



INDUSTRIAL COMBUSTION SYMPOSIUM

October 10 - 12, 2021

The Whitehall
Houston, TX

REGISTER TODAY
afrc.net/symposium

SUNDAY, OCTOBER 10

6:00 - 8:00 PM

WELCOME RECEPTION

MONDAY, OCTOBER 11

7:00 AM - 3:30 PM

REGISTRATION OPEN

7:00 - 8:00 AM

CONTINENTAL BREAKFAST

8:00 - 8:30 AM

OPENING REMARKS

8:30 AM - NOON

MORNING PRESENTATIONS

ClearSign Eye™ Pilot Sensor Analysis and Demonstration

High-Temperature Multi-Process Sensor Development and Demonstration at a Full-scale PC Combustion System

The ClearSign Core™ Process Burner: Technology Development, and Field Results

Characterizing Combustion Kinetics in a Miniature Thermal Oxidizer

A 3-D Computational Fluid Dynamic Model to Enhance Efficiency and Predict NO_x Formation in Once-Through Steam Generators

Ultrasonically Induced Cavitation to Enhance Oxidative Desulfurization of HFO, Optimum Reactor Design

12:00 - 1:00 PM

LUNCH

1:00 - 4:30 PM

AFTERNOON PRESENTATIONS

CFD for Assessment of Performance and Emissions Impacts of Burner, Coil, and Firebox Design in Pyrolysis Furnaces

Solving Noise Problems in the Process Industry

Model Based Assessment of the Novel Use of Sour Water Stripper Vapor for NO_x Control in CO Boilers

Experimental Study on the Swirling Flame Combustion of Heavy Fuel Oil/Water Emulsion

Kinetics Mechanism of Asphaltenes and Resins Fractions Liquid-Phase Pyrolysis

Experimental Investigation of Soot Formation in Inverse Co-Flow Flames at High Pressure

4:30 - 5:30 PM

AFRC BUSINESS MEETING

TUESDAY, OCTOBER 12

7:00 - 8:00 AM

CONTINENTAL BREAKFAST

8:00 AM - NOON

MORNING PRESENTATIONS

High Performance Air-Assisted Flare Design for Low Waste Gases Flow Conditions

A Bayesian Approach to Quantifying the Uncertainty of Combustion Efficiency Measurements in Flares

Remotely Monitoring Flare Combustion Zone Net Heating Value

Hardening of Arches for Commercial Simulation of Industrial Flares: A Second Program Update

High Hydrogen Fuels in Fired Heaters

Extreme Low Emissions Combustion

The Use of Hydrogen for High Temperature Industrial Heating

12:00 - 1:00 PM

LUNCH

1:00 - 5:30 PM

AFTERNOON PRESENTATIONS

Special Session on Thermal Oxidizers (Part 1)

A Comprehensive Overview of Thermal Oxidizers

Design Considerations for Thermal Oxidizers; Applicability of API-560

Application Existing Industrial Standards (API, ASME, NFPA, ASTM) to Thermal Oxidizer Design and Minimum Safety Margins

Discussion Time

Special Session on Thermal Oxidizers (Part 2)

Control/Safeguarding of Thermal Oxidizers; Low-NO_x Considerations

Environmental Emissions and Operational Flexibility Considerations

Operation, Maintenance, Troubleshooting: End-User Perspective (I)

Operation, Maintenance, Troubleshooting: End-User Perspective (II)

Discussion Time

5:30 PM - 5:45 PM

CLOSING REMARKS

6:30 PM - 9:00 PM

SYMPOSIUM DINNER

REGISTRATION INFORMATION

REGISTRATION FEE: \$465

REGISTRATION INCLUDES:

- Admission to all Symposium sessions
- AFRC Business Meeting
- Welcome reception on Sunday, October 10
- Continental Breakfast and Breaks each day
- Lunch on Monday, October 11 and Tuesday, October 12
- Dinner on Tuesday, October 12
- Access to papers online after the Symposium concludes

REGISTER AT AFRC.NET/SYMPOSIUM



HOTEL & TRAVEL INFORMATION

THE WHITEHALL HOTEL

1700 Smith Street
Houston, TX 77002

ROOM RATES

\$145 plus tax

RESERVATION REQUIREMENTS

A credit card is required to guarantee individual reservations when booking.

HOTEL RESERVATION CUTOFF

The hotel will offer our discounted group rate until September 11. Reservations booked thereafter will receive the group rate if the hotel is not sold out.

HOTEL CANCELLATION

Reservations must be cancelled 48 hours (2 days) prior to arrival to avoid a cancellation penalty.

HOTEL PARKING

Discounted to \$16/day for AFRC registrants.

[CLICK HERE TO MAKE A HOTEL RESERVATION](#)

AIRPORTS

Houston has two airports that attendees can fly into; both airports are serviced by a variety of major airlines:

- **George Bush Intercontinental Airport (IAH)**
21.8 miles to the Whitehall Hotel
- **Houston Hobby (HOU)**
9.5 miles to the Whitehall Hotel

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