

RACHIT TIWARI

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PROFESSIONAL EXPERIENCE

Sedibeng Iron ore (Pty) Ltd., Johannesburg, South Africa

Head Operations (Plant)

Nov 2016-Present

- Directly responsible for operations and maintenance of 4 plants and reporting to General Manager.
- Engaged with team from France, Brazil, Algeria, Portugal, Ukraine and South Africa for installation, commissioning and maintenance of a new production plant of capacity 3Mn tons.
- Designed the organization structure of operations team, interviewed, and recruited candidates to fill up the vacant positions.
- Effectively lead, coach & develop teams to accomplish production targets for the concerned financial year.
- Plan work flow, manage multiple priorities & processes to improve production accuracy with minimum spoils for around 70 members who directly report to me.
- Employ modern production management tools like Six Sigma, Lean Manufacturing, Kiazen process Improvements, etc. to achieve organizational targets viz, higher productivity, lesser rejections, increased operating margins and low employee turnover.
- Collaborate with local and foreign suppliers and subject matter experts to implement design changes in production process to improve overall plant efficiency and reduce cost.
- Chair monthly planning meeting to develop the monthly maintenance and operations plan, to plan shutdowns, and to arrange & allocate resources for various planned and unplanned jobs.
- Review major data points of the operations and maintenance department and present the findings to C-level executives and board members.
- Regularly conduct RCA, FMEA and Cost avoidance studies to enhance the existing process and improve the productivity.

Key Achievements:

- Reduced downtime of plant by 40% through root cause analysis.
- Dispatched 0.5 million tons of ore to China with in the period of 4 months, two times the dispatch clocked during the same period in last financial year.
- Liaised with Metso Minerals, France, to install Computerized report generating and analyzing System in the plant – a never-used-before technique in any of the mineral plants of such scale.

Tata Steel, Global Mineral Projects, Jamshedpur, India

Senior Manager

April 2016 – Nov 2016

- Engage with foreign suppliers to put up a cost and technical proposal to the management for an investment of \$10Mn to set up a new production plant at the South African mine.

Key Achievements:

- Successfully managed the \$10 million project and ensured transparency in communication amongst the 20+ teammates subordinate staff to complete the project in 12 months.

Tata Steel, Research and Development, Jamshedpur, India

Researcher

July 2012- March 2016

- Completed 3 projects as a project leader and 5 projects as a project member with average project performance index of 95%.
- Implemented 2 projects at plant scale, generating additional revenues of \$800K from each project.
- Trained two subordinates on operation of beneficiation equipment and on data analysis using MS Excel. Also, Supervised eight project interns from July 2012 to Jan 2016.
- Member of Innovation council, Tata Steel R&D. Nurtured 5 innovative ideas, two of which converted to full-time projects.
- Coordinator of chief review meeting. Developed standard review methodology and reduced meeting time by 30 minutes.
- Suggestion management coordinator, organized suggestion fair and generated more than 100 (kaizen based) suggestions.
- Developed standard operating procedures (SOP) for labs and pilot scale equipment and implemented safety initiatives as Health Safety Management System (EHSMS) coordinator.
- In-charge of a pilot plant, improved Equipment Availability Index (EAI) from 72% to 85% and correspondingly Equipment Utilization Index (EUI) from 61% to 67%.

Client projects

- Developed process flow sheet to enhance the yield by 5% of Iron ore beneficiation plant at Noamundi, TATA Steel.
 - Spearheaded a team of 4 senior researchers. Conducted lab scale, pilot scale and plant scale trials
 - Benefit potential of \$800K per annum and Project performance index of 95%.
- Developed an innovative methodology to utilize of waste (mine overburden) generated during coal mining in road making.
 - Led this innovative project of conversion of a waste material to a new revenue source from new product.
 - Benefit potential of \$0.6M per annum and project performance index of 95%
- Leading a \$7M investment project on briquetting (agglomeration) of coal tailings (low-grade coal fines).

- New product development. Coal tailings utilization will also mitigate environmental hazards associated with storage of coal tailings. Technology ready for implementation in next FY and Benefit potential of \$2.5M per annum.
- Improvement in the thickener water overflow clarity in Joda East, Iron ore Mines, TATA Steel.
 - Carried out 25-day plant scale trial to demonstrate that selected chemical performs under dynamic plant conditions.
 - Performed statistical analysis of the data and presented to the client.
- Performed process audit of Noamundi Iron ore wet processing plant, Tata Steel.
 - Used modeling and simulation to identify bottlenecks and pain points in the process plant.
- Developed and demonstrated beneficiation process for Khondbond Iron ore fines.
 - Performed study at pilot scale. Methodology adopted: Design of experiments, statistical analysis of data and optimization of process parameters. Project performance index of 100%.
- Developed innovative and ecofriendly method to utilize the waste generated during iron ore slime beneficiation as a soil conditioner

Publications

- Published 4 papers in peer-reviewed journals and 3 papers in TATA Search (in-house technical journal), and presented 4 papers in international conferences.
- Company level best paper award for paper published in Tata Search 2015.

Patents

- Filed Indian application as inventor and co-inventor for 3 inventions.

EDUCATION

Bachelor and Master of Technology, Mineral Engineering and Resource Management **2012**

Indian Institute of Technology (Indian School of Mines), Dhanbad, India [Ranked #4 Engineering college in the country]

- National level award – Gold medalist for outstanding performance 2012, ISM Dhanbad.
- College level award – Merit based scholarship and Annual outstanding performance award, 2010-11, ISM Dhanad.

TATA IPR Course - Modules covered - IPR, Invention disclosure and Licensing (technology transfer). **2014**

Finance for non-finance professionals (Online – Coursera), University of California, Irvine **2016**

ADDITIONAL INFORMATION

- **Volunteer:** Life member KARTAVYA – an initiative (NGO) founded by the Class of 1999 to provide basic education to those living around the college.
- **CSR Initiatives:** Key leader in driving various CSR programs of TATA Engage and Initiated various activities related to Environmental awareness, road safety, health and hygiene.
- **Event Management:** Organized workshops on important topics such as *Legal Liability* in South Africa. Conducted in-house training and seminars on control charts and cost calculations to educate production supervisors.