

Travel Information:

Location: Hamilton is situated midway between Toronto and Niagara Falls. McMaster University is located in the west end of the city.

Getting Here: The nearest large airport is Pearson International in Toronto. Frequent limousine or bus service is available and it takes about one hour. There are also flights from Buffalo NY which is approximately 120 km from Hamilton.

Parking Fees: Residents and non-resident attendees will be charged \$11.00/per day if purchase at course registration or course registration desk. McMaster University Parking fee: \$20.00/per day.

Sponsored by:

Canadian Carbonization
Research Association



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Steel Research Centre

McMaster University
Hamilton, ON, Canada

6th Cokemaking Course

May 8—13, 2011

ORGANIZING COMMITTEE

Ken Blake, ArcelorMittal - Dofasco
(Chair)

Bob Bowman, U. S. Steel Canada
Gordon Irons, McMaster University
(Secretary)

Ron Kauppi, Essar Algoma Steel Inc.
Nick Mak, ArcelorMittal - Dofasco
Peter Schiestel, U. S. Steel Canada



Course Objectives:

Cokemaking has evolved over the years to become a very efficient producer of coke and by-products. Cokemaking is one of the most important operations in the steel industry because it is the key to the energy consumption in the plant, it also has a major influence on the operation of the blast furnace, and many of the environmental problems facing the steel industry arise in the coke plant. The course is designed to present “state-of-the-art” knowledge of the entire coke plant to operators, researchers and suppliers to the industry. While the focus of the course will be primarily on coke for blast furnaces, some consideration will be given to coke for other uses. The course content is continuously updated by the expert lecturers.

Lectures:

Introduction & Fundamentals

The History of Cokemaking
TBD.

Coke in the Blast Furnace
Joe Poveromo, Raw Materials & Iron making

Microscopy, Chemistry & Rheology-Tools to Determine Coal and Coke Characteristics
Louis Giroux, CanmetENERGY

Environmental Issues Facing the Coking Industry Into the 21st Century
Andy Sebestyen, U. S. Steel Canada

Theory of Carbonization
Ted Todoschuk, ArcelorMittal Dofasco

Coke Oven Game (Computer Game)
Ted Todoschuk, ArcelorMittal Dofasco

Coal Preparation

Design of Coal Blends for Required Coke Properties

Hardarshan Valia, Coal Science, Inc.

Coal from Ground to Coke Plant

Ted Todoschuk, ArcelorMittal Dofasco

Equipment and Operations

Principles of Coke Oven Design

R.V. Ramani, Uhde Corp. of America

Machinery Design and Automation
TBD

By-Product Coke Oven Energy Balance and Recovery

John Busser, Danieli Corus

Prolonging Asset Life

Jean Paul Gaillet, Centre de Pyrolyse de Marienau

Control of Battery Heating

Robert Carlin, DTE Energy Services

Case Study on Cokemaking

Robert Carlin, DTE Energy Services; Jack Garzella, Consultant; Ken Blake, Nick Mak, ArcelorMittal Dofasco;

By-Products

Introduction to the By-Products Plant

Bob Bowman, U. S. Steel Canada

Tar and Light Oil Recovery

Karl Svoboda, ByP Consulting LLC

Removal of Sulphur and Ammonia from Coke Oven Gas

Karl Svoboda, ByP Consulting LLC

Effects of Gas Quality on Operations

Greg Elder, Consultant

Contaminated Water Treatment

Fred Maddalena, Consultant

Case Study on By-Product Operations

Greg Elder, Consultant; Karl Svoboda, ByP Consulting LLC; Fred Maddalena Consultant; Bob Bowman, U. S. Steel Canada

Technological Developments

International Cokemaking Issues

Frederic Honnart, ArcelorMittal CTO

Coke Production Utilizing Nonrecovery/Heat Recovery Technology

Hardarshan Valia, Coal Science, Inc.

Introduction to Cokemaking (Optional)

Ken Blake, ArcelorMittal - Dofasco

