

## **Anand M. Murmu**

Assistant Professor (21<sup>st</sup> November 2016)

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### **Educational Qualification**

- M.Tech. in Mechanical Engineering (Specialization in Manufacturing Science and Engineering) from IIT Kharagpur on 25<sup>th</sup> July 2008.
- B.Tech. in Production Engineering from B.I.T. Sindri, Dhanbad on 23<sup>rd</sup> August 2005.
- I.Sc. from St. Xavier's College, Ranchi (Board-BIEC Patna) on 21<sup>st</sup> June 1999.
- Xth from St. Joseph's High School Guhijori, Dumka (Board-BSEB Patna) on 15<sup>th</sup> August 1997.

### **Research Area**

- Surface Modification by coating using various energy sources, like, Plasma, Laser, etc.
- Welding, Conventional and Non-conventional Machining.

### **Subjects of Interest**

- Conventional & Non-Conventional Machining, Welding Technology, Surface Engineered Materials Technology, Laser Processing of Materials, Thermodynamics, Heat & Mass Transfer, Engineering Mechanics, etc.

### **Projects:**

**“Thermally sprayed WC-Co coating as a hard chrome replacement solution.”**

- WC-12% wt. Co powder has been plasma sprayed under several parametric conditions and some of their important properties like wear, hardness, phases etc., have been assessed. Finally the wear properties have been compared with a commercially available electroplated

hard chrome coating. A careful choice of parameter yields a coating more wear resistant to the electroplated hard chrome. Hence, thermally sprayed WC-Co can be a good hard chrome replacement solution.

## **Professional Experience**

- Essar Steel India Limited, Hazira as a Deputy Manager (from 1<sup>st</sup> July 2008 to 2<sup>nd</sup> March 2013).

### **Area of Exposure:**

- ✓ Technology and the processes of 12 MTPA Integrated steel plant.
  - ✓ Operations and maintenance of various departments of ESTIL Hazira.
  - ✓ Maintenance of various critical equipment (Gearbox, Hydraulic and pneumatic cylinders, Pumps, Compressors, Heat Exchangers, Blowers and many other types of heavy equipment used in steel industry).
  - ✓ Working as a team member for quality circle projects.
  - ✓ Member of In-house faculty pool and dealing subjects: Welding Technology, Bearings & Lubrication, Modern Maintenance Practices, Gear & Gearbox, Industrial Hydraulics, Pumps & Compressors, etc.
  - ✓ Global standard HR practices, (Performance Management System (PMS), Employees development scheme, Job Rotation, Competency Mapping, Recruitment, etc).
- Matix Fertilisers and Chemicals Limited, Panagarh, Durgapur as a Joint Manager-Ammonia Mechanical (from 06<sup>th</sup> March 2013 to 18<sup>th</sup> October 2016).

### **Area of Exposure:**

- ✓ Overall brief knowledge of the technology and the processes used in fertilizer industry.
- ✓ Exposure of PFD, P&ID and other detailed drawings of entire complex for project execution.
- ✓ Having good exposure of Erection/Installation, pre-commissioning and Commissioning activities of rotary equipment used in Fertilizers Industry such as Turbine(Gas/Steam/Hydraulic), Compressors, Blowers, ID Fan, BFW Pumps, Lean Semi-Lean Pumps, Expanders, etc.
- ✓ Erection/Installation, pre-commissioning and Commissioning activities of static equipment like installation of Boilers, boiler drums, primary and secondary reformers, methanator, Ammonia Convertor, Unitized Chiller, Stripper, Atmospheric Ammonia Storage Tank, etc.
- ✓ Closely worked with OEMs (M/S GE, M/S MHI, M/S KEPL, M/S SULZER, M/S Thermax, M/S Boldrocchi, M/S JCI, M/S KSB, M/S LINDE, M/S Cryostar, etc.) while pre-commissioning and commissioning of the equipment.
- ✓ OTS pre-commissioning & commissioning.
- ✓ Working as a team member for quality circle projects.
- ✓ Member of In-house faculty pool and dealing subjects: Welding Technology, Bearings & Lubrication, Modern Maintenance Practices, Gear & Gearbox, Operations & Maintenance of Pumps & Compressors, Turbines, Blowers, etc.

- ✓ Global standard HR practices (Performance Management System (PMS), Employees development scheme, Job Rotation, Competency Mapping, Recruitment, etc).