

*Workshop on Recycling Opportunities for Fly Ash and other Coal Combustion
Products in Concrete and Construction Materials*



Center for By-Products Utilization
3200 North Cramer Street, Room W309
P. O. Box 784
Milwaukee, WI 53201

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UWM-CBU Concrete Materials Technology Series Program No. 67

**Workshop on Recycling Opportunities for Fly Ash and other Coal
Combustion Products in Concrete and Construction Materials**

Sponsored By

**UWM Center for By-Products Utilization, Milwaukee, WI
We Energies, Milwaukee, WI
Mineral Resource Technologies, a Cemex Company**

Co-Sponsored By: Michigan Technological University and Wisconsin Public Service Corporation

February 23, 2006, Ramada Inn, Marquette, MI

Workshop Description

The purpose of the workshop is to bring attendees up-to-date with the latest information for recycling applications for coal combustion products in concrete and other construction materials. The program will include presentations showing important technical, environmental, and economic advantages of using coal ash in ordinary, everyday construction applications. The workshop should be of interest to those associated with the construction industry, including design and materials engineers, architects, engineering technicians, engineers working in governmental agencies, industry & private practice, engineering faculty and students, as well as ready-mixed concrete producers, concrete products manufacturers, and concrete contractors. The workshop will also provide significant help to people from utilities and other industries producing coal ash. The program will cover basic information, application case histories, as well as the latest developments in the utilization of coal ash from power plants in concrete, concrete products, mine backfilling, and other construction materials. Knowledgeable professionals engaged in specifying, approving, marketing, and using these materials will present state-of-the-art information. Handout materials will be provided.

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PROGRAM

Thursday, February 23, 2006

7:30 a.m. Registration and Coffee

7:55 Introduction. By Tarun R. Naik and Session Chairman Thomas Jansen

8:05 Use of Coal Ash in Concrete and Concrete Products: Classification (Class F, Class C, Class N, and other CCPs); Chemical, Physical, and Mineralogical Properties; Ready Mixed Concrete; Precast/Prestressed Concrete; High-volume Fly Ash Concrete; Roller-Compacted Concrete; Self-Consolidating Concrete; and Concrete Bricks, Blocks, and Paving Stones. By Tarun R. Naik

9:35 Coffee Break

9:55 Flowable Slurry for Backfill; Low-Strength Concrete for Foundations; Soil Stabilization and Cold In-place Recycled Pavement; Use of Bottom Ash for Base Course and Other Applications. By Bruce W. Ramme

10:55 Improved Early Performance of High-Volume Class C Fly Ash Concrete; and Quality Control and Quality Assurance of CCPs. By James K. Hicks

11:55 Lunch

12:50 Michigan Rules for Recycling of CCPs and Other Industrial By-Products. By Rob Schmeling

1:20 Environmental Issues and National trends in CCPs Use. By Thomas Jansen

1:50 Break

2:10 Applications of Fly Ash in Plastic Fillers and Mining. By Jim Hwang

2:55 Electrically Conductive Concrete. By Rudolph N. Kraus

3:30 Adjourn

SPEAKER INFORMATION

The program is scheduled to include the following speakers:

James K. Hicks, P. E., Director of Technology, Mineral Resource Technologies, Inc. A Cemex Company, The Woodlands, TX. Mr. Hicks has over 35 years experience in management of cement and concrete products development & technical service, process engineering, marketing & sales engineering, quality assurance & quality control, and plant management with several cement producers. He is a member of ACI and ASTM and several of their technical committees.

Jiann-Yang (Jim) Hwang, Ph. D., Director, Institute of Materials Processing, Michigan Technological University, Houghton, MI. Dr. Hwang came to USA from Taiwan in 1977. He received his Ph. D. degree from Purdue University in 1982. He joined Michigan Tech in 1984. Dr. Hwang has been working on fly ash research since 1985. He has contributions in the areas of fly ash beneficiation and the use of fly ash in many products, such as concrete, ceramic, plastic, mining, and mercury control applications.

Thomas Jansen, P.E., Supervising Engineer, Coal Combustion Products Group, We Energies, Milwaukee, WI. Mr. Jansen is the Chairman of the American Coal Ash Association (ACAA) and a member of ASTM. He has over 20 years of experience as a civil engineer. He supervises the CCPs utilization program at We Energies and its landfills. His prior experience includes environmental engineering and project management in Wisconsin and Florida.

Rudolph N. Kraus, Assistant Director, UWM Center for By-Products Utilization, Milwaukee, WI. Mr. Kraus has worked at the UWM-CBU for over eleven years. He has directed research on numerous projects on the use of by-products (coal ash, wood ash, used foundry sand and slag, pulp and paper mill residuals, etc.) in CLSM, concrete, and cast-concrete products. Prior to joining UWM-CBU he worked for over ten years for a consulting engineering company in Chicago.

Tarun R. Naik, Ph. D., P. E., Director, UWM Center for By-Products Utilization, Milwaukee, WI. Dr. Naik has over 40 years of experience with concrete. His contribution in teaching and research has been well recognized nationally and internationally. His research has resulted in over 250 technical reports and papers in ACI, ASCE, ASTM, etc. He is a member of ACI, ASCE, ASEE, ASTM, RILEM, NSPE, and WSPE. He is a member of many technical committees of ACI, ASCE, ASTM, and RILEM. He has served as a president of WI-ACI, WSPE, and other organizations.

Bruce W. Ramme, P. E., Manager, Land Quality, Environmental Department, We Energies, Milwaukee, WI. Mr. Ramme has about 30 years of experience as a civil engineer and has published numerous technical reports, papers, and a handbook on coal combustion products utilization. He is a member of ACI technical committees: 213 Lightweight and 555 Recycled Materials. He is also a member of ASCE, NSPE, and other professional organizations.

Rob Schmeling, P. E., District Supervisor, Waste and Hazardous Material Division, Michigan Department of Environmental Quality, Gwinn, Michigan. Mr. Schmeling has worked for the MDEQ for nearly 30 years in the solid and hazardous waste programs. These programs regulate the review and construction of landfills, as well as the management, reuse, and disposal of both solid and hazardous waste.

REGISTRATION INFORMATION

The seminar will be held at the Ramada Inn, Marquette, MI. The workshop registration fee of \$35 (\$45 if registering after February 17) includes cost of the workshop registration, handouts, refreshments, and lunch.

Make check payable to: *UWM-CBU Michigan Workshop*. We cannot accept credit cards. You may also register by telephone by calling (414) 229-4105 or by FAX (414) 229-6958. For the latest information about this seminar and UWM-CBU, visit us at: <<http://www.cbu.uwm.edu>>. For more information contact: Tarun R. Naik or Rudolph N. Kraus, (414) 229-4105, FAX (414) 229-6958; and E-mail <tarun@uwm.edu > or <rudik@uwm.edu>.

Please complete workshop registration form below and send with your check to:

Rudolph N. Kraus, UWM Center for By-Products Utilization

Refunds and Cancellations

Program fee is refunded if withdrawal notice is received seven days before the program. However, a \$20 cancellation fee will be charged. Full fee is charged if registration is not cancelled by February 17, 2006. Substitutions can be made at anytime.

Room Reservations

For staying at the Ramada Inn, Marquette, MI please call the hotel directly for reservations at (906) 228-6000. A special room rate of \$ 65 + tax has been made available for this seminar by referring to Group "UWM-CBU Workshop." Please reserve your room prior to February 16, 2006 as space is limited.

Directions

The Ramada Inn is conveniently located at 412 West Washington Street, Marquette, Michigan. When traveling to Marquette, follow Business Highway 41 into downtown Marquette and to the Ramada Inn. Business Highway 41 is Washington Street.

REGISTRATION FORM
UWM-CBU MICHIGAN CCPs WORKSHOP
February 23, 2006
Marquette, Michigan

Mail to: Rudolph N. Kraus
UWM Center for By-Products Utilization
University of Wisconsin-Milwaukee
3200 North Cramer Street, Room W309
P. O. Box 784
Milwaukee, WI 53201-0784

Registration Fee: \$ 35.00 before February 17, 2006
Late Fee: \$45.00 after February 17, 2006
Make check payable to:
UWM-CBU Michigan Workshop

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