NITISH KUMAR PANDA

Metallurgical & Materials Engineering

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Rourkela, Odisha

SUMMARY

Metallurgical and Materials Engineering student at IGIT Sarang with hands-on experience in alloy purification, steelmaking, and industrial research. Interned at CSIR-IMMT and SAIL-RSP, gaining expertise in metal processing and analysis. Strong leadership experience. Passionate about industrial production, and research.I am highly motivated, optimistic, and dedicated, with a strong desire to excel in my field and make valuable contributions to the advancement of the materials and engineering industry

EXPERIENCE

Undergraduate Research

National Institute of Technology, Rourkela

2024 Rourkela

A part of the UG thesis project involving thermal treatment using Differential Thermal Calorimetry (DSC) was carried out at NIT Rourkela under the guidance of Dr. Ajit Behera.

- This project involved the experimental investigation of different industrially manufactured alloying concentrations to understand the impact of thermal treatments on the material's microstructure and mechanical properties.

R&D Internship

CSIR-IMMT , Bhubhaneswar

05/2024 - 07/2024 Bhubaneshwar, India

Worked as a Summer Research Intern under the guidance of Dr Alok Tripathy Principal Scientist, And Mr. Nigamananda Ray, Senior. Scientist Of Mineral Processing Department At CSIR- IMMT, Bbsr. Where I worked in the Mineral Processing Department in the Mineral Processing Pilot Plant, CSIR-IMMT, Bbsr.

- The Project topic was Purification of Aluminium Silicon Alloy with Process of Leaching. Where I learnt the procedure of the experiment that how the experiment is performed

Industrial Engineering Intern

Rourkela Steel Plant, SAIL

05/2023 - 06/2023 Rourkela

Worked as a Summer Intern at Blast Furnace Department In RSP in the supervision of Mr Aditya Routray the General Manager Of Blast Furnace.

- I got to learn about the mechanical components that are used in extraction of pure oxygen, nitrogen and argon from atmosphere by fractional distillation process that are stored in both liquid as well as gaseous form that contribute to the steel making process

KEY ACHIEVEMENTS

Branch Secretary of Metallica Society

Branch Secretary of Metallica Society (Metallurgical and Materials Engineering), responsible for organizing and coordinating events, festivals, and activities for the department.

EDUCATION

Bachelor of Technology in Metallurgical & Materials Engineering

Indira Gandhi Institute of Technology, Sarang 7.40/10

11/2023 - 05/2025 Sarang, Odisha

Higher Secondary

Sri Aurobindo's Rourkela School 72%

2020 Rourkela

Matriculation

Delhi Public School,Rourkela 64.80%

2018 Rourkela

TRAINING / COURSES

Data Visualisation

Completed a course focused on using visualization tools like Tableau, Power BI to present complex datasets in a clear and visually engaging manner. Learned how to transform data into meaningful insights using interactive dashboards and graphs.

Buisness Analytics with Excel

Acquired expertise in using Excel for data analysis, including advanced functions, pivot tables, and data modeling techniques.

SKILLS

Extractive Metallurgy | Problem Solving | Heat Treatment | Teamwork | Analytical Thinking

LANGUAGES

English Proficient

Hindi Proficient

Odia Native

KEY ACHIEVEMENTS

First Prize, National Youth Day Observance (Nehru Yuva Kendra)

Awarded first place for active participation and excellence in activities during the National Youth Day observance, demonstrating leadership, creativity, and commitment to youth empowerment.

Assistant General Secretary of the Hostel Affairs

Played a key role in improving hostel operations, enhancing communication between Students and Management, and organizing community-building activities.

Buisness Analytics Co-Lead of IIEC

Contributed to the development and implementation of business analytics strategies, supported entrepreneurial initiatives, and helped drive innovation within the cell

PROJECTS

Effect of Steel Thermal Condition on Phase Transformation Behavior via DSC Analysis

2024 - 2025

Initially started as a **minor project**, this study was extended into a **major project** to explore the effect of steel's thermal conditions on its phase transformation behavior using Differential Scanning Calorimetry (DSC). The project involved preparing steel samples, conducting DSC analysis, and interpreting the results to understand the impact of thermal treatments on the material's microstructure and mechanical properties. The extended study provided deeper insights into phase transformations, aiding in the optimization of steel for industrial applications.

Heat Treatment of Low Carbon Steel

2023

Applied theoretical knowledge of phase transformations and cooling rates to optimize the heat treatment process for improved performance.

- Investigated the effects of various heat treatment processes (e.g., annealing, quenching, tempering) on the mechanical properties of low-carbon steel.
- Conducted experiments to analyze changes in hardness, tensile strength, and microstructure.

Inclusion in Stainless Steel

2023

This project examines the role of manganese sulphide (MnS) inclusions in pitting corrosion of stainless steels.