

# 10<sup>TH</sup> OCTOBER 2018

## Registration- 8:00 - 9:00 AM, GJLT

Inauguration Ceremony 9:30-11:00 AM, Penman Auditorium

Assembly of delegates and onset of Inauguration

Invitation of Guests to the Dias

Presentation of Bouquets

Lighting of Ceremonial Lamp

Invocation Song

Welcome Address and about MPT by **Prof. R. Venugopal**, Chairman, MPT-2018

Presidential address by **Prof. B.K. Mishra**, President / IIME

Address by **Prof. Rajiv Shekhar**, Director-IIT(ISM) Dhanbad & Patron MPT-2018

Address by **Prof. D. D. Misra**, Chairman, BoG, IIT(ISM) Dhanbad & Chief Patron MPT-2018

Release of Book of Abstracts and Souvenir

Introduction of Guest of Honour

Address by Guest of Honour, **Shri Sanjay Kumar Singh**, GM (Coal Division)-Tata Steel

Introduction of Chief Guest

Address by Chief Guest, **Prof. S. Seetharaman**, Professor Emeritus Royal Institute of Technology, Stockholm, Sweden

Presentation of IIME Awards

Conferment of Honour on **Prof. T. C. Rao**

Address by **Prof. T. C. Rao**, Former Director CSIR-RRL, Bhopal & HOD/FME ISM Dhanbad

Felicitation of Dignitaries

Vote of Thanks by **Prof. Nikkam Suresh**, HOD/FME, IIT(ISM) Dhanbad

## HIGH TEA

Plenary Session I 11:30 - 01:00 PM, GJLT

## LUNCH 1:00-2:00 PM

Plenary Session II 02:00 - 03:30 PM, GJLT

<b>Technical Session 1 04:00 – 5:30 PM</b>		
<b>Session ID</b>	<b>Session No.</b>	<b>Venue</b>
A	Mineral Characterization	Hall 1
B1	Coal Processing I	Hall 2
C1	Metallurgy I	Hall 3
D1	Comminution I	Hall 4
K1	SOP I	Hall 5

6:30 PM onwards

<b>Programme</b>	<b>Venue</b>
<b>Cultural Programme and Banquet Dinner</b>	<b>PANCHSHEEL</b>

**11<sup>th</sup> OCTOBER 2018**

<b>Time- 11:00-1:00 PM</b>		
<b>Session ID</b>	<b>Session No.</b>	<b>Venue</b>
K2	SOPII	GJLT
K3	Exhibitor Session	GJLT
	Lunch 1:00-2:00 PM	

<b>Technical Session 2 2:00-3:30 PM</b>		
E1	Mineral Processing I (Ferrous)	Hall 1
B2	Coal Processing II	Hall 2
F	Strategic & Precious mineral	Hall 5
G1	Environment I	Hall 3
H1	Agglomeration I	Hall 4

<b>Technical Session 3 4:00-5:30 PM</b>		
E2	Mineral Processing II (Ferrous)	Hall 1
E5	Industrial Mineral I	Hall 5
G2	Environment II	Hall 3
B3	Coal Processing III	Hall 2
D2	Comminution II	Hall 4
	<b>6:30 PM onwards</b>	

<b>Programme</b>	<b>Venue</b>
<b>Cultural Programme and Dinner</b>	<b>GJLT</b>

# 12<sup>TH</sup> OCTOBER 2018

Technical Session 4 9:00-11:00 AM		
Session ID	Session No.	Venue
E3	Mineral Processing III (Ferrous)	Hall 1
B4	Coal Processing IV	Hall 2
C2	Metallurgy II	Hall 3
H2	Agglomeration II	Hall 4
E6	Industrial Mineral II	Hall 5
Technical Session 5 11:30-1:00 PM		
E4	Mineral Processing IV (Non-Ferrous)	Hall 1
H3	Agglomeration III	Hall 4
I	Modelling Simulation & Plant Design	Hall 2
J	Miscellaneous & Dewatering	Hall 5
C3	Metallurgy III	Hall 3
Lunch 1:00-2:00 PM		

## Valedictory Session 2:30-3:30PM, GJLT

Invitation of Guests to the Dias

Presentation of Bouquets

Summing-up of MPT-2018 by **Prof. R. Venugopal**, Chairman/MPT-2018

Presidential Address by **Prof. B. K. Mishra**, President/IIME

Address by **Prof. Rajiv Shekhar**, Director, IIT(ISM), Dhanbad & Patron MPT-2018

Address by **Prof. D. D. Misra**, Chairman, BoG IIT(ISM), Dhanbad & Chief Patron MPT-2018

Introduction of Chief Guest by Prof. Nikkam Suresh, HOD/FME, IIT (ISM), Dhanbad

Address by Chief Guest, **Dr. N. K. Nanda**, Director (Technical), NMDC, Hyderabad

Presentation of Awards

Interactive Session

Felicitation of Dignitaries

Vote of Thanks by **Dr. Shravan Kumar**, Convener MPT-2018

HIGH TEA

## PLENARY LECTURE SESSION

### Plenary Session-1

- 1 Assessing Bulk Sortability for Large Copper Mines**  
*Dr. (Prof.) Bern Klein, University of British Columbia, Canada*
- 2 Mining of values from wastes-A challenge to the mineral processors and metallurgist**  
*Dr. S. Seetharaman, Royal Institute of Technology, Stockholm*
- 3 Coal mining & preparation: challenges & opportunities**  
*Mr. Sanjay Singh, GM (Coal Preparation), TATA Steel*
- 4. Separation process technologies; Advances and Innovations**  
*Dr. K. Bala Subramanian, Director, NFTDC, Hyderabad*

### Plenary Session-2

- 1 Coking Coal For Indian Metallurgical/ Steel Industries- Overall Scenario, Beneficiation, Challenges And Future Strategies**  
*Prof. H. L. Sapru, MONNET GROUP*
- 2 Present situation demands a critical look at the gaps in the hydro-metallurgical base metal concentrators for higher yield**  
*Mr. Kaushik Sengupta, Chief of Technology and Engineering, TEGA Industries, Kolkata*

### Mineral Characterization

#### Session Keynote - Prof. G. Kumar, BIT Sindri

**Topic** - Characteristics of Hydrothermal Deposits from South East Pacific Rise-A Case Study

- 1. Application of ICP-OES & ICP-MS technique for study of heavy metal content and trace elements in yellow gypsum**  
*Shrenivas Ashrit, Ravikrishna Chatti, Supriya Sarkar, Venugopal Rayasam and Udayabhanu Nair*
- 2. Significance of Mineralogical Studies in Deducing Reducibility Characteristics of Manganese Ores**  
*Dillip R. Kanungo, L.B Toal, V.A. Sontakkey, Sandhya Lal and Indira Ravindran*
- 3. An investigation on the viability of the BHQ/BHJ of Noamundi, West Singhbhum, Jharkhand**  
*Sanjeev Kumar Das and Ranjit Prasad*

4. **Characterization studies of limonite iron ore**  
*Yakshil Chokshi, Sujaykumar Dutta and Dharmesh Lodhari*
5. **Identification of Mineral Phases and Physico-Chemical Characterization of a Well Known Potters Clay from North-Eastern Region of India**  
*Paran Jyoti Kalita and Rajib Lochan Goswamee*
6. **A detailed mineralogical, textural and quantitative assessment of Eastern Indian iron ore slime.**  
*Paromita Biswas, Sanchita Chakravarty and Manoj Kumar Mohanta*
7. **Characterization and mineral identification of a potters clay from North eastern region of India.**  
*Paran Jyoti Kalita, Champa Gogoi, Rajib Lochan Goswamee*
8. **Significance of mineral chemistry of Chromite and associated host rocks in beneficiation strategy: A case study from Sukinda Chromite deposits, Jajpur district, Odisha, India**  
*Yudhisthir Mohanta, Y. Rama Murthy, Prabodha R. Sahoo, A.S. Venkatesh*

## Coal Processing - I

**Session Keynote - Dr. Atul Bhatnagar, TATA STEEL, Jamshedpur**

**Topic-** Using digital and analytics for improving processing efficiency

1. **Carbonization of low-grade Northeast Indian coal and waste plastics: studies on coke quality and oil yield**  
*Gitika Rani Saha, Tonkeswar Das, Pranjal Handique, Alok Bora, Hari Dutta and Binoy Saikia*
2. **Studies on the Beneficiation of Bore Hole Coal Samples for its Gainful Utilization**  
*Thonangi Gouri Charan, Uday Chattopadyay, Sanjay Chaudhuri, Prabha Shankar Prasad and Subhash Chandra Maji*
3. **Prospects of Dry Processing of Indian Coal**  
*Shobhana Dey and Ratnakar Singh*
4. **Improving Coal Quality through Beneficiation-A Case Study on Coal from SECL**  
*Thonangi Gouri Charan, Manoj K Sethi, S.K. Konar and Ashok K Singh*
5. **Development of an On-line Coal washability analyser for treating coarse coal**  
*K M P Singh, Thonangi Gouri Charan, K M K Sinha, G.V. Ramana, Anindya Sinha, Pradeep K Singh and Priyanka Ujjala*
6. **Chemical Looping Combustion: A Case Study of Coal Gasification Coupled with CO<sub>2</sub> Capture and Power Production**  
*Dipali, Arijit Biswas and Raghu Raja Pandiyan Kuppusamy*

7. **A Groundbreaking Method for Rapid Coal Washability Analysis Utilizing High Speed X-Ray Microtomography: A Case Study Using Indian Coal**  
*S. D. Graham & B. Tordoff*

## Metallurgy - I

Session Keynote – Dr. Sanjay Kali

Topic-Processing of Secondary Resources Employing Hydrometallurgical Techniques

1. **Production of fine powder of metallic Iron by direct reduction of iron oxides waste generated during the processing of Ilmenite ore**  
*Deepika Kumari Sahu*
2. **Carbothermic reduction of Manganese ore**  
*Sanjeev Kumar Das, Santosh Kumar and Ranjit Prasad*
3. **Hydrometallurgical extraction of nickel from alumina supported spent reforming and methanation catalysts by selective precipitation, crystallization and precipitation by ligand displacement techniques**  
*Naga Raju Batti and NR Mandre*
4. **Separation of Nd and Pr from NdFeB magnet leach liquor using Aliquat Nitrate**  
*Aarti Kumari and Sushanta Sahu*
5. **Recovery of Zinc as Hydrated Zinc sulfate salts from Zinc Dross**  
*Shivendra Sinha, Rajanikant Choudhari, Devabrata Mishra, Archana Agrawal, Kamla Kanta Sahu and Saurabh Shekhar*
6. **Utilization of low/lean grade iron ore resources to prepare pellet feed concentrate by reduction roasting**  
*Sachida Nanda Sahu, Ashok Sahu, Surendra Biswal*

## Comminution - I

Session Keynote- Prof. Bern Klein, NBK Institute of Mining Engineering, The University of British Columbia

Topic- Sizing and evaluation of HPGRs using piston press tests.

1. **Addressing the challenges in Indian Iron ore fines wet grinding for the pellet feed preparation**  
*Samayamuththirian Palaniandy and Hidemasa Ishikaw*
2. **Influence of Test Mesh Size and Circulating Load on Bond Work Index**  
*Talasetti Santosh, Chinthapudi Eswaraiyah and Rayasam Venugopal*

3. **Influence of thermal stress on strength and its application in pre-Comminution treatment of ores and industrial minerals: an example from Maldeota phosphorite of Kumaon- Garhwal Lesser Himalaya, India**  
*R. K. Dubey*
4. **Developments in HPGR technology**  
*John Victor and Joseph Dziejzina*
5. **Study on edge effect during grinding in High Pressure Grinding Roll**  
*Jitendra Kumar Sadangi, Sarada Prasad Das and Surendra Kumar Biswal*
6. **Effect of operating variables on the performance of a stirred mill**  
*Talasetti Santosh, Chinthapudi Eswaraiiah and Rayasam Venugopal*
7. **Refining Bond approach to mill scale-up design based on Kapur energy-size reduction relationship and plant operating data**  
*Vinai Gupta*
8. **Analysis of particle size distribution of unit operations by principle component analysis**  
*B. Venkoba Rao*
9. **Evaluating A Refurbished Grinding Mill For A New Application**  
*Shubham Verma*

## SOP - I

Session Keynote- Dr. B Venkoba Rao, Tenova

Topic- Modelling, Simulation And Plant Design: An Overview

1. **Verification of the triz-based forecasts made in paper 269 presented at IMPC 2012, new Delhi, india to validate the relevance and usefulness of triz for innovative resolution of mineral sector-environment conflict issues.**  
*M. S. Prithvi*
2. **Recovering Iron Values from Low Grade Iron Fines and its Statistical Optimization.**  
*Abhyarthana Pattanaik and Venugopal Rayasam*
3. **Settling Characteristics Of Coal Washery Tailings Using Synthetic Polymer**  
*Puja Hansdah, Shravan Kumar and N.R. Mandre*
4. **Extraction of Nickel from Sukinda Chromite Overburden – Steps Forward**  
*Anurag Kumar Jain*
5. **An overview of Pellet bunching in sintered pellet plant**  
*Prajna Mohapatra, Subhadra Sen, Sumit Hota and Subhendu Barik*

- 6. Performance Evaluation of Mozley Mineral separator For the Low Grade Iron ore Fines**  
*Prabhu Chand Kukkala and Shravan Kumar*
- 7. Performance analysis of low grade iron ore by flotation through different starches as depressants**  
*Sanjeet Kumar Suman and Shravan Kumar*
- 8. Hydrodynamics and separation studies of coal fines in liquid-solid fluidized bed separator**  
*Ajita Kumari, Alok Tripathy and Venugopal Rayasam*
- 9. Studies on Sintering Behavior of Iron Ore using Biomass**  
*Gaurav Jha, S. Soren and Kapil Deo Mehta*
- 10. Study on effect of scrubbing on iron ore received from Barbil region, Odisha.**  
*Soumya Sahoo, Sachida Nanda Sahu, Shatrughan Soren and Surendra Biswal*
- 11. Synthesis, characterization and evaluation of a nanocomposite based novel pour point depressant for improving the flow properties of waxy crude oil**  
*Rohit Sharma, Vikas Mahto and Barasha Deka*

## Poster Presentation

- 1. Heavy Media Separation Process In Coal Washeries: A Theoretical Approach**  
*Satyajit Sahoo, Biswajit Kujur, Satyananda Patra*
- 2. Preliminary studies on beneficiation of Malanjkhand Mixed Copper Ore**  
*Silpa Sweta Jena, N.R. Mandre, R. Venugopal*
- 3. Selective flocculation fundamental aspects and application of different flocculants in flocculation of iron ore slimes**  
*Bimal Manda, Satyananda Patra*
- 4. Effect of Na-bentonite on green pellet properties and reduction behaviour of iron ore pellets**  
*Ayesha Mohanty, Satyananda Patra*
- 5. Study the corrosion rate of tar-ammonia separator in by-product coke making**  
*Shakti Kumar, Vinod Saxena, Hari Tiwari, Pratik Dash, Deepak Kumar, Abhijit Roy and Rajesh Kumar*
- 6. Energy optimization of process chiller for coke making by-products**  
*Abhishek Sundaram, Vinod Saxena, Hari Tiwari, Pratik Dash, Deepak Kumar, Abhijit Roy and Rajesh Kumar*
- 7. Comparative study on Selective flocculation of goethitic iron ore fines using different types of flocculants**  
*Diptimayee Nanda, N.R. Mandre*



8. **Effect of Physico-chemical and Mineralogical Characteristics on Iron Ore Flotation**  
*Abhyarthana Pattanaik and Rayasam Venugopal*
9. **Role of Cell Hydrodynamics in Flotation: An Overview**  
*Kalyani Mohanty, Laxmikanta Sahu*
10. **Mineral Matter Characteristics And Combustion Behavior Of Indian Origin Coal**  
*Gaurav Nandan, Priya Ranjan Mishra, Rina Sahu and Sanchita Chakravarty*
11. **Parameters affecting jigging performance: A review**  
*Saroj Sahoo, Nikkam Suresh and Vivek Kashyap*
12. **Separation Of Beach Sand Minerals**  
*Pradyot Jha, Swapnil Sunny*
13. **Applications of rice husk for energy**  
*Thonangi Gouri Charan, KMP Singh, G Udaybhanu and Rumika Oran*
14. **Clean Coal Technology**  
*Vishaka Singh*
15. **Study on green pellet formation and its properties using dextrin as organic binder**  
*Kumar Subham Aditya, Shray Nagle and Aviral Suman*
16. **Characterization and potential utilization of fly ash collected from Bokaro Thermal Power Station (BTPS), India**  
*Dilip Kumar Rajak, SK Dhakad and Chandan Guria*
17. **Fly ash an industrial waste, hazard to environment: A detailed review**  
*Varsha Parashar and Dilip Kumar Rajak*
18. **An approach towards separation of hematite and jasper from (BHJ)**  
*Uday Keshri, Pradeep Kumar Nayak and Shubham Upadhyay*
19. **Beneficiation And Process Optimization Of Medium Grade Chalcopyrite Ore Using Froth Flotation**  
*Imkong Rathi and Shravan Kumar*
20. **Preparation of fly ash granules with respect to mine filling**  
*Anamika Masoom, Manish Jain and Venugopal Rayasam*
21. **Effect of mineralogical characteristics of Pb-Zn ores on their froth flotation performance**  
*Sagarika Nanda, Shravan Kumar and N.R. Mandre*
22. **Characterisation Of Biomass For Its Potential Utilisation As Alternative Source Of Energy**  
*Amrit Anand, Shalini Gautam*

23. **A rapid ICP-OES method for the determination of metallic chromium [Cr (M)] and metallic iron [Fe (M)] in Ferrochrome**  
*Soni Jha, Jay Narayan Patel and Sanchita Chakravarty*
24. **Characterization and preliminary flotation studies on coal to produce low ash clean coal**  
*Mitralkha Patra, Rayasam Venugopal*
25. **Selection of Operating Conditions for Green Pelletization of Goethitic Iron Ore fines**  
*Aditya Kumar, Satyanand Patra and Rayasam Venugopal*
26. **Floation of refuse tailing fine coal slurry and its characterization**  
*Puja Hansdah, Navin Kumar and Shravan Kumar*
27. **Beneficiation of low grade iron ore by using Reduction Roasting and WHIMS**  
*Gadde Amarendar, S Sorenand Prabhu Chand Kukkala*
28. **An Efficient model for minimizing energy consumption in mining and mineral processing industries**  
*Nitish kumar Patel, Rakesh Rajan Shukla*
29. **Effects of Alumina on Iron Ore Pellets properties with respect to different heating rate**  
*Rakesh Prasad, R Venugopal, LA Kumarswamidhas and SK Pan*
30. **Environmental aspects of Coal Gasification**  
*Sujan Saha, Gajanan Sahu, Neelam Kumari, Prakash Chavan, Sudipta Datta, Pashupati Dutta and Pradeep Singh*
31. **Role of Pulp density in froth flotation Cell**  
*Bijay Tiwari, Deb Prasad Chakraborty*
32. **Modeling and Simulation of Preheating Zone of Iron Ore Pelletization Process**  
*Kashinath Barik, Pallishree Prusti, Surendra Kumar Biswal and Rayasam Venugopal*
33. **E-waste management: A step towards safe, sustainable and clean environment**  
*Deblina Dutta, Manis Kumar Jha and Sudha Goel*
34. **Maceral and Geochemical characteristics of coal seams of Ib valley coal basin, Odisha, for oil and gas generation**  
*Akhandal Sahoo, Atul Kumar Varma*
35. **Mineralogical Characterization and Its Implication on Lead-Zinc Sulphide Ore Beneficiation**  
*Aryasuta Nayak and R. Venugopal*
36. **Hydrotopes in soap flotation**  
*Vijaya Mitra Duggirala*

37. **Process flow sheet for the recovery of precious metals from e-waste**  
*Rekha Panda, D. D. Pathak and Manis Kumar Jha*

38. **Counteracting ring formation in DRI rotary Kiln**  
*Bharati sahu, C.V.Susmita*

## SOP - II

**Session Keynote-Dr. Ratnakar Singh, CSIR-NML, Jamshedpur**

**Topic-** Development of Process Technology for Beneficiation of Low and Lean Grade Iron Ores for Iron and Steel Making

1. **Studies on the impact of excess sour vapour on the by-product recovery process**  
*Ritesh Chanchal, Shalini Gautam, Hari Tiwari, Pratik Dash, Deepak Kumar, Abhijit Roy and Rajesh Kumar*
2. **Organic Matter Recovery and Ash Rejection in Coal-Oil Agglomeration process using Waste Olive Oil.**  
*Darpan Shukla and R.Venugopal*
3. **Development and application of a synthesized polymeric additive for improving flow ability of crude oil through pipeline**  
*Barasha Deka and Vikas Mahto*
4. **Mathematical Representation of Coal Cleaning Performance of DM Cyclone and Vorsyl Separator**  
*Dejalini Sahu, Ram Chandra Chaurasia and Nikkam Suresh*
5. **Optical and macromolecular investigations of the coals from Himalayan fold-thrust belts, Sikkim, India: A target to produce artificial graphite for nuclear reactors and activated carbons**  
*Santanu Ghosh, Atul Kumar Varma, Sutapa Patra, Sitindra Sundar Dirghangi, Vinod Atmaram Mendhe and Shampa Mukherjee*
6. **Classification and Potential Utilization of Eocene Coals of Bapung Coalfield, Meghalaya, North East India**  
*Manabendra Nath*
7. **Prospects of utilization of coal/ coal ash as alternative resources for rare earth metals (REMs)**  
*Archana Kumari, Rukshana Parween, Sanchita Chakravarty, Kavita Parmar, Devendra DeoPathak and Manis Kumar Jha*
8. **Adsorption of rare earth metals (REMs) from rinse water**  
*Archana Kumari, Sunidhi Singh, Kavita Parmar, Devendra Deo Pathak and Manis Kumar Jha*

9. **Improvement Of Flow Property (Cfpp) Of Diesel For High Altitude Applications.**  
*Sitesh Suman, Vinod Kumar Saxena, Maya Chakradhar and Krishnarao Lopinti*
10. **Structural parameter effect on beneficiation of hematitic low-grade iron ore.**  
*H.K. Jena, Alok Tripathy and S.K. Biswal*
11. **Application of a novel surfactant and ultrasonic waves for emulsification of an Indian heavy crude oil in water for pipeline transportation**  
*Shailesh Kumar, Barasha Deka and Vikas Mahto*

## Exhibitor Presentation

1. **Advances in enhancing Performance of Thickeners & Optimizing Collector & Frother Performance**  
*Mr. Raju Sharma, ION Exchange*
2. **Insmart System**  
*Mr. P. Pathak*

## Mineral Processing - I (Ferrous)

**Session Keynote - Mr. Rajan Kumar, NMDC, Hyderabad**

**Topic-** Flotation studies with Iron ore Slimes from Kirandul, Chhattisgarh, India

1. **Upgradation of Mn/Fe Ratio of Low Grade Ferruginous Manganese Ores**  
*Veeendra Singh, Sunil Kumar Tripathy and Amit Kumar Dubey*
2. **Design and Evaluation of Novel Spiral separator for beneficiation of Iron ore slime**  
*Raviraju Vysyaraju, Arjun Kumar Pukkella and Sivakumar Subramanian*
3. **To increase the Recovery of Chrome by optimizing the performance of Screw Classifiers in Chrome Ore Beneficiation Plant at Sukinda Chromite Mine**  
*Partha Das, Rakesh Reddy Bandaru, Prerna Kumari and Srinivasulu A*
4. **Flocculation of Iron Oxides Ore**  
*Ranu Srivastava and Ranjit Prasad*
5. **Recovery of Iron ore values from tailing pond through Gravity and Magnetic separation at JSW Steel Limited – Case Study**  
*Ratnakar Bonda, Harikrishna Maddu, Supartick Gupta, Umasankar Attel, Venkatesh R and Suribabu Pandiri*
6. **Microbubble-aided nanoparticle entrainment efficiency in a floatation column**  
*Kumari Ruby and Subrata Kumar Majumder*

7. **Process Tails reduction by Optimising Hydro Cyclone Operating Parameters at JSW Steel Limited**  
*Maddu Harikrishna, Syam Yadav, Attel Umasankar, Venugopal Ram and Mudhunuru Varma Raju*
8. **Experimental characterization of external cross sparger**  
*Sachinraj D, Prasad Kopparthi, Asim Kumar Mukherjee, Narasimha Mangadoddy and Balaraju Vadlakonda*
9. **The flotation processing in solid particle based on the effect of parameters on flotation (case study)**  
*Amir Pazoki, Reza Rashidi Khabir, Reza Jahanian*

## Coal Processing - II

**Session Keynote- Dr. D. P. Patil, Alden Resources, USA.**

**Topic-Challenges in Processing of Blue Gem Seam Coal for Silicon Metal Manufacturing**

1. **Improvement opportunities in flotation circuits of Indian coal beneficiation plants: A case study by TATA Steel**  
*Jitender Singh, Kunal Mathanker, Suman Krishna Sit and Deba Prasad Chakraborty*
2. **Beneficiation of coal by ultrasonic process**  
*Pratik Praharaaj, S C Patnaik and Archana Mallick*
3. **Feasibility Studies on Coal Flotation**  
*Jai Patel, Rayasam Venugopal and Chandan Bhar*
4. **Demineralization of high ash coals by bacteria: A study on Indian Gondwana coal**  
*Aniruddha Kumar, Alok K. Singh, Prakash K. Singh, Asha Lata Singh and Mrityunjay K. Jha*
5. **Performance study of froth flotation of coal fines using different reagents**  
*Sanjay Kumar, Shravan Kumar and Prasad Kopparthi*
6. **Impact of increase in clean coal ash on the yield & rheological properties**  
*Bhargav Dhavala*
7. **Geo polymer concrete derived from by-products of coal combustion**  
*Rachit Ghosh*

## Strategic and Precious Mineral

### Session Keynote - Dr. Anand Rao, BARC Hyderabad

**Topic-**Recovery of some strategic and critical metals from Industrial wastes

- 1. In silico design of ligands for rare earth extractions using accurate density functional theory calculations**  
*Sriram Goverapet Srinivasan, Balarama Sridhar Dwadasi and Beena Rai*
- 2. PGE ore mineralization in the indian deposits and its implications in processing**  
*Tonmoy Kundu, Shivakumar I Angadi, Hemanta Kumar Tripathy and Surendra Kumar Biswal*
- 3. Metallurgical testing, gold deportment studies, and flow sheet development for jonnagiri gold deposit, kurnool district, andhrapradesh**  
*Vivek Ranganathan, Hanuma Prasad Modali, Devarajan Mylappally and Sundar Singh R*
- 4. Characters of scheelite bearing gold-ore tailing sample from hutti and its implications for beneficiation**  
*Nilima Dash, Bibhuranjan Nayak, Shivakumar I. Angadi and Nagesh Chaganti*
- 5. Utilization of Jhama coal in the reduction of ilmenite for production of titanium dioxide**  
*Sanjay Prasad and Navneet Singh Randhawa*
- 6. Flow sheet Development for processing of White tuff material containing precious gem diamonds.**  
*Rajeev Sharma and Suman Kalyan Subudhi*
- 7. A design of experiments study for selective extraction of rare earth elements: neodymium and dysprosium**  
*Shally Gupta, Santosh Daware, Venugopal Tammishetti and Beena Rai*
- 8. Studies on the recovery of precious metals from e-waste**  
*Rekha Panda, D. D. Pathak and Manis Kumar Jha*
- 9. PGE Mineralogy, Occurrence and Beneficiation Practices –A review, with special reference to BNIC ore**  
*P. Sahu, M. S. Jena, N. R. Mandre and R. Venugopal*
- 10. Sustainable Processing of Red MUD for Extraction of REES and TIO<sub>2</sub>**  
*Abhilash and Pratima Meshram*

## Environment - I

### Session Keynote- Dr. G N Jadhav, IIT (Bombay)

**Topic-**Role Of Ore-Petrology And Ore-Textures In Mineral Beneficiation Of Different Iron Ore Deposits Of India

- 1. Acid mine drainage in Assam (Northeast India) coal mining Industry: Physico-chemical characteristics of mine water, coal, overburden, soil, sediment, and their seasonal variations**  
*Madhulika Dutta, Durlav Saikia and Binoy Saikia*
- 2. Physico-chemical characterization of atmospheric particulate matters (PM10) collected around rail traffic: a study on the airborne minerals**  
*Najrul Islam, Shahadev Rabha and Binoy Saikia*
- 3. Electrolytic Waste Water Treatment – An Alternative Possibility in Mineral & Mining Industry**  
*Rama Murthy Yanamandra, Avinash Reddy, Krishan Kumar Aggarwal and Sunil K Tripathy*
- 4. Three tier vegetation in coalmine overburden dumping ground of Assam Makum Coalfields**  
*Hari Prasanna Deka Boruah, Channa Chikkaputaiah, Dipankar Neog, Jayanta Jyoti Bora and Binoy Kumar Saikia*
- 5. Design and Simulation of Terracing and Rain Water Channeling for Coalmine Overburden (OB) Dumping Site Eco-restoration in North East Opencast Coalmine**  
*Dipankar Neog, Jayanta Jyoti Bora, Binoy Kr Saikia and Hari Prasanna Deka Boruah*
- 6. Removal and recovery of cyanide from mineral processing wastewater**  
*Babli Prasad and Krishna Kant Kumar Singh*
- 7. Arsenic mobilization and ground water contamination in Brahmaputra river basin- a study in golaghat dist. of Assam, India**  
*Maridual Chetia*
- 8. Implementation of 3-R concept and effective water management in iron ore mining sector**  
*S. K. Chaurasiya, Ajay Singh*
- 9. Processing of solid wastes from mines, mineral processing and metallurgical plants a case study**  
*P Sharathkumar, Belavadi Ravi, Mahesh Patil, Sirigere Gopalkrishna, Prakash Naganoor and Chitriki Rudrappa*

## Agglomeration - I

- 1. Microscopic studies on slag formations and parameters affecting the strength of fired pellet quality A Case Study**  
*Karamjith Sharma, Gautam Banerjee and Sirshendu Chattopadhyay*
- 2. Influence of weathering and transportation on iron ore sinter properties**  
*Vijay Tiwary, Mithilesh Jha, Anant Prakash and Sandip Bhattacharyya*
- 3. Study of green pellet formation of different LOI iron ore samples**  
*Pallishree Prusti, Kashinath Barik, Danda Srinivas Rao and Surendra Kumar Biswal*
- 4. Enhancement in under grate suction for improving sinter quality in sinter plant – II, RSP**  
*Kevin karren Bhengra, Mahadeo Roy, Mithilesh Kumar Singh, Santanu Kumar Mohanta, Sandeep Awasthi, Swapan Kumar Pan, Sameer Rajan Dutta*
- 5. Effect of Particle size iron ore pellet properties**  
*Kiran Yelemkar, Swar Raje, Janardhan Jeurkar, Sanjeev Bhasin*
- 6. Improving Cold Compression Strength of Iron Ore Pellets by Using Colemanite**  
*Shaik Mahaboob Basha, Chandra Sekhar, Srinivas Dwarapudi*
- 7. Study on the effect of alkali metals on the reduction of blast furnace flue dust composite briquettes**  
*Susanta paramanik, Ritwik Das*

## Mineral Processing - II (Ferrous)

Session Keynote - Dr. C Raghu kumar, TATA STEEL, Jamshedpur

**Topic-** Evolution of hydraulic classification and its importance in mineral Industry

- 1. Thermally assisted beneficiation of a low-grade iron ore: A study of characterization and magnetic separation**  
*Swagat Satyagopal Rath, Nilima Dash, Shivakumar Angadi and Surendra Kumar Biswal*
- 2. Comprehensive Utilization of Banded Iron Ores: An innovative approach**  
*Nigamananda Ray, Deepak Nayak, Nilima Dash, Swagat S. Rath and Surendra Kumar Biswal*
- 3. Utilization of a manganese ore fine from central india in view of mineral conservation – a case study**  
*M.G. Raut, Dillip R. Kanungo, Sandhya Lal and Indira Ravindran*



4. **Issues of technology development for utilization of waste to commercialization in iron ore Industries**  
*Rajan Kumar*
5. **Beneficiation studies of Manganese ore fines using dry magnetic separation**  
*Sharath Bhoja, Sunil Kumar Tripathy, C Raghu Kumar, Veerander Singh, D P Chakraborty and Rajib Mohanty*
6. **Selective Flocculation of Iron Ore Slimes using Xanthan Gum**  
*Santosh Daware, Venugopal Tammishetti and Beena Rai*
7. **Extraction of nickel from sukinda chromite.**  
*Anurag Jain*
8. **In plant scale beneficiation of a ferruginous manganese ore**  
*Udyal Umamaheshwar Reddy, Sirigere Gopalkrishna, Belavadi Ravi, Sharath P, Mahesh Patil, Prakash Naganoor and Chitriki Rudrappa*
9. **Process amenability studies on low grade ferruginous manganese ore**  
*R. V. Vinayak Kumar, M.R. Patil, B. P. Ravi, Suresh Yadav*

## Industrial Mineral - I

**Session keynote- Dr. A. Bandyopadhyay, CDE ASIA**

**Topic-Application of CDE Compact Plant Technology In Industrial Mineral Processing**

1. **Characterization and Influence of impurity minerals on beneficiation of low grade kaolin deposit**  
*Mahesh Kulkarni and Gajananrao Jadhav*
2. **Pre-Graphite Flotation**  
*Surya Pratap Singh*
3. **Zero waste process evolution for a low grade limestone**  
*Chitriki Rudrappa, Belavadi Ravi, Sharath P, Sirigere Gopalkrishna, Mahesh Patil, Prakash Naganoor and MV Rudramuniyappa*
4. **Process amenability study on a barite**  
*Mahadev Khandali, Belavadi Ravi, Sharath P, Mahesh Patil, Sirigere Gopalkrishna, Prakash Naganoor and G Shaila*
5. **Performance of a Knelson Concentrator in Recovering PGE values from the Low Grade BNIC PGE ores**  
*M. S. Jena, P. Sahu, P. Dash, M. Satyanarayanan, R. Venugopal and N. R. Mandre*
6. **An enhanced-gravity method for the beneficiation of pyritic limestone**  
*Subrata Roy, Amit Chatterjee, Hemant Aiyer*

**7. Beneficiation of Silica Sand Using Spiral Separators and IRMS for the Glass Industry**

*Glen Rampola, Alex D Costa and Rohan Avasthi*

## **Environment - II**

### **Session Keynote- Prof. Gurdeep Singh**

**1. Development of value-added magnetically separable Nano product from minerals industry waste and its photocatalytic environmental remediation applications**

*Purna K Boruah, Pinaki Sengupta and Manash R Das*

**2. Mechanical and Thermal Treatment of Waste Foundry Sand**

*Mohd Moiz Khan, G.N Jadhav, S. M. Mahajani, R. Vishwakarma, D. Gosavi and S. Mandre*

**3. Effective Recycling and Utilization of BOF Dust by Two Stage Beneficiation**

*Ela Jha and Sujay Kumar Dutta*

**4. Utilization of waste iron oxide of ilmenite processing to produce fine powder of metallic iron**

*Raman Raj, Deepika Kumari Sahu, Aarti Kumari, Ranjit Prasad and S. Ranganathan*

**5. Reprocessing of Iron ore beneficiation plant tails to cement grade for reuse**

*Mahesh Patil, Belavadi Ravi, Sharath Kumar P, Sirigere Gopalkrishna, Chitriki Rudrappa, Prakash Naganoor and C Venkatiah*

**6. Effect of coal fly ash on the growth of microalgae in water and waste water**

*Prabhat Jaiswal, Vinod Kumar Saxena and Satya Narayan Naik*

**7. Synthesis of alkaline cement from metallurgical slags using geopolymerization at ambient temperature**

*Susanta Nath and Sanjay Kumar*

**8. Recovery of metallic values from the ferrochrome slag using an advanced gravity concentrator**

*Surya K. Das, Sumil Tripathy and Shivakumar Angadi*

**9. An assessment for the recycling of rechargeable Batteries**

*Pankaj Pathak, Karan Chabhadiya, Yash Pujara, Rhytham Niranjani, Upasna Jadeja, Chaitali Chaandekar, Janki Govani*

## Coal Processing - III

**Session Keynote- Dr. Sanchita Chakravarty, CSIR-NML, Jamshedpur**

**Topic-** Rare Earth Elements: A potential resources of coal and coal by products

- 1. Advanced technologies to wash Indian coal**  
*Jimmy Yu, Bob Hollis, Shuyan Zhao and Amit A*
- 2. Beneficiation of High Ash Indian Fine Coal using Spiral Separator**  
*Thonangi Gouri Charan, K MK Sinha, KMP Singh and Gopal Shankar Jha*
- 3. Effects of reactivity on porosity of metallurgical coke: A case study**  
*Deepak Kumar, Vinod Saxena, Hari Tiwari, Vijay Tiwary and Sandip Bhattacharyya*
- 4. Study of particle separation in centrifugal flowing film concentrator**  
*Ranjeet Kumar Singh, Kisor Kumar Sahu and Ratnakar Singh*
- 5. Conversion of hematite fines to magnetite used for heavy media separation using CNG (Compressed Natural Gas)**  
*D. C. Sau, M.K. Runda and Manoj Kumar*
- 6. Advances in spiral automation and ultrafine coal processing**  
*A. De Andrade, J. Agenbag, G. Dcosta, Siba Sankar Patra*
- 7. Nano-mineralogy and geochemistry of feed coals and their coal combustion residues from two Indian coal-based industries: implications for health hazards**  
*Binoy Saikia and Shahadev Rabha*
- 8. Co-Gasification of high ash Indian Coal with different agriculture bio mass and their reactivity assessment for better fluidization**  
*Alka D Kamble, Prakash D Chavan, Vinod Kumar Saxena, V A Mendhe*
- 9. Extraction of rare earth metals (REMs) from coal and coal ash**  
*Archana Kumari, Rukshana Parween, Sanchita Chakravarty, Kavita Parmar, Devendra Deo Pathak and Manis Kumar Jha*

## Comminution - II

**Session Keynote- Prof V K Gupta, IIT (ISM) Dhanbad**

**Topic-**Recent advances in understanding size reduction in ball mills

- 1. Energy Efficient High Pressure Grinding Rolls to Treat Low Grade PGE Ore.**  
*Talasetti Santosh, Soni Rahul Kumar, Angadi Shivakumar, Chinthapudi Eswaraiiah and Rayasam Venugopal*
- 2. Liberation studies of high ash low volatile medium coking coals**  
*Uday Chattopadyay, Sreemantha Dutta, Eesh Kumar, Thonangi Gouri Charan and Pradeep Kumar Singh*

3. **Product Size Distribution and its Washability Characteristics while crushing the coal through Drop Breakage and Single Roll Crusher**  
*Subhash Chandra Maji, Uday Chattopadhyay, Prabha Shankar Prasad, Thonangi Gouri Charanand Sujit Kumar Kabiraj*
4. **Studies on comminution characteristics of carbonatite rock to determine the energy and kinetic parameters of ball mill**  
*Satyasish Rout, Rahul Soni, Talasetti Santosh and Chinthapudi Eswaraiah*
5. **Liberation studies of working seams of coking coal of Sijua group of collieries, Tata Steel Limited - A case study**  
*Nedumuri Venkata Sairam, Balla Srinivasa Rao, Surajit Sarkar, Deepak Kumar Gorai, Pudi Srinivasa Rao and Atul Kumar Bhatnagar*
6. **Optimization of process parameters during grinding in high pressure grinding roll**  
*Chintada Umasankar, Jitendra Kumar Sadangi, Sarada Prasad Das and Brij Kumar Dhindaw*
7. **Mobile Crushing Technology- Evolution and Application in Indian Scenario.**  
*Om Dwivedi and Srinivas Nandikanti*
8. **Grindability studies of a Typical Indian Sub Grade Iron Ore sample**  
*Gottumukkala Venkateswara Rao, Ravvala Markandeya and Rajan Kumar*
9. **HPGR circuits for Mineral Processing**  
*F.P. Vandermeer, H. Knapp*

### Mineral Processing - III (Ferrous)

1. **Magnetic beneficiation of Low-Grade Manganese Ore from Odisha, India**  
*Patitapaban Mishra, Pradeep Mallick, Nilima Dash and Birendra Kumar Mohapatra*
2. **Investigations on the silicothermic reduction of manganese ore**  
*Navneet Randhaawa, Rajesh Minj, Satadal Ghorai, Ajay Mishra, Krishna Kumar, Deo Prakash Singh and Jai Narayan Patel*
3. **Upgradation of Low-grade Siliceous Chromite ore from Ghutrigaon area, Dhenkanal district, Odisha, India**  
*Asish Kumar Das, Somnath Khaoash, Patitapaban Mishra, Jaykrushna Mohanty, Sarada Prasad Das, Nilima Dash and Birendra Kumar Mohapatra*
4. **To Study the Recovery of Iron Values from a High LOI Iron Ore Through Reduction Roasting Process**  
*Piyush Kumar, Prabhas Chandra Beuria and Surendra Kumar Biswal*

- 5. Flow sheet development studies on an iron ore sample from Central Karnataka**  
*B. Suresh Kumar, V.A.J. Aruna and Indra Ravindran*
- 6. Processing of slimy iron ore dressing plant tails**  
*Umesh Shivanigi, Belavadi Ravi, P Sharath Kumar, Sirigere Gopalkrishna, Mahesh Patil, Prakash Naganoor and Chitriki Rudrappa*
- 7. Developments in new Gravity Separator Technologies for Mineral Beneficiation**  
*Glen Rampola Alex D Costa, Siba Sankar Patra*

## Coal Processing - IV

**Session Keynote- Dr. Binoy Saikia, CSIR-NEIST, Jorhat.**

**Topic-** Low-grade High-sulfur Coal as Abundant Source of Fluorescent Carbon Quantum Dots

- 1. Geochemistry of rare earth elements in Lower Gondwana coal from the Talcher Coal basin, India**  
*Rupa Biswas, Sanchita Chakarvarty and Vivek Mishra*
- 2. Application of FactSage to predict ash melting behavior**  
*Naresh Kumar, R Venugopal, S Soren, Sanchita Chakravarty, Rina Sahu and Priya Ranjan Mishra*
- 3. Quality Improvement of Heat Altered Coal by Oil Agglomeration**  
*Sanchita Chakravarty, Saswati Chakladar, Ashok Mohanty, Mamta Sharma and Rupa Biswas*
- 4. Reduction of Imported Coal in Coke Making in SAIL Plants to Reduce Coal Blend Cost**  
*K.P. Jayakumar Pillai, Salil Bhattacharjee and Ranjan Kumar Barman*
- 5. Renovation of four Coking Coal Washeries of BCCL**  
*N.K Suresh, V.K Rao and Aditya Raj Suman*
- 6. Effect of feed solids concentration on settling rate of coal for clarification of washery water(Waste) by polymer Flocculation**  
*Sarika Pimpalkar, Nikkam Suresh, Gurdeep Singh*
- 7. Cleaning of high ash Indian coal fines(-3.0mm) using a water-only cyclone**  
*Abhishek Anand Hembrom, Nikkam Suresh*

## Metallurgy - II

Session Keynote-Dr. Abhilash, CSIR-NML, Jamshedpur

**Topic-** Sustainable Processing of Secondary Resources for Extraction of Strategic Metals

- 1. Separation of Iron From Acidic Iron Rich Potash Solution Obtained During Processing of Glauconitic Clay**  
*Saurabh Shekhar, D Mishra, A Agrawal, K. K Sahu and Shivendra Sinha*
- 2. Precipitation of rare earths from the leachate of a coal fly ash**  
*Serajuddin Md*
- 3. Hydrometallurgical process for the extraction of rare earth metals (REMs) from diluted aqueous solution**  
*Archana Kumari, Sunidhi Singh, Kavita Parmar, Devendra Deo Pathak and Manis Kumar Jha*
- 4. Hydrometallurgical processing of alloy ash for selective recovery of zinc and lead**  
*Pratima Meshram, Abhilash, Nallusamy Vasumathi and JN Patel*
- 5. Process modelling and metal separation in air-lift reactor bioleaching of sea nodules**  
*Rohit Meshram, Abhilash, Pratima Meshram, Kapil Deo Mehta and Banshi Dhar Pandey*
- 6. Extraction of Cobalt from Lithium ion batteries following Solvent Extraction (SX) process**  
*Deblina Dutta, Manis Kumar Jha and Sudha Goel*
- 7. General Characteristics and gainful utilisation of steel plant slag in environmental prospectives**  
*M Choubey, R Venugopal*

## Agglomeration - II

Session Keynote- Dr. Srinivas Dwarapudi, TATA-STEEL, Jamshedpur

**Topic -** Establishing Right Pellet Chemistry for the 6 MTPA Capacity Iron Ore Pelletizing Plant at Tata Steel, Jamshedpur, India

- 1. Beneficiation Response Of A Waste Dump Fines From Eastern India For The Production Of Sinter And Pellet Feed**  
*Rajendra Kumar Rath, Manoj Kumar Mohanta and Ratnakar Singh*
- 2. Studies on utilization of sukinda chromite fines via sintering route for charge chrome production**  
*Sanjay Agarwal, Jagannath Pal and Dinabandhu Ghosh*

3. **Statistical approach for predicting and optimising the physical properties of sinter by usage of HMDS Slag Case Study at JSW Steels limited**  
*Sharanappa Kalshetty, Rudramuniappa MV, Ratnakar Bonda and Ashwin A*
4. **Investigation on the softening-melting behaviors of iron ore pellets with the combination of ferrous burdens of Blast Furnace**  
*Shriprakash Sudhir, Satrugan Soren and Golap Md Chowdhury*

## Industrial Mineral - II

**Session Keynote-Dr. B. P. Ravi, VSK University, Belary**

**Topic-**Process to Prosper By Nil Waste Process Evolution of Solid Wastes from Mines and Plants For Sustainable Development

1. **Flow sheet development for a low grade graphite sample from Republic of Madagascar**  
*Prasanna Kumar Sampathirao, Veerabhadra Rao, V.A.J. Aruna and Indira Ravindran*
2. **Beneficiation of Limestone Rejects for Utilization in Cement Industry – An Impetus for Mineral Conservation and Resource Augmentation**  
*V.V.R. Murty, Dillip R. Kanungo, Sandhya Lal and Indira Ravindran*
3. **Mineral Characterization and Beneficiation Studies on a Low grade Glauconitic Sandstone from Vindhyan Super Group, Bihar, India**  
*S. Pani, S. K. Nanda, Dillip R. Kanungo, S. Lal and Indira Ravindran*
4. **Silica Reduction by beneficiation of low grade bauxite – A Case Study**  
*Manoj Modi, Buddhiprakash Meena and Saurav Kumar*
5. **Physical beneficiation of quartz to remove trace impurities for photo voltaic application.**  
*Shiva Prasad, Janardhan Jeurkar Mahesh Kulkarni, Sanjeev Bhasin*

## Mineral Processing - IV (Non-Ferrous)

**Session keynote - Dr. Viswanathan, ZEISS Pvt. Ltd**

**Topic-** Geometallurgical characteristics and Process mineralogy of Indian lead zinc ores and their bearing on the metallurgical parameters of quality and recovery – some examples from Indian Lead Zinc mines

1. **Tailing Re-processing to recover metal values**  
*Suryapratap Singh*
2. **Lead - Zinc Beneficiation Plant, Abakaliki, Nigeria**  
*Saibal Ghosh, Mihir D. M, P Srinivas and Tabish Ali*

- Beneficiation study on a very low grade Zinc ore from Central India – A way forward for efficient utilization**  
*V.V.R. Murty, Dillip R. Kanungo, Sandhya Lal and Indira Ravindran*
- Assessment of textural and heavy mineral concentration in Fluvial deposits of Brahmagiri delta, Odisha, India**  
*Jagadeeswari Vanamu and Sunita Routray*
- Effect of reagent dosages on the entrainment factor of flotation of copper ore at laboratory scale**  
*Mousumi gharai, Venugopal Rayasam*

## Agglomeration - III

**Session keynote-Dr. B. Gorain, Hindustan Zinc, Vedanta Ltd., Udaipur**

**Topic-Delivering Value Through innovation and breakthroughs in the mining industry**

- A selective granulation process of high Al<sub>2</sub>O<sub>3</sub> iron ores to improve sintering behaviour and sinter qualities**  
*Akhil Singh*
- Statistical Approach for Prediction and Optimization of Sinter Properties with Washed Iron Ore Fines**  
*Ratnakar Bonda, Vinayak Bhosekar, Avb ABrahmacharyulu, A A Ashwin, V Prabhu and VR Sekhar*
- Amenability of BMQ for pellet making**  
*P Sharath Kumar, Belavadi Ravi, GE Shreedhar, Udyal Umamaheshwar Reddy, Basavaraj Karadkal, G Shaila and A Ayyakannu*
- Effect of Cooling Rate on Cold Compressive Strength of Carbon-Burdened Hematite Pellets**  
*Ammasi A and Pal J*
- Pelletization studies on beneficiated magnetite concentrate**  
*P Sharathkumar, Belavadi Ravi, Sirigere Gopalkrishna, Prakash Naganoor, Chitriki Rudrappa, Mahesh Patil and Ge Shreedhar*
- Improvement of RDI and RI of Iron ore sinter by improving porosity network and mineralization through selective granulation of input raw material**  
*Sudip Acharya, Swapan Pan, Mahadeo Roy, S. A. Balaji*

## Modelling Simulation and Plant Design

- Data Reconciliation by Successive Linearization: The shortfalls**  
*Rahul Soni and S. P. Tiwari*



2. **Predicting the HPGR performance using DEM modelling technique**  
*Amit Kumar, Bern Klein, Chengtie Wang, Genzhuang Li*
3. **Studying the effect of magnetic liner on ball mill performance using DEM**  
*Gen Zhungli, Bernklein, Amit Kumar, Rroufail*
4. **Gas Holdup And Bubble Size Distribution In Microstructured Flotation Column**  
*Ritesh Prakash, Subrata K Majumder and Anugrah Singh*
5. **CFD simulation studies on fluidization of monosized particles under hindered settling**  
*Anmol Awasthi, Prasad Kopparthi and AK Mukherjee*
6. **Designing & Modelling of bigger hydrocyclone for delivering smaller cut point**  
*Pooja Kumari, Kaushik Sengupta, Narashima Mangadoddy,*
7. **Debottleneck AG/SAG and Ball mills through Holistic Modelling and Energy Efficient Discharge System**  
*Sanjeeva Latchireddi, Rao Latchireddi*
8. **Impact of Plant Design Process on Project Economics**  
*Shubham Verma, Swadhin Saurabh and Rainer Stephenson*

## Miscellaneous & Dewatering

**Session Keynote- Dr. Om Prakash, Metso India Pvt.**

**Topic-Glimpses of all Past International Coal Preparation Congress**

1. **Risk Assessment and Disaster Management Plan in Tasra Project of Chasnala Group of Coal Mines**  
*Girijesh Kumar, Neelesh Sharma, Bijay Sinha and Shyam Singh*
2. **Effects of press-filter operating parameters on filtration efficiency of iron ore concentrate**  
*Suribabu Pandiri, MudhunuruVarma Raju, Kumar Abhishekand T Uma Devi*
3. **Batch sedimentation studies on beneficiation tailings of sludge**  
*Mudhunuru Varma Raju, Sandeepa B, Suri Babu Pandiriand Uma Devi T*
4. **Experimental investigations on the tribological characteristics of TiO<sub>2</sub> metal nano particles (MNP) additives with Acacia Concinna biodiesel- diesel fuel blends**  
*Vishal Saxena, Vinod Kumar Saxena and Niraj Kumar*
5. **De-Bottlenecking of Vertical pressure Airblow filter for optimizing Moisture and Throughput at JSW Steel Limited**  
*Ratnakar Bonda, Harikrishna M, Benjamin Walter, Venugopal Mr, Umasankar Attel and Venkatesh R*

6. **Development of technology for growth of Iron ore industry**  
*Rajan Kumar*
7. **Studies on the effect of chemical conditioning on the tribo-electrostatic separation of coal- quartz powder**  
*Santosh Kumar Mohanta, Swagat S Rath and Ranjan Kumar Dwari*
8. **Reduction of imported coal in coke making in SAIL plants to reduce coal blend cost.**  
*K P Jaykumar, Salil Bhattacharjee, R K Barman*
9. **CFD analysis on the effect of outer vortex finder length on water split behaviour in hydrocyclone**  
*Shashank Shekhar Pathak, Arun Kumar Majumder*
10. **Business Opportunities for Production of Value Added Products from Primary and Secondary Resources through Investment and Academia Collaboration**  
*Adel Ismail*
11. **Energy, exergy and environmental analysis of thermal power plants**  
*Vivek Kumar , V K Saxena, Rakesh Kumar*

### **Metallurgy - III**

Session Keynote- Dr. C. Kesava Rao

**Topic-** The role of hydrometallurgy in mines waste management

1. **Silicone Oil based emulsion leaching of Cu, Ni, and Co from Complex sulfide minerals (Cu-Fe-Ni-Co-S) at moderate temperature-pressure**  
*Shivendra Sinha, Devabrata Mishra, Kamla Kanta Sahu, Archana Agrawal and Saurabh Shekhar*
2. **Solvent Extraction of Tungsten from Alkaline Solution for Production of High Pure W-Powder**  
*Noopur Deshmukh, Archana Agrawal, Kamala Kant, Sanjay Agarwal and Devabrata Mishra*
3. **New Insights into the Reduction Behaviour of Iron Ore Slimes: A Mechanistic Study of Phase Transformation**  
*Deepak Nayak, Nigamananda Ray, Nilima Dash, Subhmit Kumar Roy, Swagat S. Rath and Surendra Kumar Biswal*
4. **Cobalt recovery from high iron containing acidic leach liquor generated during processing of Tungsten-Carbide Scraps**  
*Preeti Karmakar, Ranjan Pradhan, Archana Agrawal, K K Sahu and D. Mishra*

5. **Studies on extraction of Hafnium and Zirconium from solid zirconium frit disposed off after recovery of nitric acid**

*Arbind Kumar, MRP Reddy and NR Mandre*

## TECHNICAL SESSIONS

