Cokemaking Course

May 14-19, 2023



Lectures take place in the Michael DeGroote Center for Learning and Discovery (MDCL), room 1110 **Coke oven game and case studies** take place the McMaster University Student Centre (MUSC), CIBC Hall, 3rd floor

Program

Sunday, May 14

5:00-6:00 pm REGISTRATION – MDCL outside room 1110

- 6:00-7:00 Introduction to Cokemaking Lyle Moore, ArcelorMittal Dofasco For those who have little or knowledge of cokemaking
- 7:00-9:00 REGISTRATION and WELCOME RECEPTION The University Club

Monday, May 15

7:30-8:30	REGISTRATION and BREAKFAST – MDCL outside room 1110
AM SESSION	Chair: Neslihan Dogan, McMaster University
8:15-8:30	Opening Remarks and Course Orientation – Jodi Kesik, ArcelorMittal Dofasco and Neslihan Dogan, McMaster University
8:30-9:30	The History of Cokemaking – Ted Todoschuk, ArcelorMittal Dofasco
9:30-9:40	Q&A period
9:40-10:40	Coal from Ground to Coke Plant – Maria Dooley, Teck Coal Limited
10:40-10:50	Q&A period
10:50-11:05	BREAK
11:05-12:05	Fundamentals of Coal and Coke Characterization – Graeme Scott, ArcelorMittal Dofasco
12:05-12:15	Q&A period
12:15-1:30	LUNCH
PM SESSION	Chair: Jarred Kapush, Algoma Steel
1:30-2:30	Design of Coal Blend for Required Coke Properties – Hardarshan Valia, Coal Science Inc.
2:30-2:40	Q&A period
2:40-3:00	BREAK
3:00-4:00	Coke Oven Computer Game and Cokemaking Rules of Thumb – Graeme Scott, ArcelorMittal Dofasco and Ted Todoschuk, ArcelorMittal Dofasco
4:00-4:10	Q&A period
7:00-10:00	Coke Oven Computer Game, MUSC, CIBC Hall – Graeme Scott, ArcelorMittal Dofasco and Ted Todoschuk, ArcelorMittal Dofasco (with bar service and snacks)

Tuesday, May 16

7:30-8:30	BREAKFAST – MDCL
AM SESSION	Chair: Jodi Kesik, ArcelorMittal Dofasco
8:30-9:30	Coke in the Blast Furnace – Ted Todoschuk, ArcelorMittal Dofasco
9:30-9:40	Q&A period
9:40-10:40	Theory of Carbonization – Ted Todoschuk, ArcelorMittal Dofasco
10:40-10:50	Q&A period
10:50-11:05	BREAK
11:05-12:05	Principles of Coke Oven Design – Jodi Kesik, ArcelorMittal Dofasco
12:05-12:15	Q&A period
12:15-13:30	LUNCH
PM SESSION	Chair: Ted Todoschuk, ArcelorMittal Dofasco
13:30-2:30	Recent Trends in Cokemaking Heat Recovery Processes – John Quanci, SunCoke Energy
2:30-2:40	Q&A period
2:40-3:00	BREAK
3:00-4:00	Non-Recovery Cokemaking Case Studies – John Quanci, SunCoke Energy
4:00-4:10	Q&A period
7:00-10:00	Coke Oven Computer Game, MUSC, CIBC Hall – Graeme Scott, ArcelorMittal Dofasco and Ted Todoschuk, ArcelorMittal Dofasco (with bar service and snacks)
Wednesday,	May 17
7:30-8:30	BREAKFAST – MUSC, CIBC Hall
AM SESSION	CASE STUDIES - MUSC, CIBC Hall. Chair: Jodi Kesik, ArcelorMittal Dofasco
8:30-9:30	Control of Battery Heating – Michael Boccalon, Stelco and Chris Hagan, Stelco
9:30-9:40	Q&A period
9:40-10:40	Recovery Cokemaking Case Study – Jodi Kesik, ArcelorMittal Dofasco and Lyle Moore, ArcelorMittal Dofasco
10:40-11:00	BREAK

- 11:00-12:30 Recovery Cokemaking Case Study (continued)
- 12:30-1:30 LUNCH MDCL

PM SESSION Chair: Carter Dumont, Stelco

- 1:30-2:30 Introduction to the By-product Plant Abdul Hassan, ArcelorMittal Dofasco
- 2:30-2:40 Q&A period
- 2:40-3:00 BREAK
- 3:00-4:00 Environmental Issues Facing the Coking Industry into the 21st Century Julie Wedzinga, Stelco
- 4:00-4:10 Q&A period
- 5:30 BANQUET DINNER Cokemaking Game Awards Presentation bus departure from MUSC to Burlington Golf & Country Club (**No blue jeans.** Alcoholic drink tickets provided and cash bar available.)
- 10:00 Bus departure to McMaster/downtown hotels

Thursday, May 18

7:30-8:30	BREAKFAST – MDCL
AM SESSION	Chair: Jason Halko, Teck Coal Limited
8:30-9:30	Removal of Sulphur and Ammonia from Coke Oven Gas – Carter Dumont, Stelco
9:30-9:40	Q&A period
9:40-10:40	Effects of Gas Quality on Operations – Greg Elder, Consultant
10:40-10:50	Q&A period
10:50-11:05	BREAK
11:05-12:05	Tar and Light Oil Recovery – Brianna Zekl, Stelco
12:05-12:15	Q&A period
12:15-13:30	LUNCH
PM SESSION	CASE STUDY - MUSC, CIBC Hall
1:30-3:00	By-product Operation Case Study – Carter Dumont, Stelco and Greg Elder, Consultant
3:00-3:15	BREAK
3:15-4:45	By-product Operation Case Study (continued)

Friday, May 19

7:30-8:30 BREAKFAST - MDCL

AM SESSION Chair: Ted Todoschuk, ArcelorMittal Dofasco

- 8:30-9:30 Coke Oven Energy Balance and Recovery Ian Cameron, Hatch
- 9:30-9:40 Q&A period

9:40-10:40 Prolonging Asset Life – Yannick Hergalant, ArcelorMittal Maizières Research | CPM Forbach

- 10:40-10:50 Q&A period
- 10:50-11:00 BREAK
- 11:00-12:00 Future Decarbonization Strategy: 2050 Graeme Scott, ArcelorMittal Dofasco
- 12:00-12:10 Q&A period
- 12:10-12:15 Closing Remarks Jodi Kesik, ArcelorMittal Dofasco and Neslihan Dogan, McMaster University 12:15 LUNCH

PM SESSION

1:00-4:30 OPTIONAL PLANT TOURS

ArcelorMittal Dofasco – Driving tour of coal handling and cokemaking facilities, followed by a ground-level walking tour of No. 3 Coke Plant/By-Products Plant. Long sleeved shirts, long pants and closed-toed shoes are required. PPE will be provided on-site.

Stelco Hamilton Works – A walking tour of the Battery, By-Product Plant and the new Wastewater Treatment Plant. Long sleeved shirts, long pants and closed-toed shoes are required. PPE will be provided on-site.