Mrs Sanghamitra Bharati

DOB: 12-10-1978

Education & Perfonal Profile

M.Tech in Material Science (Ceramic Engineering)

IIT, Kharagpur, India /Batch : 2010

B.E ,Ceramic Engineering

NIT, Rourkela. India **/**Batch: 2000

Career Highlights

- **21yrs of work experience in various areas : Bio-ceramics Refractory and Steel making Operations**
- Developed, implemented and improved several technologies used in Steel Plants.
- Domain knowledge in the area of steel making, material characterisation techniques, manufacturing of refractory materials used in steel plants and their quality assurance.
- Expertise in slag-refractory interaction in steel making conditions and various refractories used in Primary, secondary and Continuous Casting steel making process
- **Work published in over 30National and International journals and 10 filed/granted patents.**

Awards & Accolades

- *Selected by JSW group for **Women Leadership Development Program at IIM Bangalore** (2019)*
- *Selected by JSW as **Future Fit Leader (FFL)**, sponsored by company for Advanced Leadership Development Couse at ISB, Hyderabad (2020)*
- *Selected by JSW Group for **Technical Leadership Development Program at Carnige Mellon University** (2023)*
- *Awarded Best Graduate **Engineer Trainee (GET) of IFGL** (2001)*

Professional Journey

JSW Steel Ltd, Vijaynagar Works, India:2015 to Present

Prior to that, have worked at Tata Steel Ltd – Jamshedpur (Research & Development), CGCRI – Kolkata (Bioceramics Division) and **IFGL Ltd - Rourkela India (Research & Development)** from 2000 onwards.

Demonstration of Professional Leadership

- Introduced improved project management methology for R&D projects in JSW Steel.
- Strengthened Daily Management practices in SMS (Steel Melt Shop)with focus on process control and integrating best practices acorss all SMSes.
- Established an improved structure for preparation, communication and review of various MIS (management Information System) reports at SMS with focus on analysis and problem solving.
- Developing and grooming the process control team, mentoring to 4 women employees who are also direct reportees.
- Seen as a Role model to young women employees in JSW, often consulted by other women employees especially GETs for professional guidance / career advices and mentoring.
- Takes active role in CSR / Community initiatives like Tree planation drive, awareness development program in surrounding localities. Took up the work of watering the common garden in Vidyanagar Township with a team of likeminded people during Covid lockdown when the gardeners were not

Key Achievements / Projects Completed

at JSW Steel Ltd, Vijaynagar Works, India

- **Developed green process technologies for recycling of Steel making Slags & refractory wastes.**
  - LHF slag as replacement of synthetic slag in secendary steel making
  - Use of LHF slag for making Refactory Cement
  - Use of EAF Slag for making Refractory castable
  - Use of Mgo-Cr_2O_3 refractory for making RH refractory
- **Developed and implemented practices of TiO_2addition in steel making, resulting improvemt in product quality, reduction in rejection level and lowering of production cost.**
- **Reduction of Cycle time in RH Steel making process through process optimisation and modifying alloy addition practice.**
- *** Development & Stabilisation of high end wire rods for tyre cord applications**
- *** Reduction of Carbon pick up in Electrical Steel for reducing quality rejections.**

(**Projects currently being handled)*

at Tata Steel Ltd, Jamshedpur, India

- Designed novel DVM for Tundish that resulted in 50 % improvement in Tundish sequence length.
- 10 % improvement in slag zone refractory of steel Ladles by replacing spar addition with bauxite and/or LF slag.
- Eliminated chronic caster outage due to Tundishbuttom puncture by modifying the locking system in Turbo-Stop.
- Successfully designed and implemented a slag conditioner for Low Carbon grade Si-killed Steel Tundish, which resulted in 40 % improvement in Tundish sequence length.
- Standardised the fixing mechanism of slide plate system in steel ladle that resulted in higher MTBF of ladles.
- Successfully implemented use of 60% LC castables as Ladle-Tundish back-up lining material to replace use of 70 % LC castable resulting cost saving.
- Driven implementation of Carbon-free refractory materials for steel ladle metal zone to improve quality of flat products and enhance ladle life

Projects handled at CSIR Govt of India

- Novel Synthetic Route for Biomaterials and their Applications.
- Development of Bio-active Bio-glass Compositions with varied amount of Calcium-Phosphate crystals to be used as coating on Titanium and Stainless steel implants

Projects handled at IFGL

- Development of Continuous Casting refractories and slide gate refractories for trial at various steel industries in India