

# 6th International Conference on Automation & Information Technology in Steel & Mining Industry (AITISM'19)

*Final*

<b>PROGRAMME AT A GLANCE</b>		
<b>Date</b>	<b>Time</b>	<b>Activities</b>
17.10.19	09:30 AM-1:30 PM	Registration
	1:50 PM - 3:20 PM	Inaugural Programme
	3:20 PM- 3:35 PM	Inauguration of Technical Exhibition, e-poster Gallery and Student Projects
	3:35 PM-4:00 PM	Inaugural Tea & Visit to Technical Exhibition
	4:05 PM-5:30 PM	Plenary Session
	7:30 PM Onwards	Cultural Programme & Dinner
18.10.19	9:00 AM - 10:35 AM	Manufacturer's Presentation Session - I
	9:00 AM-1:00 PM	e-Poster Session-I
	10:35 AM- 11:00 AM	Visit to Technical Exhibition, Student Projects, Review of e-Poster Session-I and Tea
	11:00 AM- 01:05 PM	Sponsor's Presentation Session-I
	1:05 PM- 2:05 PM	Lunch
	2:05 PM- 4:15 PM	Sponsor's Presentation Session-II
	2:05 PM-6:00 PM	e-Poster Session-II
	4:15 PM-4:30 PM	Visit to Technical Exhibition, Student Projects, Review of e-Poster Session-II and Tea
	4:30 PM - 6:00 PM	Sponsor's Presentation Session-III
	7:30 PM Onwards	Cultural Programme & Dinner
19.10.19	9:00 AM - 10:20 AM	Technical Session - I
	9:00 AM-1:00 PM	e-Poster Session-III
	10:20 AM- 10:40 AM	Visit to Technical Exhibition, Student Projects, Review of e-Poster Session-III and Tea
	10:40 AM- 1:20 PM	Manufacturer's Presentation Session - II
	1:20 PM- 2:20 PM	Lunch
	2:20 PM- 3:45 PM	Technical Session - II
	3:45 PM-4:00 PM	Visit to Technical Exhibition & Student Projects
	4:00 PM - 5:00 PM	Valedictory Session
	5:00 PM -5:30 PM	Hi-Tea

17.10.19

**INAUGURATION SESSION**

13:50-15:20

- Welcome Address
- Lighting of the Lamp
- Address by Guests of Honor
- Inaugural Address by Chief Guest
- Release of Conference Souvenir
- Release of Conference e-Proceedings CD
- Keynote Address
- National Anthem
- Inauguration of Technical Exhibition, e-Poster Gallery, Student Projects (Auditorium Foyer)

17.10.19

**PLENARY SESSION**

16:05-17:30

1. The Automation of the Future is now reality in Steel Manufacturing  
*Marco Ometto*  
**Danieli Automation, Italy**
2. Digitalization in Industry  
*Mr. Tara Rana*  
**Schneider Electric**
3. Industry 4.0--Role of a New Age Cloud Service Provider  
*Ashish Bhagat*  
**Sify Technologies**
4. Presentation by *Datta Kuvalekar*  
**Forbes Marshall**

18.10.19	MANUFACTURER'S PRESENTATION SESSION - I	9:00-10:35
1.	Scalable Monitoring & Predictive Maintenance for Rotating Equipment <i>Raunak Bhinge</i> <b>Infinite Uptime</b>	
2.	Online Quality Assurance in Flat Steel Process <i>Rajeev S Jain</i> <b>EMG Automation</b>	
3.	Manufacturer's Presentation by Steffen Gunther <b>Baumer India</b>	

18.10.19	SPONSOR'S PRESENTATION SESSION - I	11:00-13:05
1.	Smart Steelmaking: A Step Towards a New Industrial Revolution <i>Bernhard Steenken</i> <b>SMS Digital</b>	
2.	System Overview and Case Study Before and After Implementing Digital Insight Platform in Indian Integrated Steel Plant Coke Oven Battery <i>SB Chaudhury</i> <b>Lotus Wireless</b>	
3.	Digital Transformation – An Execution Roadmap <i>Ravi Narayan Mishra</i> <b>Schneider Electric</b>	

1. Design Simplification and Problem Rectification through Automation of Cutting Machine and Welding Machine of Long Rail Complex at RSM, Bhilai steel Plant  
*Nishant Kumar Singh, Abhilash Gupta, Bhilai Steel Plant, SAIL, Bhilai, India*
2. Yard Indexing Techniques  
*Rajiv Kr. Singh, Shailendra Kr Jha, Srihari Velisetti, Gagandeep Singh, Tata Steel Limited, Jamshedpur, India*
3. Analytical Model to determine Tuyere Body and Nose Leakage Detection in Blast Furnaces  
*Debjani Aditya, Utpal Nandy, Rama Shankar Singh, Shantanu Mallick, Tata Steel Limited, Jamshedpur, India*
4. Design of Customized Assistive Technology for the Disabled  
*Richa Pandey, Mainak Mandal, Birla Institute of Technology, Mesra, Ranchi, India*
5. Smart Energy Management for Increasing Sinter Productivity from Sinter Cooler's Hot Flue Gas Discharge  
*Abhijit Das, R.P. Singh, P.K. Singh, P.K. Thakur, K. Prakash, S.K. Pan, Research & Development Centre for Iron & Steel, SAIL, Ranchi, India*  
*R.D. Sharma S. Ganguly, R. Singh*  
**Bhilai Steel Plant, SAIL, Bhilai, India**
6. Smart Technological Upgradation for Performance Enhancement of Plate Mill, Bhilai Steel Plant  
*P.K.Thakur, R.P.Singh, P.K.Singh, Abhijit Das, Kundan Prakash, Research & Development Centre for Iron & Steel, SAIL, Bhilai Plant Centre, India*
7. Application of Machine Learning in Rolling Mills: Case Studies  
*S. Rath, S.K. Thakur, S.K. Mohapatra, D. Karmakar, Research & Development Centre for Iron & Steel, SAIL, Ranchi, India*
8. A New Index for Assessing the Coke Strength after Reaction  
*Praveen K Jha, B K Sahoo, Bablu Ghosh, Santosh Kushwaha, KK Manjhi, Research & Development Centre for Iron & Steel, SAIL, Bhilai Plant Centre, India*
9. Smart BLT for Blast Furnace  
*Jitendra Kumar, Paul Wurth India, Gurgaon, Haryana, India*
10. Process Condition Analyzer  
**SMS India Pvt Ltd.**
11. Digitisation of Condition Monitoring Parameters for Eliminating Breakdown of Important Equipment of Blast Furnace in Durgapur Steel Plant – A Step Towards Industry 4.0  
*Kausik Kumar Sengupta, Abhishek Bose, Abhishek Chakraborty, Avinash Kumar, Kausik Sengupta, Kajal Mandal, Durgapur Steel Plant, SAIL, Durgapur, India*
12. Product Quality Analysis  
**SMS India Pvt Ltd.**

**18.10.19 SPONSOR'S PRESENTATION SESSION - II 14:05-16:15**

1. X-ray Photoelectron Spectroscopy (XPS), X-Ray Fluorescence (XRF) and Optical Emission Spectrometry (OES)

*Karthick Balasubramanian & M R Malathesh*

**Thermofisher Scientific**

2. The Automation of the Future is now reality in Steel Manufacturing-II

*Marco Ometto*

**Danieli Automation, Italy**

3. Metal & Mining Solution For Optimizing Power

*Shaikh Sahid Hossain*

**ETAP Automation**

**18.10.19 SPONSOR'S PRESENTATION SESSION - III 16:30-18:00**

1. Automation Products & Solutions For Steel Industry

*Joshi Jacob & K.C. Khatai*

**Tata Steel**

2. Manufacturer's Presentation

*Ajay Deshmukh*

**Honeywell**

3. Digital Solutions for Modern and Efficient Blast Furnace Iron making

*Reuter Yves*

**Paul Wurth S.A., Luxembourg**

1. Automatic Head End Cutting of Hot Bar in Motion at Crop Shear Before Entry of Finishing Stands at Hot Strip Mill in Rourkela Steel Plant  
*Shaktiveer Singh, Indranil Banerjee, Ayan Goswami, Research & Development Centre for Iron & Steel, SAIL, Ranchi, India*  
*D Sarkar , K Venkata Ramana, Rourkela Steel Plant, SAIL, Rourkela, India*
2. Design and Installation of Hydraulic Drive Mechanism for Torch Cutting Roller Table in Caster 1&2, SMS-II, RSP, M. Shrujan, S Parida, Manish Kumar Singh, U K Mondal, N Pradhan, **Research & Development Centre for Iron & Steel, SAIL, Ranchi, India**  
*M Jyoti, S K Sahoo, T P Sivasanka and A V Rajashekhar*  
**Rourkela Steel Plant, SAIL, Rourkela, India**
3. Temperature Control System for Generating Hot Water through Waste Heat Recovery from Sinter Cooler  
*M K Singh, S Dhara, RK Ram, M Roy, S K Pan, Research & Development Centre for Iron & Steel, SAIL, Ranchi, India*  
*U Oudhia, D D Patra, Bhilai Steel Plant, SAIL, Bhilai, India*
4. Cloud Based Monitoring of Critical Assets of HSM-2  
*R.K.Muduli, Rourkela Steel Plant, SAIL, Rourkela, India*
5. Slab Positioning System in Reheating Furnace of Plate Mill, Bhilai Steel Plant  
*R.R.Choudhary, Ashit Prasad, Research & Development Centre for Iron & Steel, SAIL, Ranchi, India*  
*C.S.Seshu, Bhilai Steel Plant, SAIL, Bhilai, India*
6. Mathematical Simulation of Rod Rolling with Refined Roll Gap  
*Abhishek Maitra , D.K. Jain, S. Kumar and D. Karmakar, Research & Development Centre for Iron & Steel, SAIL, Ranchi, India*
7. Improvement in performance of Sinter Plant-2 of Durgapur Steel plant (DSP) through innovative measures  
*Diwakar Raj, Archana Sharan, SA Balaji, Research & Development Centre for Iron & Steel, SAIL, Durgapur Plant Centre, India*  
*S Jain, Pramod Kr. & Atanu Roy, Durgapur Steel Plant, SAIL, Durgapur, India*
8. Image Stitching using Computer Vision Algorithms  
*Ishita Shreevastava, Karthik Datta Yerram, Ujjwal Verma, Manipal Institute of Technology, Manipal, Karnataka,*
10. Smart Stoves Monitoring  
*Reuter Yves, Paul Wurth S.A., Luxembourg*
11. Advances in Automation in Steelmaking – Step Towards Quality Steel Production  
*Rajeev Kumar, Pravanjan Bera, K Jha, Durgapur Steel Plant, SAIL, Durgapur, India*  
*Somnath Kumar, Antariksh Gupta*  
**Research & Development Centre for Iron & Steel, SAIL, Ranchi, India**

19.10.19	TECHNICAL SESSION - I	9:00-10:20
<ol style="list-style-type: none"> <li>1. Evolution of Control Components in Industrial Automation – Best Practices for Steel Plants <i>Ashish Manchanda, FINDER India Pvt. Ltd.</i></li> <li>2. An IoT Based 6 – DoF Parallel Robot for Industrial Applications <i>Ashish Siddharth, Arun Dayal Udai, Shivankar, and Arnav Swapnesh, Birla Institute of Technology, Mesra, Ranchi, India</i></li> <li>3. Role of Automation in Energy Monitoring System in Bhilai Steel Plant <i>Sandeep Verma, Bonya Mukherjee, Bhilai Steel Plant, SAIL, Bhilai, India</i></li> <li>4. Predictive power utilization dashboard to reduce over-injection units <i>ASN Murthy, Abhisek Chakrabarti, Gautam Khera, JSW Steel Ltd. Dolvi Works</i></li> <li>5. A Case Study on Commissioning of Automation System of Blast Furnace 8 at Bhilai Steel Plant <i>Nakul Khopragadhe, Prasant Jain, Anshul Gangwar, Bhilai Steel Plant, SAIL, Bhilai, India</i></li> <li>6. Smart Management Information System (MIS) driven by Industry 4.0 <i>Amiya Kumar Samantaray, Phoenix Robotix Pvt. Ltd.</i></li> </ol>		

19.10.19	MANUFACTURER'S PRESENTATION SESSION -II	10:40-13:20
<ol style="list-style-type: none"> <li>1. Network Security Chinmoy Maiti <b>Palo Alto Networks (I), Pvt Ltd</b></li> <li>2. Manufacturer's Presentation by Sandeep Prabhakar <b>MOXA</b></li> <li>3. Manufacturer's Presentation by <b>Fox Solutions</b></li> <li>4. The Connected Enterprise Maturity Model <b>Rockwell</b></li> <li>5. Mass Spectrometer Dineshwar Singh <b>Thermo Fisher Scientific India Pvt. Ltd.</b></li> </ol>		

1. Study of IOT based Water Optimization in Irrigation System & Efficiency Parameters in Manufacturing Industry  
*Shikhar Sinha, Mr. Dayananda Nayak, Manipal Institute of Technology, Karnataka, India*  
*Mr. Mariswaran Selvarajan, Sify technologies, India*
2. Development of Ironmaking Technologies in SAIL  
*Bishnu Kumar Das, Mahadeo Roy, Research & Development Centre for Iron & Steel, SAIL, Ranchi, India*
3. Mould Sticker Detection and Breakout Prevention System in Continuous Slab Caster  
*A. K. Verma, I. Banerjee, Research & Development Centre for Iron & Steel, SAIL, Ranchi, India*
4. Improving Productivity by Multiple Plate Piece Planning from Higher Weight Slab in Plate Mill  
*Nilamani Mohapatra, Prabir Kumar Swain, Rourkela Steel Plant, SAIL, Rourkela, India*
5. Aspects of Improving Water Productivity of Integrated Steel Plants through Automated Water Quality Monitoring and Management  
*S.Mitra Mazumder, A.K.Jha, P.Banerjee, Research & Development Centre for Iron & Steel, SAIL, Ranchi, India*  
*S.K.Singh, K.Bhattacharjee, Durgapur Steel Plant, SAIL, Durgapur, India*
6. Development of Process Model for Improving Quality of Steel  
*Antariksh Gupta, Rajeev Kumar Singh, Research & Development Centre for Iron & Steel, SAIL, Ranchi, India*  
*Rakesh Kumar, Indian Institute of Technology (ISM), Dhanbad, India*
7. Digitalization – New Hot Strip Mill at RSP, Rourkela  
*Ram Naik, Rourkela Steel Plant, SAIL, Rourkela, India*  
*Jagdish Arora, Nilesh Sinha, H Brahme, Subhro K Ghosh*  
**Centre for Engineering & Technology, SAIL, Ranchi, India**
8. Modelling and Analysis of Blast Furnace Performance for Efficient Utilization of Energy  
*Susanta Pramanik, National Institute of Technology, Durgapur, India*  
*S.K. Dubey*  
**Durgapur Steel Plant, SAIL, Durgapur, India**
10. Advanced BFXpert with Artificial Intelligence  
*Reuter Yves, Paul Wurth S.A., Luxembourg*
11. Future of Cyber Security  
**Trend Micro**
12. Strategies & Challenges for Implementation of Industry 4.0 in a Large & Old Process Plant  
*Deepak Jain, Bhilai Steel Plant, SAIL, Bhilai, India*



19.10.19	TECHNICAL SESSION - II	14:20-15:45
1.	<p>SMART Mining at Sukinda, Tata Steel  <i>Sreela Paul, Vandana Kumari, Jose Martin Korath, A S R Rao, Manish Kumar Singh, Awnish Kumar, Rajesh Patel, Sumit Kumar, Tata Steel Limited, Jamshedpur, India</i></p>	
2.	<p>Automated Video Surveillance using Deep Learning: A Coal Industry Perspective  <i>Rajsekhar Kumar Nath, Coal India Limited, Ranchi, India</i>  <i>Debjani Mitra, Indian Institute of Technology (ISM), Dhanbad, India</i></p>	
3.	<p>Leveraging MPLS &amp; Private APN Technologies For Central Monitoring and Analysis of Mission Critical Assets  <i>Sweij Kumar Sharma, Manish Kumar Singh, Sanjeev Kumar and Abhishek Kumar, Tata Steel Ltd., Jamshedpur, India</i></p>	
4.	<p>Dynamic Solid Control  <i>KK Gaur, SMS India Pvt Ltd.</i></p>	
5.	<p>Application of GPS And GSM Based System for Locomotive Tracking in Bokaro Steel Plant  <i>Ayan Goswami, Shyamalesh Saha, Chandan Kumar, Research &amp; Development Centre for Iron &amp; Steel, SAIL, Ranchi, India</i>  <i>T Kedarnath, AK Jha, Bokaro Steel Plant, SAIL, Bokaro, India</i></p>	

19.10.19	VALEDICTORY SESSION	16:00-17:00
	<ul style="list-style-type: none"> <li>• Introduction of Panelists</li> <li>• Recapitulation of AITISM'19</li> <li>• Panel Discussion</li> <li>• Concluding Remarks</li> <li>• Vote of Thanks</li> </ul>	