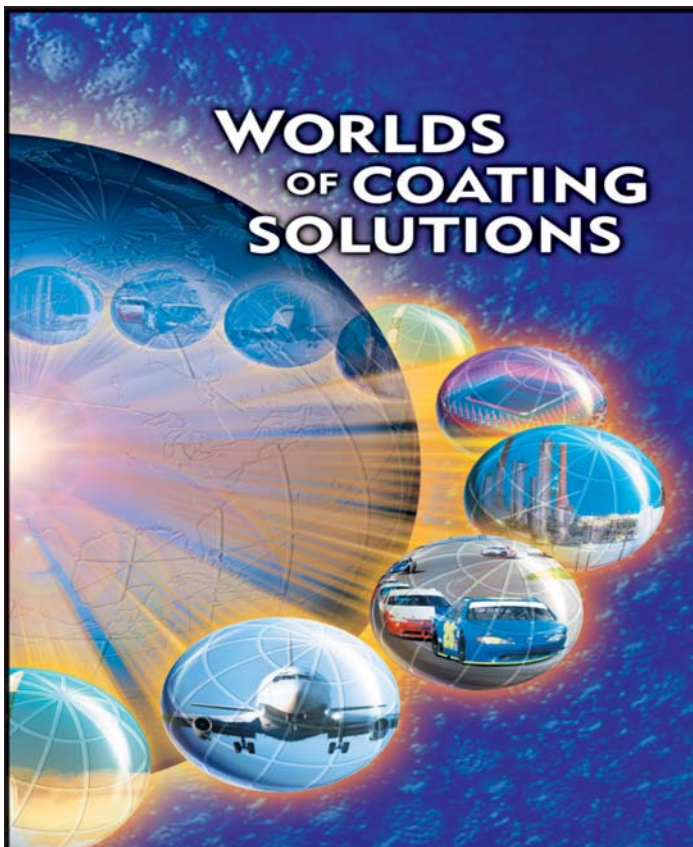
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Huffman Corporation Introduces HP-245ACC Laser Welding System With Fully Enclosed Atmospheric Chamber

Huffman Corporation, located in Clover, South Carolina introduces its laser welding system—the model HP-245ACC—with a fully enclosed atmospheric welding chamber. The benefits of laser powder fusion welding are further enhanced with the addition of a fully enclosed atmospheric chamber for welding in an inert gas environment. The system is designed for welding oxygen sensitive or reactive materials like titanium. The system can be configured with a variety of features like antechambers, inert gas handling and purification systems, oxygen and moisture sensors, and part handling devices to match the end user's specific needs.

Applications include weld restoration on worn surfaces on a variety of turbine engine components like blades, vanes, shrouds, seals and BLISKS or IBRs (Integrally Bladed Rotors). The system is also capable of 3D freeform fabrication—welding successive layers of material to build up complex 3D components.

Huffman's laser powder fusion systems are designed to meet the increasing demands for flexible, reliable, precision production systems for complex parts like flight and industrial gas turbine blades, vanes, and other components.

About Huffman Corporation: "Compelling Productivity. Legendary Reliability." – Founded in 1961, Huffman Corporation provides manufacturing process technology to the flight and industrial gas turbine, medical, and vehicle markets. The company's main technologies are high-precision, multi-axis grinding; laser powder fusion welding and abrasive waterjetting. Located in Clover, SC; a suburb of Charlotte, NC; Huffman is an ISO 9001:2000 and CE-approved supplier with global sales and service.

For more information, visit www.HuffmanCorp.com



INDUSTRY NEWS

Inframat Corporation Moves Operations To Accommodate Expansion

Inframat Corporation announces the relocation of its world headquarters to Manchester, Connecticut. The new facility allows for continued expansion of feedstock, advanced materials and delivery system production along with R&D activities. The expansion will allow Inframat to meet the increasing demand for superfine/nano-grained thermal spray feedstocks.

"Despite the economy, we continue to experience significant long-term growth of our business, including products in a diverse range of industries ranging from oil and gas to aerospace to medical devices. This move will allow us to expand our product lines as well as develop new superfine/nano-grained products" said Robert Lee, President and CEO.

"This move will significantly enhance Inframat's capability of delivering high quality R&D service and products to the US government and our commercial customers on time." Said Dr. Danny Xiao, Chairman and CTO.

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SPRAYTIME First Quarter 2010

The new Manchester facility is approximately 18,000 ft² and houses production, R&D and pilot plant, sales and support functions. The new layout adds efficiencies which will reduce the time required to bring new products to market.

Customer response has been very positive. "We are pleased to learn about Inframat's expansion and are looking forward to continued excellence in your products" said Scott Spruce, VP of Operations, Thermal Spray Solutions, Chesapeake, VA.

Inframat® Corporation is a leading manufacturer of superfine/nano-grained thermal spray feedstocks (powder and wire) and Solution Plasma Spray (SPS™) delivery systems. Primary lines include Infralloy™ WC/Co, NiCr/Cr₃C₂ along with Nanox® alumina, zirconia and titania ceramic powder products.

For more information, contact Stephen Glancy, director of sales and marketing, voice: 860.432.3155, fax: 860.432.3722, email: sglancy@inframat.com, web: www.inframat.com

VAC AERO Kalisz Installs a New HVOF Spray System

VAC AERO's new high velocity oxygen fuel (HVOF) system is based on a new generation Carbide Jet System.

VAC AERO's Kalisz, Poland-based operation recently installed a fully integrated High Velocity Oxygen Fuel (HVOF) system based on a new generation Carbide Jet System (CJS) produced by Dortmund, Germany-based Thermico.



The system's specially-designed combustion chamber is fed by hydrogen, kerosene and oxygen fuel and optimized for spraying MCrAlY coatings on turbine engine components, tungsten carbide coatings on landing gear components and can perform many other coating applications. Precise combustion and fuel configuration

settings control particle temperature and velocity to achieve optimal coating efficiency in less time and lower fuel consumption than other HVOF systems. The system was installed in a 13'X13'X 10' high (4X4X3 meters) soundproof booth.

The CJS torch is set in motion by a new Fanuc M20 robot with 8-axis movement (6 axes on the robot and 2 axes on a tilting turn-table integrated into and controlled by the robot). The torch's wide range of spraying temperatures prevents part overheating and an ID torch allows for spraying of parts with inner diameters as small as 6 in. (150 mm).



This versatile system can also operate with the following HVOF torches:

- Thermico CJS K5.2
- Thermico ID Coolflow
- Thermico ID Coolflow Mono
- Praxair JP-5000
- Deloro Stellite Jet Kote
- Sulzer Metco Diamond Jet.

The system is equipped with a CPF2 powder feeder that can achieve reproducibility in powder flow lower than 1% and accuracy of ±2%. It can also feed very fine (even nano) powder measured by mass-flow controllers. The new HVOF system complements VAC AERO's existing plasma spray and inorganic paint coating capabilities. The company continues to invest in new special processing technologies to provide customers with a wider scope of services.

The system was installed in a 13x13x10 ft high (4x4x3 m) soundproof booth.

The CJS torch is set in motion by a new Fanuc M20 robot with 6-axis movement. The torch's wide range of spraying temperatures prevents part overheating and an ID torch allows for spraying of parts with inner diameters as small as 6 in. (150mm).

Established in 2003, VAC AERO Kalisz also provides heat treating and brazing and metallurgical laboratory services to the burgeoning aerospace industry in Poland and other parts of Europe.

For more information, visit www.vacaero.com

WHERE IS YOUR ARTICLE?
The **SPRAYTIME** Editorial Staff encourages and welcomes your contribution.



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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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Tekna Advanced Materials Takes Place on the International Scene



It is in the presence of Sherbrooke Mayor, Mr. Bernard Sévigny, of the CEO of Sherbrooke Innopole, Mr. Pierre Bélanger, of the vice-president for research at the Université de Sherbrooke, Mr. Jacques Beauvais, of the directors of regional offices of the DEC and of the MDEIE, of the members of the board of directors of EFD, Norwegian company, partner of Tekna Plasma Systems Inc., of the representatives of the BMO, BDC and FTQ, financial partners, as well as Tekna employees, that the President and CEO of Tekna Plasma Systems Inc., Mr. Maher Boulos, announced the official opening of their new company **Tekna Advanced Materials Inc.**, located in Sherbrooke's Technoparc.

Mr. Boulos stressed that "the economical activity we are launching with this new project leading to the creation of ten new jobs planned for 2010, is our way of thanking our society and both levels of governments, federal and provincial, for their help throughout our twenty years of existence."

Mr. Boulos continued by pointing out that this project, which represents an investment of almost 5 million dollars, will allow Tekna to diversify its production of manufacturing of equipment and integrated plasma systems for the treatment and the synthesis of materials, by adding the role of producer of high added value materials for applications in microelectronics, biotechnology and the fabrication of wear-resistant pieces for the field of mines and oil drilling.

"More than ever, the City of Sherbrooke is counting on innovation, on putting together abilities, networks and strengths of the environment to assure its growth and economical development. Today, Tekna offers us a good example of the amazing potential of such attitude. What Tekna has achieved over the past 20 years is remarkable and lets us foresee a brilliant future", mentioned Sherbrooke Mayor, Mr. Bernard Sévigny.

Mr. Pierre Bélanger, CEO of Sherbrooke Innopole, declared that: "This is a proud moment for Sherbrooke Innopole to contribute to the rapid expansion of a local company, that is a stem from local university research and whose international alliance contributes to the radiance of Sherbrooke as an innovative city. We have a proof here of the potential of our innovative companies and this encourages us to continue in our effort to support the development in the field of nano-technologies."

Mr. Boulos also insisted on the fact that: "By launching this project during a period of economical recession, this project allowed Tekna to reposition itself very quickly and take back its place as leader on the international market in this field, during the recovery that is starting to show since the beginning of 2010. It is thanks to the fierce work of our amazing team, that we can face this challenge and that we have been able to assemble this new plant in record time." Mr. Boulos continued by mentioning that the construction of this new plant in Sherbrooke has also been joined to important efforts of marketing our products internationally. "This translated into the opening of a new office in Grenoble in France for the diffusion of our products in Europe, as well as the signature of representation agreements with EFD offices in Yokohama, Japan; Shanghai, China; and in Bangalore, India. These are added to our representation offices in Seoul, South Korea, and to Singapore."

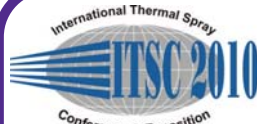
Mr. Boulos declared: "It is with great pleasure that I would like to express, in the name of the entire Tekna personnel, our great recognition to Canada Economic Development and to Développement économique, Innovation et Exportation du Québec for their important contributions to this project that we have launched last March, further to a meeting at our offices of all the participants in this file. Your receptivity, your encouragements, and your financial support have, without any doubt, had a marking effect on our decision to go forward with this project at a time where all the economical prognostics were signalling an important economical recession."

"Great thanks to your contribution for making this ambitious project a reality. You can be assured that we will spare no effort to make this project a great success and prove we were up to it. Also, great thanks to our EFD partners for their encouragements and support throughout this important step in the development of our company."

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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.

Officers

Chairman: **Dan Hayden**, Hayden Corporation
 Vice-Chairman: **David Wright**, Accuwright Industries, Inc.
 Treasurer: **Bill Mosier**, Polymet Corporation
 Corporate Secretary: **Kathy Dusa**

Executive Committee (above officers plus)

Marc Froning, BASF Catalysts LLC
John Read, National Coating Technologies
Scott R. Goodspeed, Farr Air Pollution Control
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.

ITSA Headquarters

208 Third Street, Fairport Harbor, Ohio 44077 USA
 tel: 440.357.5400 fax: 440.357.5430
itsa@thermalspray.org www.thermalspray.org



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.

International Thermal Spray Association Welcomes New Members

Tara Technologies, Inc. has joined the International Thermal Spray Association.

AS9100, ISO 9001:2000 & NADCAP AS7003 certified. Manufacturer and designer of components and systems used in critical applications for manufacturers in the semiconductor, aerospace, military, energy & medical markets. Capabilities include CAD designing, solid modeling & FEA (Finite Element Analysis), fabricating, coatings, testing & repairing. Engineering capabilities include ceramic integration, coating development & deposition, surface treatments & temperature control. Surface Technologies capabilities include Texturing (ceramic & metals) & Advanced Coatings (Thermal Spray – HVOF & Plasma, CVD and PVD) as well as support capabilities (automated shot peening, Age Heat Treat [vacuum and atmosphere] and FPI testing). Precision capabilities include rigorous process control, welding (including up to 150kV electron-beam welding), flatness & perpendicularity tolerance control, clean room assembly & welding & edge-welded bellows designing.

For more information, contact ITSA company Representative Mr. Bob Panza, via email Bob.Panza@TaraTechnologies.com or visit website www.taratechnologies.com

MesoCoat, Inc. has joined the International Thermal Spray Association.

MesoCoat, Inc is an advanced nanocomposite ceramic -metallic (cermet) coatings company that is developing a diversified, patented product platform that consists of environmentally friendly coating compositions; and breakthrough methods of applying coatings to large surface areas. MesoCoat is initially focusing on selected niches in the aerospace and defense, oil and gas, infrastructure and marine industries to be followed by introduction into broader markets, addressing the needs of OEM manufacturers and maintenance and repair organizations (MRO) in the transportation, construction, mining, utilities, and agricultural equipment markets. MesoCoat Inc was founded with the sole goal of becoming the dominant force in clean technology, nanocomposite cermet and high power density powder coating metal finishing technologies worldwide.

Since the seed funding of \$220,000 in July 2008, MesoCoat Inc. has created 12 new jobs and is currently hiring for 8 new positions in 2010. MesoCoat has operating lab/pilot scale application equipment, and closed a \$1.4M seed investment round in December, 2009, which includes milestone based options for an additional \$18.8M in series B and C financings. MesoCoat's Inc technology has won 3 R&D 100 awards, Nortech Innovation award, and the Technology Insertion program through National Institute of Standards and Technology. MesoCoat's core technologies acquired for MesoCoat's start-up phase includes over

\$13.5M in sunk R&D and product development costs, as well as over \$11M in investment/proof of concept development and testing at DOE National labs for the plasma arc lamp powder coating application technology. The company owns exclusive rights to engineered nanocomposite coating structures and the multiple R&D100 award-winning high power density powder coating application technology, and has established an IP baseline for the combination of nanoengineered cermets with 'Fused Arc Lamp' application process applications to enable technology commercialization.

For more information, contact ITSA company representative Anupam Ghildyal via email aghildyal@mesocoat.com or visit website www.mesocoat.com

Thermal Spray Jobs
listed at www.thermalspray.org

WHERE IS YOUR ARTICLE?
The *SPRAYTIME* Editorial Staff encourages and welcomes your contribution.

Journal of Thermal Spray Technology®

A publication of the **ASM Thermal Spray Society**
Abstract: The Correlation Between the Coating Quality and the Moving Direction of the Twin Wire Arc Spraying Gun

W. Tillmann, E. Vogli, and M. Abdulgader

Asymmetric melting behavior of the electrodes is a process-related feature of the twin wire arc spraying (TWAS) technique since the heating of the negative wire is different from that of the positive wire. The asymmetric melting behavior, particle crossover, irregular plume shape, and last but not least the arc voltage fluctuations affect the spraying jet on the whole and lead to an inhomogeneous plume. To investigate the effect of inhomogeneous spraying plume on coating characteristics, coatings were produced by moving the spraying gun in different directions, with respect to the electrodes. The porosity, micro-cracks, hardness, thickness, and adhesion strength of the sprayed coatings were measured and brought in correlation with the gun moving direction. In this study, two different wire types were investigated in order to find out the effect of the spraying gun moving direction on the coating quality.

Read the entire article in the January 2010 Issue

Visit www.asminternational.org/tss

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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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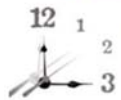
Lineage Alloys offer a comprehensive range of thermal spray powders to the industry.

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For information, contact us at 281.426.5535, fax: 281.426.7484, email: lineage@lineagealloysllc.com

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Free Poster

Free poster by Linde and the GTS (Association of Thermal Sprayers) which illustrates the different thermal spray processes (suitable for framing).

Send request for poster via email to itsa@thermalspray.org



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CALENDAR OF EVENTS

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

21 Houston, TX USA *Engineering Ethics in Action Course* - contact Melanie Diaz, tel: 281.493.3491 email diazm@asme.org

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



3-6 Pittsburgh, PA *AISTech 2010 The Iron & Steel Technology Conference and Exposition* - contact Gerry Kane, (724) 814-3022 or Jeff Campbell (724) 814-3030

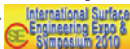
11-13 Mexico City, Mexico *AWS Weldmex - FABTECH Mexico - MetalForm Mexico* - visit www.aws weldmex.com (see advertisement page 21)

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

25-26 Cleveland, OH USA *Int'l Symposium on Surface Hardening of Corrosion-Resistant Alloys* - contact ASM Int'l tel: 440.338.5151, ext 0, email: customerservice@asminternational.org, website: www.asminternational.org

JUNE 2010

7-9 Shanghai China *ISE 2010 International Surface Engineering Expo* - contact email: surfaceexpo@126.com, 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* - visit www.turboexpo.org



15-16 Montreal, Quebec Canada *Canadian Cold Spray Conference 2nd CCSC* - visit www.coldspraycanada.com

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, ICCCE* - contact David Hui, Professor of Mechanical Engineering Univ. of New Orleans, tel: 504.280.6192, email: dhui@uno.edu

SEPTEMBER 2010

27-28 Akron, OH USA *ASM TSS Cold Spray Conference* - contact ASM Int'l tel: 440.338.5151, email: customerservice@asminternational.org, website: www.asminternational.org/coldspray,

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

30NOV - 4DEC Boston, MA USA *2010 MRS Fall Meeting* - visit www.mrs.org

MAY 2011

18-21 Chicago, IL USA *PowderMet 2011 Annual Conference* - Metal Powder Industries Federation, Sandra Leatherman email sleatherman@mpif.org, web: www.mpif.org

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Education Program April 17–22, 2010

Exhibit April 20–21, 2010

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Tara Technologies Corporation Names Motyka Coatings

Development/Applications Engineer

Elaine Motyka was named Coatings Development/Applications Engineer for Tara Technologies Corporation. Motyka will be working in our New Product Development group focusing on research and application development of thermal spray technology.



Prior to joining Tara, Motyka worked for Praxair Surface Technologies, TAFE, Inc. She is Green Belt certified and has nearly 20 years of hands-on experience in the field of

materials engineering.

Tara Technologies designs manufactures and tests components and systems used in critical applications for the world's leading manufacturers in the semiconductor, aerospace, military, energy, industrial and medical markets. Tara Technologies is headquartered in Daytona Beach, Florida, with manufacturing facilities in Florida. Tara also has facilities in California, and Singapore; and sales offices and distribution network across the US and worldwide.

Tara Technologies Corporation Announces Accornero New Operations Manager of Precision Coat Product Line



Frank Accornero joins Tara Technologies Corporation as Operations Manager of our Precision Coat product line. He comes with a wealth of experience within the thermal spray industry, having spent the last 15 years at Praxair Surface Technologies, TAFE, Inc. as a Robot Programming Instructor and R&D Coating

Specialist. Accornero is a Six Sigma Green Belt and will be a major asset to the company.

Precision Coat was acquired by Tara Technologies Corporation in the Fourth Quarter of 2008 and will operate under the KLD Quality Systems and corporate identity. Precision Coat is a leading service provider for high performance coatings and specialized heat treatment for the Industrial Gas Turbine and General Industrial markets. KLD/Precision Coat and Tara are both headquartered in Daytona Beach, Florida, with manufacturing facilities in Florida.

For more information, visit www.taratechnologies.com

Thermal Spray Jobs
listed at www.thermalspray.org

Tiruna America and Stork Cellramic Announce Partnership on Advanced Tungsten Coating Program



The Milwaukee high-tech coatings company and the Green Bay manufacturing and service business committed to a 5-year contract for the high-quality corrugating rolls

Stork Cellramic of Milwaukee, Wisconsin, is pleased to announce the finalization of a long-term partnership with Tiruna America of Green Bay, Wisconsin.

Stork entered into a five-year exclusive agreement with Tiruna to provide tungsten coating services for its corrugating rolls intended for the American market. Tiruna corrugating rolls, which are sold in over 40 countries, are enhanced by a very high-quality tungsten coating process the company developed at their parent company's research facility in Spain. This advanced coating dramatically improves the lifetime of the rolls and is considered the quality leader in the industry.

New processes, new equipment

To meet the requirements of this specialized process, Stork has invested in a new state-of-the-art, robotically-equipped thermal spray booth to apply the coatings and accommodate the rolls, which are typically 150" long and can weigh up to 15,000 lbs. In addition, Stork engineers visited Spain to learn the new process, and visiting engineers from Spain have been part of the installation and implementation process. After setup and qualification, the first sets of high quality tungsten coated corrugated rollers were successfully released at the beginning of 2010.

Wisconsin companies strengthened by agreement

Besides being the market leader in service and resoration of corrugating rolls, Tiruna America is known for a strong focus on technology and after-market support. A family owned business, Tiruna America was formed from a joint venture between Tiruna of Pamplona and Fosber America, Inc. of Green Bay in 2003. Jeff Pallini, President of the eastern Wisconsin company, said of the agreement with Stork, "Until now, Tiruna was utilizing standard tungsten technology from a company on the East Coast. We were very pleased to form a partnership with Stork which offers us a superior product right here in Wisconsin."

Since 1986, Stork Cellramic has been a well-established market leader in thermal spray coatings for printing industries in the Midwest. General Manager Daniel Ruiter was enthusiastic about the announced partnership, saying, "Everyone at Stork Cellramic has enjoyed working with their excellent staff and expanding our skills capabilities with the new thermal spray chamber and the new tungsten processes. We are pleased to be partnering with Tiruna and we look forward to a long and rewarding relationship."

Stork Cellramic applies ceramic coating applications for different rollers such as water rollers, ink fountain rollers, pan rollers and anilox rollers for offset, gravure, and flexographic industries. Stork also applies coatings for other industries such as oil and gas, power generation, chemicals, paper, food processing, packaging, converting, plastics and general manufacturing.

For more information, visit www.storkcellramic.com



www.mecpl.com



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In Memorium

Richard (Dick) Cole



Richard (Dick) Cole, 75 passed on to a new life of measurements, angles, and perfecting the space around him on February 16, 2010. Dick has worked in the thermal spray industry for the past 25+ years. Most recently, before his retirement, Dick worked for Plasma Technology in south Windsor, CT and BASF in East Windsor, CT.

Dick was the type of person if you told him he "couldn't do that" he would, just to prove that it could be done. He was a curious man who spent many long hours researching and developing different coatings. He made many contributions to the thermal spray industry.

Dick took his love of flying one step further and accomplished one more task that he was told "not possible". At 62 years old, Dick went to a nearby school and completed and received a pilot license for helicopters. This was after many years of being a fixed wing pilot and instructor. You ask him anything about "his" helicopter and he would explain it all in great detail. This was one of his favorite accomplishments since he would fly to Marthas Vineyard often.

Another tinkering accomplishment that Dick was very proud of was his burgundy tri-motorcycle. He bought it stock and by the time he was done rebuilding this masterpiece, he had an original trike fit for a king.

He is survived by his wife Nancy and son Mark. He will be sadly missed by his friends, family and his two loyal companions, Little Guy and Buddy.

Donations may be made to the Make a Wish Foundation in his name.

Condolences may be sent to his family in care of Plasma Technology, 70 Rye Street, South Windsor, CT 06074.

Linde, part of Union Carbide, and later went on to work for General Plasma. For the last 30 years of his career, he served as President/CEO of Plasma Technology Inc.. Gene was a Lifetime VIP member of the International Thermal Spray Association.

Gene was an avid sports fan of the Los Angeles Rams and the Nebraska Cornhuskers football teams. In his younger days he coached and managed his children in softball and baseball and served several years as a Cub Scout and Boy Scout leader.

He was a parishioner of St. Catherine Laboure Church in Torrance, CA. He held the office of President in St. Vincent De Paul Society and was also a member of the Holy Name Society. Gene also was a member of the Torrance Elks Lodge #1948.

Survivors include his wife of 46 years, Annette, his son Matt and daughters Sheila and Julia along with five grandchildren.

Condolences can be sent to the Foskett Family in care of Plasma Technology Inc., 1754 Crenshaw Blvd., Torrance, CA 90501

Will Hickham



I.W. "Will" Hickham died March 1st from a long illness with Celiac Disease. Will Hickham was one of the early pioneers in the Turbomachinery Industry.

Will began his career in the late 50s as a young engineer with the General Electric Company in Schenectady, New York. Will was later transferred by GE to Houston, Texas, where he worked as a service engineer whose job was troubleshooting large steam turbines and gas turbines.

During his employment at GE, he became increasingly more passionate about his chosen profession. He spent a great deal of time in area plants servicing and installing turbomachinery. This gave him a great deal of varied

Bernard Eugene Fosket



Bernard Eugene Fosket, 72, of Torrance, CA passed away on Monday, September 14, 2009.

Gene attended the University of Nebraska starting in 1955 where he played football. Gene later on decided to join the U.S. Marine Corp. where he served his country for 4 years.

With over 40 years in the thermal spray industry, Gene started his career working for

In Memorium

equipment experience as he was often called out to trouble shoot "problems". He "loved solving unusual problems". He was always eager to share his experiences with just about anyone who would listen.

He later developed a keen interest in the field of vibration analysis. For years he always carried a portable analyzer in the trunk of his car. He was always ready, day or night to head out to one of the many plants in South Texas.

In the early 1960's, Will, along with partner Clyde Ashley, formed Ashley, Hickham, Maintenance and Engineering Company. This turned out to be noteworthy in that Ashley, Hickham was the first non OEM repair facility of major significance in the industry.

Ashley, Hickham became a dominant player in the industry and evolved into Ashley, Hickham, and Uhr. Later the company was sold DeLaval (to become Deltex). The company would eventually be integrated into TurboCare.

Will dabbled in other ventures for a few years, but eventually gravitated back to this true love – the repair of rotating equipment. In the late 70's Will started a new venture – I.W. Hickham Company (later renamed Hickham Industries).

Hickham Industries quickly became an innovator in the industry. Hickham Industries became a leader in the manufacturing of non-OEM compressor wheels, aftermarket screw compressor repair, advanced rotor balancing techniques and rotor storage. Will Hickham's plan was to always add at least one unique innovation to the company's offerings each year. This approach was highly successful.

Will Hickham also had an uncanny ability to surround himself with talented people. Many former employees remain the dominant players in the industry even today.

Will Hickham will be remembered by many as a pioneer and innovator in a truly unique industry. He will also be missed by many others - as a father, a family member, a friend, or as a mentor. He was a truly unique individual – definitely "one of a kind".

Condolences can be sent to the Hickham family in care of Marc Hickham, Compressor and Turbine Services, LLC, 901 Old Genoa Red Bluff, Houston, Texas 77034

Krist Leovich



Krist Leovich passed away December 20, 2009

Krist was born May 19, 1926 in Cleveland, OH. He moved to CA in 1952. He is survived by his wife of 55 years, Phyllis, his 3 daughters Barbara, Karen, Kristi and their husbands and 6 grandchildren.

Krist served in the navy on a destroyer during WWII.

He worked at Wall Colmonoy Corp. for about 20 years. He opened Hardface Alloys, Inc. in 1979 and worked until retirement at the age of 65.

Krist was a Lifetime VIP member of the International Thermal Spray Association and a 50-year-lifetime member of ASM International

Krist enjoyed time with his family, playing golf and taking trips to Hawaii.

Donations can be made in Krist's name to the Juvenile Diabetes Research Foundation of Orange County, phone 949 553-0363 or online at www.JDRFOC.org.

Condolences can be sent to the Leovich Family in care of the International Thermal Spray Association, 208 Third Street, Fairport Harbor, OH 44077

Erich Muehlberger



Erich Muehlberger passed away on February 27, 2010 at USC Medical University Hospital in Los Angeles, California after a battle with heart disease. He was 80 years old and is survived by his wife of 56 years, Annemarie and his four children, Brigitte, Karin, Stephan and Andrea as well as eight

grand children. He will be greatly missed by his family and friends.

Erich emigrated with his family from Germany in the mid-1950s and devoted much of his life to his work in the field of plasma physics.

Erich was inducted into the ASM Thermal Spray Society Hall of Fame in 1997. His citation read "For serving as a mentor and advisor to many leaders of the thermal spray industry, including founders of the ASM Thermal Spray Society; for his entrepreneurship and vision; and for inventing the low-pressure plasma spray known as LPPS or Vacuum Plasma Spray."

Condolences can be sent to the Muehlberger family in care of Phil Meyer, Sulzer Metco (US) Inc., 1101 Prospect Avenue, Westbury NY 11590



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www.asminternational.org/itsc

Joe Bell joins SLM as Operations Manager



Joe Bell has recently returned to St. Louis Metallizing as Operations Manager and will be responsible for the day to day activities of the operation. Joe previously worked at SLM for three years and three years at Nooter Corporation in various engineering roles

before departing to Covidien for 15 years where he held increasing management positions in maintenance, engineering and operations.

Joe is a mechanical engineer, Certified Welding Inspector and a member of the AWS and ASME organizations. He is proficient in Lean and Six Sigma initiatives and will use Operational Excellence as the foundation and building blocks to improve service, quality and cost in operations.

Joe is active in competing at local and national Karate events, and is a member of the USANKF and Shitokai karate organizations. He volunteers at his local Humane Society and is an assistant scout master with the Boy Scouts of America.

"We are very pleased to have someone of Joe's talent, aptitude and presence in the company and look forward to the experience, ideas and improvements he brings!"

For more information, visit www.stlmetallizing.com

Wall Colmonoy Hires Business Manager for the Alloy Products Group



Wall Colmonoy is pleased to announce that **Joel Gutierrez** has joined Wall Colmonoy Corporation as Business Manager for the Alloy Products Group. He will be responsible for the western states in the USA, as well as Mexico, Central, and South America.

Joel previously held positions at Goodman Manufacturing and Modine Manufacturing Company in the brazing, engineering, and quality areas. He has a Bachelor of Science in Mechanical Engineering, a minor in Industrial Engineering, and an MBA from Texas A&M International University.

Utilizing his brazing expertise, he will focus his activities on the North and South American brazing markets, where he will work closely with Wall Colmonoy's Technical Services and provide assistance to our customers' engineering specialists in the automotive, power generation, and heat transfer industries.

For more information on Wall Colmonoy, visit: www.wallcolmonoy.com/alloyproductsgroup.html

Aerobrazo Cincinnati Promotes Joe Hetzer to Director of Manufacturing

Wall Colmonoy is pleased to inform that **Joe Hetzer** has been promoted to Director of Manufacturing for Aerobrazo, Cincinnati.

Joe previously held the title of engineering manager where he did an outstanding job, especially with Rolls Royce contracts, leading successful qualifications for the RR250 diffuser program.

Joe has over 23 years of experience working in the Aerospace Industry. He attended Colerain High Trade School for advanced machining and tool design, and continued his education at Cincinnati State in manufacturing engineering.

Joe worked on the Pratt & Whitney Joint Strike Fighter program, developing blades, vanes and shrouds from concept to production. He is also a major contributor in developing multi-axis EDM drilling machines from concept to world-leading technology.

Joe's new responsibilities will include directing and monitoring production and sales, creating innovative ways of manufacturing aerospace hardware, team building, and establishing goals. Reporting to Joe will be personnel in the manufacturing departments at Aerobrazo Cincinnati.

For more information on Aerobrazo visit <http://www.wallcolmonoy.com/locations/cinci.html>



Wall Colmonoy Hires Accounting Manager

Wall Colmonoy is pleased to inform you that **Daria Johnson** has joined Wall Colmonoy Corporation as Accounting Manager, reporting to the Vice President of Finance & Administration. Daria holds a Bachelor of Business Administration and Masters Degree in Finance from Walsh College.

Daria has over 25 years experience in accounting, most recently serving as Controller for a gauge, cable, and adapter manufacturer for the heavy truck and military industries. She has a strong background in cost accounting, and experience in the implementation of various accounting systems.

Her responsibilities will include streamlining and strengthening internal control and reporting systems.

For more information on visit www.wallcolmonoy.com



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