CHEMICAL METALLURGY IN MINING AND MINERAL PROCESSING

Event No	CH004
Organizing Department	Chemical Engineering
Associate Dept. | NSC	Indian Institute of Chemical Engineers
Date	21/07/2022
Time	11:00 AM to 12:30 PM
Event Type	Guest Lecture
Event Level	Dept. Level
Venue	Thanam Hall
Total Participants	125
Faculty - Internal	12
Students - Internal	110
Other Participants	3

Related SDG

Resource Persons

Sl	Type	Name	Designation	Company	Email	Phone
1	Resource Person	Mani Selva	Operations Manager - Production	Tronox Mining Limited, Australia	manivannan.Selvaraju@Tronox.com	xxxxxxxxxx

Involved Staffs

Sl	Name	Role
1	Arunkumar N	Coordinator

Outcome

Students Gained knowledge in mechanical unit operations in mining and mineral processing industry. Also gained knowledge on life skills and personality development

Event Summary

Department of Chemical Engineering and Indian Institute of Chemical Engineers (IIChE) student chapter at KPR Institute of Engineering and Technology, Coimbatore has jointly organized a guest lecture on "Chemical Metallurgy in Mining and Mineral Processing" on 21.07.2022, 11.00AM - 12.30 PM in Thanam hall. Mr. Mani Selva, Operations Manager – Production, Tronox Mining Limited, Australia was the speaker of the invited talk. There were around 100+ participants including faculty members and students. The session was very interesting and interactive. Mineral processing can involve four general types of unit operation: *comminution* – particle size reduction; *sizing* – separation of particle sizes by screening or classification; *concentration* by taking advantage of physical and surface chemical properties; and *dewatering* – solid/liquid separation. In all of these processes, the most important considerations are the economics of the processes, which is dictated by the grade and recovery of the final product. To do this, the mineralogy of the ore needs to be considered as this dictates the amount of liberation required and the processes that can occur. The smaller the particles processes, the greater the theoretical grade and recovery of the final product, but this is difficult to do with fine particles since they prevent certain concentration processes from occurring. The first half of the session was focused on mineral processing operations in mining industry. The mechanical unit operations such as grinding, separation, leaching were discussed in details with videos demonstrations. The second half of the session was taught on life skills and personality development. Head of the department honored the guest with a corporate gift. Ms. Varsha of final year has proposed a vote of thanks

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