



MADRAS INSTITUTE OF TECHNOLOGY
DEPARTMENT OF AEROSPACE ENGINEERING
ASSOCIATION OF AERONAUTICAL ENGINEERS



PRESENTS

FLIGHT '26

COMBUSTION WORKSHOP

REGISTER NOW



FOR MORE INFO



FOR REGISTRATION
299/- PER HEAD



MIT



21 MARCH



9.30AM

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COMBUSTION WORKSHOP

INTRODUCTION AND DESCRIPTION

Flames, heat, and combustion are often seen as dangerous—and rightly so. Yet combustion is the phenomenon that set humanity on a new path with the discovery of fire. From the slow oxidation in our cells during respiration to the massive thrust produced by aircraft engines, the underlying principle remains the same: oxidation. Combustion is simply rapid oxidation with heat release.

Flight '26 brings you our flagship workshop on combustion, guiding you from the fundamentals of flame formation to the working of gas turbine engine combustors. The workshop features demonstrations in aero-engineering thermodynamics, thermo-acoustics, gas turbine combustor design, and an introduction to combustion analysis using CFD tools.

A basic understanding of higher secondary-level thermodynamics and fluid mechanics is sufficient. Sessions will be conducted in batches for better interaction, and all participants must follow safety guidelines strictly.

Beyond academics, this workshop offers an exciting opportunity to witness the science and beauty of combustion as a cornerstone of modern engineering and aerospace innovation.

OUTCOMES

By the end of the workshop, participants will be able to:

- Identify flame types and combustion behaviour.
- Explain combustion and flame stabilization in gas turbines.
- Measure calorific value of fuels.
- Describe thermo-acoustic effects.
- Understand hydrogen combustion properties.
- Use CFD tools for basic combustion analysis.

SCHEDULE

Time	Experiment/ Presentation
10:00 AM- 10:30 AM	Types of flames and coloured metal flames
10:30 AM- 11:00 AM	Measurement of flame parameters
11:00 AM- 11:30 AM	Measurement of calorific value of fuel using a bomb calorimeter
11:30 AM- 12:30 PM	Introduction to numerical analysis in combustion using CFD tools
12.30 PM - 1.25 PM	LUNCH BREAK
01:25PM- 02:15 PM	Ruben's tube and Rijke's tube
02:15 PM- 03:00 PM	Combustion in a canned combustor
03:00 PM- 03:30 PM	Flame stability using a V- gutter
03:30 PM- 04:00 PM	Exhibiting hydrogen flame phenomenon
04:00 PM- 04:30 PM	· Exhibition of other minor setups · Questionnaire and discussion

PARTICIPATION CERTIFICATES WILL BE PROVIDED TO ALL THE PARTICIPANTS (LUNCH WILL BE PROVIDED)

REGISTRATION FEE: INR 299/- PER HEAD

FOR ANY QUERIES, CONTACT:

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