



NATIONAL WORKSHOP ON



IRON ORE AGGLOMERATION

(19th - 22nd January 2027)



Organized

By

CSIR-National Metallurgical Laboratory

Jamshedpur-831007



Why this Workshop?

Iron ore agglomeration is essential to modern ironmaking. Sintering efficiently utilizes iron ore fines and plant wastes in the blast furnace route, while pelletizing enables the use of lean-grade ores and beneficiated concentrates. As hydrogen-based ironmaking develops, high-quality pellets will become increasingly important for next-generation direct reduction processes. Both technologies require continuous improvements in quality, productivity, process efficiency, energy consumption, and environmental performance.

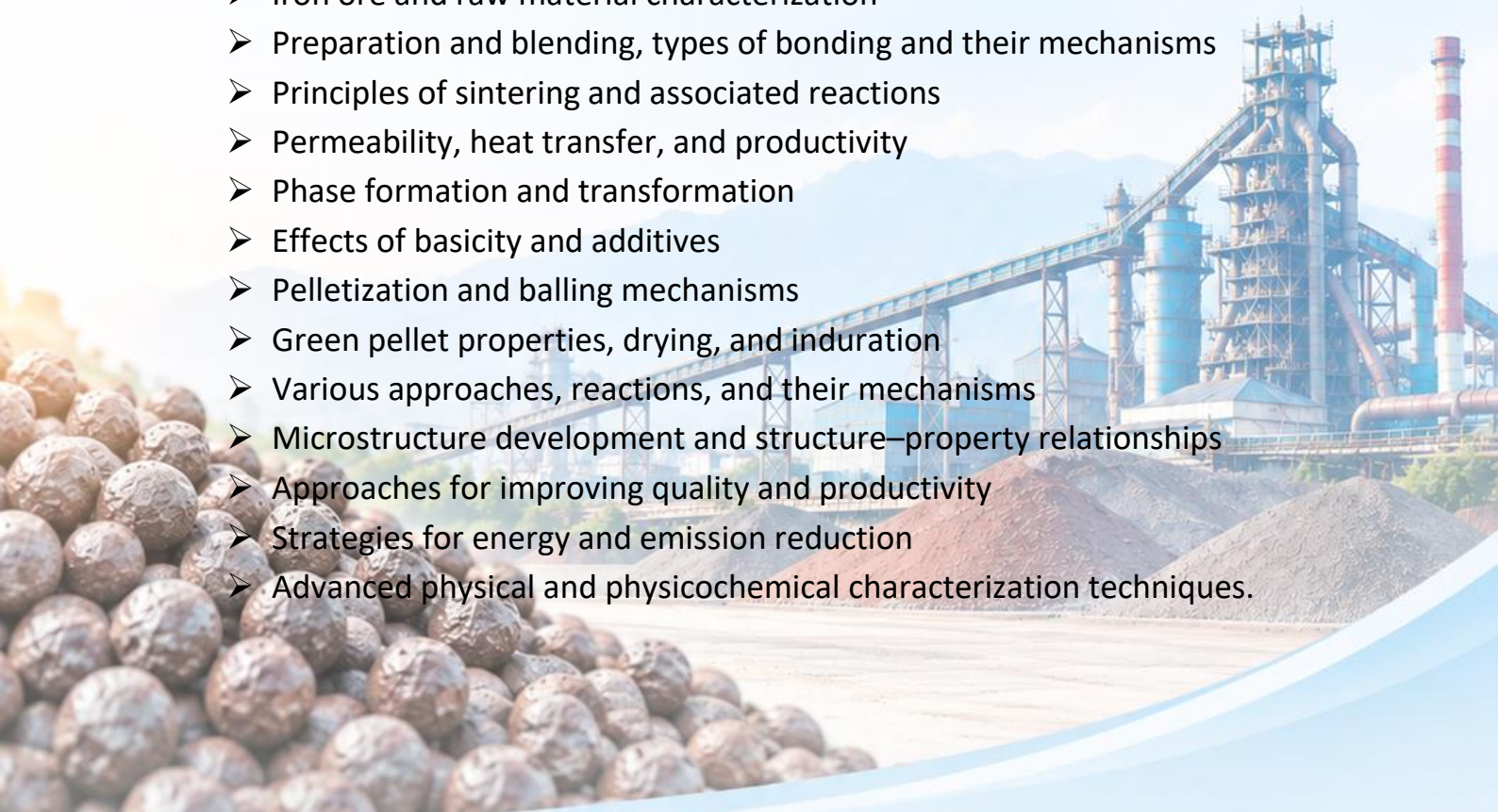
However, the fundamental science of sintering and pelletizing is dispersed across numerous research publications and technical references. Therefore, integrated knowledge of their basic principles and scientific foundations is essential. Despite its industrial significance, dedicated undergraduate courses covering the complete science of iron ore agglomeration remain rarely available, highlighting the need for comprehensive educational resources in this field.

Topics to be covered

This workshop is designed to provide a systematic foundation in the basics and fundamentals of iron ore agglomeration, covering both sintering and pelletizing. The fundamental lectures supported by laboratory demonstrations to connect scientific concepts with practical observations.

Fundamental lectures will cover

- Iron ore and raw material characterization
- Preparation and blending, types of bonding and their mechanisms
- Principles of sintering and associated reactions
- Permeability, heat transfer, and productivity
- Phase formation and transformation
- Effects of basicity and additives
- Pelletization and balling mechanisms
- Green pellet properties, drying, and induration
- Various approaches, reactions, and their mechanisms
- Microstructure development and structure–property relationships
- Approaches for improving quality and productivity
- Strategies for energy and emission reduction
- Advanced physical and physicochemical characterization techniques.



The workshop will then move from fundamentals to industrial practices and recent developments, with invited experts from industry and R&D and academic institutes sharing:

- Industrial practices and operating experiences
- Plant data and case studies
- Process developments and improvement experiences
- Recent findings and developments from R&D
- New technologies and emerging approaches
- Approaches for improving quality, productivity and process efficiency
- Energy and carbon reduction strategies
- Future requirements and technological opportunities

The industrial sessions will explore plant-scale agglomeration processes, challenges, and process improvements, while the R&D sessions can highlight scientific findings, emerging technologies, and future directions. Thus, the workshop will provide a complete learning pathway:

Fundamentals → Laboratory → Industrial Practices → Plant Experience → R&D Advances → Future needs

Who Should Attend?

The program is intended particularly for ***young engineers from iron and steel plants, research scholars, scientists, young metallurgists and other early-career professionals*** who wish to develop a strong fundamental understanding of iron ore agglomeration and connect it with present and future industrial requirements.

Key Speakers

Experts from CSIR-NML, IITs, Tata Steel Ltd, JSW Steel Ltd,
RDCIS-SAIL

Organized by

CSIR-National Metallurgical Laboratory, Jamshedpur

Duration: 19th - 22nd January 2027

Venue: CSIR - NML, Jamshedpur - 831007

Organizing Committee

Dr. Sandip Ghosh Chowdhury, Director, CSIR-NML (Chairman)

Dr. K. K. Sahu, Scientist G & Head, SEM Division (Vice Chairman)

Dr. Jagannath Pal, Scientist G (Convener)

Dr. D. C. Sau, Scientist F

Dr. Madan M, Scientist F (Co-convener)

Dr D. Paswan, Scientist F

Dr Ammasi A, Scientist E (Co-convener)

Dr. M. Malathi, Scientist F

Registration Fee and Sponsorship

Golden Sponsor: Rs 2,00,000/- + GST (3 delegates free + Banner & standee)

Silver Sponsor: Rs 1,00,000/- + GST (1 delegate free + Banner & standee)

Registration fees: Rs 25,000/- per delegate + GST (Non-residential)

Registration is on a first-come, first-served basis, limited to 35 participants

Registration [Link \(Google Form\)](#)

Bank details for Payment

Name: DIRECTOR NML

Account no: 30271713826

Bank: State Bank of India

Branch: NML Jamshedpur

IFSC Code: SBIN0003329

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Contact information

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