

Agenda for APTI Course No. 427
COMBUSTION EVALUATION

Sponsored by
Lake Michigan Air Directors Consortium (LADCO)
9501 West Devon Avenue, Suite 701
Rosemont, IL 60018

Held at the
Location
To be Determined in the
Minneapolis/St Paul Area, MN

March 30 - April 2, 2015

Course Moderator & Speaker
Taylor Beard, PhD, P.E.

Monday, March 30, 2014

Unit	Time	Subject	Manual Pages
	8:30-8:45	Registration and Introductory Comments	
	8:45-9:45	Pre-Test	
1.	10:00-10:45	Introduction to Combustion Source Evaluation	1-1 to 1-13
2.	10:55-12:00	Combustion I: Basic Concepts	4-1 to 4-15
	12:00-1:00	Lunch	
3.	1:00-1:50	Fuels I: General Features	3-1 to 3-19
4.	2:00-2:50	Combustion II: Excess Air	4-15 to 4-24
5.	3:00-3:40	Combustion III: Chemical Energy	4-24 to 4-39
6.	3:50-4:30	Fuels II: Fuel Properties	3-19 to 3-44

Homework: Read Chapters 1, 2, 3, & 4; Work Review Exercises Chapters 1 & 4.

Tues, March 31, 2015

Unit	Time	Subject	Manual Pages
	8:30-9:15	Discuss Review Exercises	1-14 & 4-40
7.	9:25-10:45	Combustion Systems I: Conventional Systems	2-1 to 2-29
8.	10:55-11:30	Combustion Systems II: Gas Incineration Systems	2-30 to 2-35
9.	11:30-12:00	Combustion Systems III: Boilers & Controls	2-36 to 2-47
	12:00-1:00	Lunch	
10.	1:00-1:40	Combustion Systems IV: Municipal Waste Comb.	
11.	1:40-2:20	Air Pollution Formation I: Acid Gases	5-1 to 5-10
12.	2:30-3:00	Air Pollution Formation II: Particulates and Metals	5-10 to 5-20
13.	3:00-4:00	Air Pollution Formation III: NO _x	5-20 to 5-33
14.	4:00-4:30	Air Pollution Formation IV: Organics	5-33 to 5-41

Homework: Read Chapters 5, 6 & 7; Work Review Exercises Chapters 2, 3 & 5.

Wednesday, April 1, 2015

Unit	Time	Subject	Manual Pages
	8:30-9:40	Discuss Review Exercises	2-48, 3-45, 5-42
15.	9:50-10:40	Air Pollution Control I: Particulates	6-1 to 6-18
16.	10 :50-11 :25	Air Pollution Control II : Acid Gases	6-19 to 6-23
17.	11:25-12:15	Air Pollution Control III: Modification for NOx	6-23 to 6-41
	12:15-1:15	Lunch	
18.	1:00-1:40	Air Pollution Control IV: Nox Flue Gas Cleaning	6-41 to 6-49
19.	1:50-2:30	Emissions I: Efficiency Applications	7-1 to 7-11
20.	2:40-3:30	Emissions II: Monitoring Systems	7-11 to 7-16
21.	3 :45-4 :30	Emissions III : Calculations	7-16 to 7-19

Homework: Read Chapter 7; Work Review Exercises Chapter 6 & 7.

Thursday, April 2, 2015

Unit	Time	Subject	Manual Pages
	8:30-9:30	Discuss Review Exercises	6-50 & 7-29
22.	9:45-10:15	Emissions IV: Engines & Turbines	7-19 to 7-21
23.	10:25-11:20	Emissions V: Gas & Oil Boilers	7-21 to 7-24
24.	11:20-12:00	Emissions VI: Coal & Wood-Fired Boilers	7-24 to 7-28
	12:00-1:00	Lunch	
25.	1:00-2:00	Emissions Workshop	
	2:00-3:00	Post-Test	
	3:00	Course Closing	