



## New Literature

### Corrosion Testing Made Easy: Erosion-Corrosion

*Pierre Roberge, NACE International, \$84; NACE Members: \$63.*

This is the eighth and final installment of the *Corrosion Testing Made Easy* (CTME) series, which has been in development for more than 12 years.

This new and final volume of the *Corrosion Testing Made Easy* series introduces

concepts of electrochemistry and fluid dynamics in the context of erosion-corrosion and flow-assisted corrosion (FAC). The book reviews test methods that provide means to qualify materials for usage in flow intense situations.

Dr. Pierre R. Roberge, P. Eng., obtained his Ph.D. in physical chemistry in 1982 from the University of Sherbrooke, Québec, Canada, and is currently a professor in the Department of Chemistry and Chemical Engineering at the Royal Military College of Canada. He has dedicated

his career as a research scientist to the study of the performance of materials in service and the production of energy with electrochemical power sources. Dr. Roberge has authored or coauthored more than 90 scientific publications and 150 papers in Conference Proceedings, and he is the author of the *Handbook of Corrosion Engineering and Erosion-Corrosion Testing Made Easy*.

**Contact:** NACE Membership Services; tel: 281/228-6223; Web: [www.nace.org/newbooks/roberge.asp](http://www.nace.org/newbooks/roberge.asp).

## Conference/Workshop Information

### 2004 ASM Materials Solutions Conference & Expositions

*October 18-21, 2004 (Conference) October 18-20, 2004 (Exposition), Columbus, Ohio*

ASM's annual event features current materials research and applications with more than 20 technical programs including:

- materials for hydrogen economy,
- fuel cells and hybrid systems,
- nanocrystalline materials,
- green engineering for materials processing,
- advanced materials for Homeland Security,
- joining of advanced and specialty materials, and
- materials for energy efficiency.

This year's exposition also offers access to nearly 100 exhibitors, free educational activities, and more. Complimentary exposition passes are available on-line.

**Contact:** ASM International, Customer Services; Web: [www.asminternational.org/materialssolutions](http://www.asminternational.org/materialssolutions). For booth space,

contact Charles Dec; ASM International; tel: 440/338-1733; e-mail: [cdec@asminternational.org](mailto:cdec@asminternational.org).

### ASM TSS Sensors and Control 2004 Workshop

*October 26-27, 2004, Boucherville, Montreal, Canada*

“Consistency and Reliability of Thermal Spray Coatings: Issues and Practical Solutions.” The ASM Thermal Spray Society will host a two-day workshop on control of thermal spray processes at National Research Council Canada in Boucherville (Montreal), Canada.

This workshop will address new and existing technologies to provide innovative and practical solutions for better control of coating production. Highly experienced thermal spray practitioners, engineers, and scientists will provide insight into the current and future needs of the industry with a strong focus on solutions for improving the consistency and reliability of thermal coatings in the production environment. An industrial visit is sponsored by Tecnar Automation Ltée.

**Who Should Attend:** engineers and practitioners responsible for production

of spray coatings in OEMs and job shops, spray equipment suppliers, and scientists involved in the development of advanced controls and equipment.

#### Benefits for Attendees:

- Learn about new technologies for increasing the productivity of your spray processes
- Identify key process variables and coatings characteristics that must be controlled to produce consistent coatings
- Know about directions the thermal spray industry is heading to get better coatings produced day after day
- Identify key research areas to address actual industry needs

The meeting will feature a keynote address by Dr. Robert C. Tucker, Jr., president of ASM International and former corporate fellow and director of business development at Praxair Surface Technologies and invited talks from world-renowned experts from Europe and America.

Presentations will address topics such as:

- current and future needs of the industry,

- sensors for monitoring gun, particle and coating conditions,
- process instabilities,
- coating optimization,
- process control strategies, and
- process modeling.
- **Speakers will include:** *Robert C. Tucker, Jr.*, FASM, The Tucker Group, LLC; President, ASM International (2003-2004), member of ASM TSS Hall of Fame; *M. Brad Beardsley*, Caterpillar Inc.; *Jean-Pierre Janssen*, Advanced Coatings Technology; *P. Marcoux*, Vac Aero

International, Inc.; *Esa Hämäläinen*, Oseir Ltd.; *Luc Pouliot*, TECNAR Automation Ltd., Finland; *Joachim Heberlein*, University of Minnesota, member of ASM TSS Hall of Fame; *Sanjay Sampath*, SUNY Stony Brook; *Richard Neiser*, Sandia National Laboratories; *James E. Craig*, Stratronics, Inc.; *Warren Nelson*, General Electric Energy; *Pierre Fauchais*, University de Limoges, member of ASM TSS Hall of Fame; *Javad Mostaghimi*, University of Toronto; *Christian Moreau*, National Research Council Canada; *Alexandre Nadeau*, TECNAR Automation Ltd.;

*Paolo Rosa*, DaimlerChrysler; *Michael Gevelber*, Boston University; *Anthony Herbert*, Sulzer Metco; *John P. Sauer*, Sauer Engineering; *Andrew Nicoll*, FASM, Sulzer Metco; Vice-President, ASM International (2003-2004); *Marc Froning*, Engelhard Corp.; *Elaine Motyka*, Praxair Tafa.

- **Contact:** ASM International, Web: [www.asminternational.org/sensors](http://www.asminternational.org/sensors). For tabletop exhibit information, Charles Dec; ASM Expositions Manager; tel: 440/338-1733; e-mail: [cdec@asminternational.org](mailto:cdec@asminternational.org).

## Recent Conferences

### International Thermal Spray Conference and Exposition ITSC 2004

The International Thermal Spray Conference and Exposition 2004—the second such conference in the Asian Pacific Rim—was this year a major event in the thermal spray field. Co-organized by the DVS, German Welding Society; ASM-TSS, Thermal Spray Society; IIT, International Institute of Welding; HTS, High Temperature Society; and JTSS, Japan Thermal Spray Society, this event had more than 600 attendees and exhibitors including more than 440 full-conference participants.

Osaka, the second largest industrial region of Japan with its more than 1400 years of history and tradition of people, goods, and culture, provided a perfect

symbiosis to combine an international meeting with memorable traditional and history-related experiences. More than 320 oral and poster presentations from 24 countries were put together, forming a well-balanced and informative conference program.

More than 33 international companies participated in the exposition that accompanied the conference, providing a practical orientation for the thermal spray industry.

#### ITSC 2004 Conference Awards

**S. Costil, H. Li, and C. Coddet**, LERMPS – UTBM, Belfort, France. “New Developments in the PROTAL® Process”

**D.N. Guru, M. Palacio, W. Mook, M. Chambers, J. Heberlein, and W. Gerberich**, University of Minnesota, Minne-

apolis, USA, and O. Racek and C.C. Berndt, SUNY, Stony Brook, USA. “Nanophase Partially Stabilized Zirconia Intermediate Layer for Strain Accommodation in a Multi Layer Thermal Barrier Coating”

**X. Huang and Y. Lü**, Surface Engineering Technology Institute of CAAMS, Beijing, China. “The Current Stuation and Future of Thermal Spraying Industry in China”

**K.D. Landes, G. Forster, J. Zierhut, and M. Dzulko**, University of the Federal Armed Forces, Munich, Germany, and D. Hawley, Sulzer Metco, Westbury, USA. “Computer Tomography of Plasma Jets – Applied on a Triple II Torch”

**Akira Kobayashi**, Osaka University, Ibaraki, Japan. “Performance of Thermal Barrier Coatings Formed by Gas Tunnel Type Plasma Spraying”

**A. Scrivani, G. Rizzi, Turbocoating SpA, Parma, Italy, and H.K. Pugsley**, Alstom, Baden, Switzerland. “Development of Thick Thermal Barrier Coating With Varying Porosities and Continually High Functional Properties”

**E. Lugscheider and K. Seemann**, Aachen University of Technology, Aachen, Germany. “Prediction of Plasma Sprayed Coating Properties by the Use of Neural Networks”

**F.-X. Ye, and A. Ohmori**, Osaka University, Osaka, Japan, and C.-J. Li, Xi'an Jiaotong University, Xi'an, China. “The Photoresponse and Donor Concentration of Plasma Sprayed TiO<sub>2</sub> and TiO<sub>2</sub>-ZnO Electrodes”



Some of the members of the organizing committee of the ITSC 2004. From left to right: J. Jerzembeck, P. Hanneforth, C. Berndt, G. Kraume, R. Knight, A. Kay; in the first row: B. Brommer, P. Heinrich and S. Mahlstedt



### Journal of Thermal Spray Technology 2004 Best Paper Awards

The *Journal of Thermal Spray Technology* Best Paper Award was established to recognize publications of superior quality, and to motivate researchers in the thermal spray area to submit their best work as a manuscript to the JTST journal. The award is determined on the basis of scientific and engineering merit, originality and presentation style. The Best Paper Awards presented at ITSC 2004 were as follows:

#### Volume 11:



**Zheng Duan**, Hypertherm, Inc., and **Joachim Heberlein**, University of Minnesota, "Arc Instabilities in a Plasma Spray Torch," Issue 1, page 44

**Joachim Heberlein** **Thomas C. Hansson**, **Charles M. Hackett**, and **Gary S.**

**Settles**, Pennsylvania State University, "Independent Control of HVOF Particle Velocity and Temperature," Issue 1, page 75

#### Volume 12:



**J.-F. Bisson**

**Jean-Francois Bisson**, **Bruno Gauthier**, and **Christian Moreau**, National Research Council of Canada, "Effect of Plasma Fluctuations on In-Flight Particle Parameters," Issue 1, page 38

**Jean-Francois Bisson** and **Christian Moreau**, National Research Council of Canada, "Effect of Direct-Current Plasma Fluctuations on In-Flight Particle Parameters: Part II," Issue 2, page 258

### ASM Thermal Spray Society Hall of Fame Awards

The Thermal Spray Hall of Fame was established in 1993. Induction honors out-



**Christian Moreau**

standing leaders who have made significant achievements and contributions to the science, technology, practice education management, and advancement of thermal spraying. The following individuals were selected by their peers to be inducted into the Thermal Spray Hall of Fame for Year 2004:

**Fred W. Gartner, Jr.**, recognized as "a pioneer and tireless ambassador for the Thermal Spray Industry. Devoted to the advancement, understanding and appreciation of thermal spray coatings; their application and usage."

**Anthony J. Rotolico**, recognized as "innovator in the development of Thermal Spray equipment, their manufacture and introduction to aircraft, automotive and industrial/production applications."

**Prof. Joachim V. Heberlein**, his citation reads "for sustained long-term Research and Development efforts relative to fundamental plasma arc phenomena that have contributed to advance Thermal Spray application techniques."



**Prof. Joachim V. Heberlein** (left) accepting his ASM Thermal Spray Society Hall of Fame Award from **Prof. Christopher Berndt**, ASM TSS President