

INTERNATIONAL SEMINAR ON SCREENING AND SIZING (i3s)

16th-17th January 2025

Venue: The Alcor Hotel, Jamshedpur



Organised by Indian Institute of Metals - Jamshedpur Chapter



in association with Tata Steel Limited, Jamshedpur **CSIR - National Metallurgical Laboratory, Jamshedpur** National Institute of Technology, Jamshedpur







ABOUT i3S-2025

Screening and sizing of ore and minerals plays a critical role in a mineral processing plant. Intoday's scenario, due to the exhaustion of good quality ores, processing oflowgrade minerals, increase in product fineness, etc. has made the screening and sizing systems more and more critical in a circuit. This seminar serves as a platform for exchange of basic understanding, novel ideas and insights into mechanisms and methodology of screening and sizing equipment. The aim is to bring about ground-breaking innovations and advancements in this field throughcollaboration and knowledge-sharing among participants of varied background from industries, academia and R&D institutions.

Scope of The Symposium

The characteristics of run of mines iron ore, coal and other minerals under high moisture (>6%by wt) condition causes major challenge in plant operation to achieve the desired throughput. Screening is an area where dry processing plant always struggle due to jamming of screen media in monsoon and foggy seasons. In wet processing plant, ultrafine particle of ore/minerals reduce the dewatering efficiency of screen.

Major advances have taken place to understand the behaviour of particles through Discrete Element Method modelling with the objectives to make new design screens. To increase the plant throughput in same footprint is a major challenge for most of the processing plants. In such circumstances, design of screen panels is an important subject. Efforts have been taken to improve the open area% of panel to increase the plant throughput in available screen footprint. The role of sizing equipment such as hydro cyclone and classifier are also important for any beneficiation plant in view of improving plant yield and reducing the slime loss. New approaches and innovative technologies are continuously evolving to push the performance boundary with change in ore/mineral characteristics.

This seminar aims to provide a forum for interaction and exchange of knowledge among professionals dealing with beneficiation of ferrous and non-ferrous minerals/ores. The deliberations at the symposium would provide an opportunity for further interactions between research laboratories, academia, andindustries engaged in mineral beneficiation.

Theme of the Seminar

- New technology evaluation in Dry & wet screening.
- Role of screening media
- Modelling and simulation approach in designing & selection.
- Role of Al and ML in Screening and classification.
- Mechanical aspect in screening
- New design hydro cyclone and classifier.
- New design screen panels to improve plant efficiency.
- Case studies to improve screen and hydro cyclone efficiencies.
- Roles of different motions in screening
- Slime loss reduction/Sustainability of mines
- Screening in Pelletization and Sintering
- Improving plant throughput
- Increasing concentrate yield
- Use of Reagents to improve the material flowability



Registration & abstract submission

Delegates are requested to register online. Registration fees should be paid by electronic fund transfer. The online transfer details are given below. Delegates and students are encouraged to participate in poster session. After online payment, please send the duly filledregistration form(for all registered delegates) and abstract (only for poster) to the email address i3s2k25 @gmail.com .

Bank details for depositing the registration fee:

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Contact:

Mr. Prashant Dixit Convener, i3s -2025 Tata Steel, Jamshedpur -831007 Jharkhand, India Contact no. +91 7763807840

Dr. Siddhartha Misra Chairman, i3s -2025 Tata Steel, Jamshedpur-831007 Jharkhand, India Contact no. +91 9234567600

mail: i3s2k25 @gmail.com,

Phone: +91-7763807840 / 9264498837

