



INDUSTRIAL COMBUSTION SYMPOSIUM

September 25-27, 2023

**Embassy Suites
Denver Downtown
Denver, CO**

REGISTER:

afrc.net/symposium

AGENDA

Program content as of June 2, 2023. Review the program on the AFRC website for future program updates.

MONDAY, SEPTEMBER 25

6:00 – 8:00 PM WELCOME RECEPTION

TUESDAY, SEPTEMBER 26

7:00 AM – 3:30 PM REGISTRATION OPEN

8:00 – 8:30 AM OPENING REMARKS

8:30 AM – NOON MORNING PRESENTATIONS

Combustion and Nozzle Design for Biomass Pyrolysis Oil

Swiss-roll Autothermal Ammonia Reformer for Gas Turbine Applications

Minimizing Emissions on Modern Day Burners with EFGF and Variety of Fuels

Numerical Investigation of Non-equilibrium Plasma Discharges in Hydrocarbon Gas Flares for Emission Control

Reduced Flaring Through Analytics

Enhanced Destruction and Removal Efficiency in Air Assisted Flares: Cimarron's DreamDuo and DRE-Max VFD Controller Integration

NOON – 1:00 PM LUNCH

1:00 – 4:30 PM AFTERNOON PRESENTATIONS

Eliminating Burner Air Register Assembly Reliability Issues with BUSA Compensator Retrofit

Multi-burner Considerations for ClearSign Core Process Burners

Hydrogen Mixtures on Industrial Burners Designed for Natural Gas

Emissions, Stability, and Flame Structure of KAUST Double Swirl Burner (KDSB) Fired with Ammonia/Methane Blends

Full-Scale Demonstration and CFD Model Evaluation of an Oxy-coal Firing System with Undiluted Oxygen and Minimal Flue Gas Recycle

Swiss-roll Combustor: An Innovative Enclosed Combustor Design for High Methane Destruction Efficiency and Ultra-low NOx Emissions

4:30 – 5:30 PM AFRC BUSINESS MEETING

6:30 – 9:00 PM SYMPOSIUM DINNER

WEDNESDAY, SEPTEMBER 27

8:00 AM – 12:30 PM MORNING PRESENTATIONS

Using Machine Learning Algorithms to Predict Steam-Assisted Flare Performance

Embracing Digital Twin Framework to Efficiently Optimize Forced Draft Combustion Networks

Model for Thermal Decomposition of Biocrudes at High-Heating Rates for Spray Combustion and Gasification

Safety and Operability Review of a Crude Heater at Delek's Tyler Refinery

Test Results from R&D Test Fired Heater on Impact of Butter-pad on Tube Skin Thermocouple Accuracy

CFD Demonstration of Extreme Low Emissions Combustion System Including Oxygen and Hydrogen Combustions

ESG Pilot Technology

Holistic Burner System Integration

12:30 – 1:30 PM LUNCH

1:30 – 4:30 PM SPECIAL SESSION APPLICATION OF COMBUSTION TECHNOLOGY IN THE METALS INDUSTRY

Producing Hydrogen From Natural Gas Using Hot Slag From Steel Plants

Testing and Modeling of Ultra Low NOx Regenerative Systems for Aluminum Melting with Hydrogen Fuel

Oxygen Technologies Appraisal for Copper Scrap Smelters

A Comparison of Reheating Metals in Combustion Processes Using Natural Gas and Hydrogen Fuels

Hydrogen Blending to Reduce Carbon Emissions from the Metals Industry

4:30 PM – 5:30 PM SPECIAL SESSION DISCUSSION

5:30 PM – 5:45 PM CLOSING REMARKS

5:45 PM SYMPOSIUM CONCLUDES

REGISTER TODAY
afrc.net/symposium

REGISTRATION INFORMATION

REGISTRATION FEE: \$595

REGISTRATION INCLUDES:

- Admission to all Symposium sessions
- AFRC Business Meeting
- Special session: Application of Combustion Technology in the Metals Industry
- Welcome reception on Monday, September 25
- Refreshment breaks on Tuesday, September 26 and Wednesday, September 27
- Lunch on Tuesday, September 26 and Wednesday, September 27
- Dinner on Tuesday, September 26
- Access to papers on-line after the Symposium concludes

REGISTER AT AFRC.NET/SYMPOSIUM



HOTEL & TRAVEL INFORMATION

EMBASSY SUITES DENVER DOWNTOWN

1420 Stout Street
Denver, CO 80202

ROOM RATES

\$239 plus tax

BREAKFAST

Complimentary breakfast in the Embassy Suites restaurant is included in the room rate.

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 August 30. Reservations booked thereafter will be on a space and rate availability basis.

HOTEL CANCELLATION

Reservations must be cancelled at or before 11:00 AM MDT, 48 hours (2 days) prior to arrival to avoid a cancellation penalty of one night's room and tax.

HOTEL PARKING

Only valet is offered: \$24 for up to 8 hours; \$52 after 8 hours or overnight.

CLICK HERE TO MAKE A HOTEL RESERVATION

AIRPORT

Denver International Airport is approximately 24 miles from the Embassy Suites Downtown Denver. Taxis and ride share options (Uber/Lyft) are the best way to reach the hotel.

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