

News from Institutes and Research Centers Around the World

This column is a forum to inform the thermal spray community on current activities in institutes and research centers active in the field of the thermal spray. Research efforts carried out in these organizations are oftentimes the starting point of significant developments of the technology that will have an impact on the way coatings are produced and used in industry. New materials, more efficient spray processes, better diagnostic tools, and clearer understanding of the chemical and physical processes involved during spraying are examples of such developments making possible the production of highly consistent performance coatings for use in more and more demanding applications encountered in the industry.

This column includes articles giving an overview of current activities or a focus on a significant breakthrough resulting from research efforts carried out in institutes and research centers around the world. If you want to submit an article for this column, please contact Jan Ilavsky, JTST associate editor, address: Argonne National Laboratory, Advanced Photon Source, 9700 S. Cass Ave., Argonne, IL 60439; e-mail: JTST.ilavsky@aps.anl.gov.

Sandia National Laboratories Thermal Spray Research Laboratory

Sandia National Laboratories' Thermal Spray Research Laboratory (TSRL) is a large experimental facility dedicated to understanding process-microstructure-property relationships in thermal spray coatings. The TSRL is located on Kirt-

land Air Force Base in Albuquerque, NM. It is part of Sandia National Laboratories' Materials and Process Sciences Center. The Materials and Process Sciences Center provides scientific and engineering expertise in materials techniques to support the missions of Sandia National Laboratories, including stewardship of the U.S. nuclear stockpile. The primary mission of the Thermal Spray Research Laboratory is to provide technical support to the U.S. Department of Energy for its needs related to thermal spray coatings. The TSRL supports process development, coating design, and knowledge development for thermal spray coating applications within the Department of Energy.

The TSRL is led by Dr. Aaron C. Hall and Dr. Rodney L. Williamson. The remaining support staff of engineers and technicians at the TSRL have nearly 100 years of combined experience in thermal spray technology and process control development. Over the past 25 years, the TSRL has contributed significantly to the development of the cold spray, wire flame spray, and powder flame spray coating processes. The TSRL is currently working to develop an understanding of microstructure-property relationships in very low pressure (thin film) plasma spray coatings.

The TSRL currently employs six engineers and technicians, one visiting professor, and two summer students. Laboratory facilities consist of a 2500 ft² high bay space and numerous smaller spaces dedicated to feedstock analysis, instrumentation assembly, and machining operations. The TSRL has four spray sta-

tions; three are traditional thermal spray booths equipped with six-axis robots (Staubli RX-60, ABB IRB 140, and an ABB IRB 6600). The fourth spray station is a 1000 L³ vacuum plasma spray chamber equipped with enough pumping capacity to maintain 1 Torr while operating a Metco 03C plasma torch. Processes available at the TSRL include air plasma spray, vacuum plasma spray, very low pressure (thin film) plasma spray, twin wire arc spray, high-velocity oxyfuel spray, wire flame spray, powder flame spray, and cold spray. The TSRL maintains a suite of particle diagnostics equipment on-site for characterizing thermal spray feedstocks (Beckman—Coulter laser particle size analyzer), investigating thermal spray processes (DPV-2000, Tecnar G3, Polytech L2F, control vision, and optical spectrometry systems), and characterizing coating properties (xenon-flash thermal diffusivity, helium oycnometry).

While the TSRL's primary mission is to support the needs of the DOE, the TSRL can and does accept work from other federal agencies and from U.S. industry. The status of Sandia National Laboratories as a federally funded research and development center specifically precludes Sandia from competing with U.S. industry.

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Industrial News

Guide to Surface Engineering Measurement Standards

National Institute of Standards and Technology (NIST), Gaithersburg, MD, has published a guide to standards for the measurement and characterization of inorganic materials surfaces, in cooperation with the ASM International Surface Engineering Committee. *NIST Recommended Practice Guide: Surface Engineering Measurement Standards for Inorganic*

Materials (Special Publication 960-9) is intended to aid the technical and scientific community by identifying relevant standard methods for measurements of pertinent surface properties and characteristics such as surface chemistry, surface texture, hardness, cleanliness, residual stress, sampling thickness, and more. The Guide directs the user to appropriate standards based on material type, property of interest, and measurement or characterization method. Each summary includes a

general description of the standard, the intended application, specimen requirements, type of data produced, and the limits of the method.

NIST SP-960-9 may be downloaded in Adobe Acrobat format at www.msdl.nist.gov/practiceguides/SP960_9.pdf. A free print copy may be obtained by contacting Joyce Harris, tel: 301/975-6045; e-mail: joyce.harris@nist.gov.

People in the News

Wall Colmonoy Selects Hart as New Sales and Marketing Manager



David Hart

David Hart was recently appointed Marketing and Sales Manager for Wall Colmonoy Corporation (WCC) U.S. He will be working from their corporate office in Madison Heights, MI, and will be developing and implementing

sales and marketing strategies for the Microbraz and Colmonoy product lines. The WCC North American field sales force will be reporting to Hart, and he will also have responsibility for marketing and sales for the alloy product business in Latin America and Asia.

Hart has 25 years experience in the hard facing and brazing industries. He previously held positions in Australia and Canada, as well as in the United States, as Sales and Training Manager and Technical Director.

David holds an MBA degree from

Queens University, Ontario, Canada, and a Graduate Diploma in Materials and Metallurgy from Adelaide University, Australia.

Contact: Wall Colmonoy Corporation, 30261 Stephenson Hwy, Madison Heights, MI, 48071-1650; tel: 248/585-6400; fax: 248-585-7960.

Rybicki Named 2005 Outstanding Professional Engineer



Edmund F. Rybicki

Edmund F. Rybicki, FASM, has been named the 2005 Outstanding Professional Engineer by the Oklahoma Society of Professional Engineers. Rybicki chairs the Mechanical Engineering Department, holds the Harry H.

Rogers Chair of Mechanical Engineering, and is director of the Erosion/Corrosion Research Center, all at the University of Tulsa, Tulsa, OK. He is also a Fellow of

the American Society of Mechanical Engineers and American Welding Society.

Sturch Elected to Vice President Position at Wall Colmonoy



John Sturch

The Board of Directors of Wall Colmonoy Corporation has elected **John Sturch** to the position of Vice President of the Wall Colmonoy Aeronautical and Aerospace group. Sturch, who has more than 30 years of service with

Wall Colmonoy, was most recently the General Manager of their Oklahoma City Business Unit.

Sturch will be responsible for business development and growth for the Wall Colmonoy FAA licensed repair stations in Oklahoma City and San Antonio.

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