

The Proceedings of the 31st International Technical Conference on Coal Utilization & Fuel Systems

**May 21 – 26, 2006
Sheraton Sand Key
Clearwater, Florida, USA**

Volume I

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*In cooperation with the
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- CANMET Natural Resources Canada
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- China Coal Research Institute, Ministry of Coal industry
 - Edison Electric Institute
- Illinois Department of Commerce & Economic Opportunity
 - Office of Coal Development
 - International Energy Agency
 - National mining Association
- National Rural Electric Cooperative Association
 - Ohio Coal Development Office
 - U.S. Geological Survey

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WELCOME

On behalf of the Coal Technology Association, the American Society of Mechanical Engineers' Power Division, the U.S. Department of Energy, and the National Energy Technology Laboratory, I welcome you to the **31st International Technical Conference on Coal Utilization & Fuel Systems**. We are truly honored to have you participate in our thirty-first conference.

I want to take this occasion to thank the many people who work so hard to make this conference the success that it continues to be each year. The Clearwater Conference Committee works diligently throughout the year to organize the panels, tutorials and technical sessions. They do this under the direction and guidance of my two co-chairmen: Dr. Robert Romanosky of the National Energy Technology Laboratory, U.S. Department of Energy, and Stanley J. Vecchi of The Babcock & Wilcox Company.

I also want to take this opportunity to extend our sincere gratitude and appreciation to: Robert Beck, Executive Director of the National Coal Council, this year's Keynote Speaker, who has taken the time from his very busy schedule to be with us. In addition, we are very grateful to our panel chairs: *Dr. Klaus Lackner of Columbia University; Prof. Dr. Klaus R. G. Hein, IVD - University of Stuttgart; John V. Smolenski, Tampa Electric Co.; Joseph Giove, U.S. Department of Energy; Janos Beer, Professor Emeritus, Massachusetts Institute of Technology; C. Lowell Miller, U.S. Department of Energy; Ligang Zheng, CANMET Natural Resources Canada; and Ronald W. Breault, National Energy Technology Laboratory, U.S. Department of Energy*. They have selected the excellent topics that are brought to us this year. These panels are an integral part of the program and receive the highest praise from our attendees year after year.


In addition, we must also acknowledge the excellent job done by our tutorial chairs. In selecting a particular topic of interest to the industry and providing an in-depth analysis, they add a new dimension and depth to the conference program. They are:

- **Transfer of NIST Measurement Accuracy via SRMs to the Fossil Fuel Industry**, *Dr. Robert D. Vocke, and Dr. W. Robert Kelly, Analytical Chemistry Division, Inorganic Chemical Metrology Group; and Bruce S. MacDonald, Measurement Services Division, Scientific and Technical Services Group, National Institute of Standards & Technology*
- **Interactive Control of Ash Deposits in Power Boilers and Other Combustion Units**, *Joseph Comparato, Fuel Tech Inc.*
- **Low NO_x Burners**, *Alan Paschedag, Advanced Burner Technologies Corporation and J.J. Letcavits, AEP*
- **The Economics of Ash Deposition - How Much Is It Costing Utilities and How Do We Remediate It?**, *Bruce Folkedahl, University of North Dakota Energy & Environmental Research Center*
- **Fuel Blending Approaches and Implications for Power Plants**, *David A. Tillman, DTE Energy*

- **Gasification: Yesterday, Today and Tomorrow**, *Ronald Breault, National Energy Technology Laboratory, U.S. Department of Energy; and Massood Ramezan, Science Applications International Corporation*
- **Doing Business in China**, *William S. Lawton, Foreign Service Officer, Senior Trade Specialist, Export Assistance Center, U.S. Department of Commerce*
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As we enter our fourth decade of conducting these international technical conferences, those of us in this room and other leaders in our industry face an exciting, and unprecedented challenge: The need to reduce the nation's dependence on imported oil and to increase the production and utilization of domestic resources. Coal is now center stage in the national quest for energy independence. Our job is an essential one: developing the technologies that will allow us to burn this valuable natural resource more efficiently and cleanly. Today there is no debate in Washington or anywhere else about the importance of clean coal technology.

We very much appreciate the efforts of all who contribute to the program and to those who come to the conference to take advantage of the excellent program that we offer. I welcome you to Florida and thank all of you for being with us.


 Barbara A. Sakkestad
 Vice President
 Coal Technology Association

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