Somanath Malakari Kambale

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SUMMARY

Mechanical Engineer with A Specialization in Solar Energy, adept in PVsyst and Helioscope for solar optimization. Experienced in solar cells and photovoltaics design and testing. Seeking a full-time position in the renewable energy sector to leverage my expertise in mechanical engineering and solar technology.

EDUCATION

Master of Science in Modern Energy Production and Sustainable Use **Graduating May 2024**

Arizona State University, Tempe, AZ

Courses: - Applied Photovoltaics, Solar cells, Battery and EV, Reliability (Testing) and Standard of Photovoltaics.

Specialized in Solar Energy, leveraging PVsyst and Helioscope for academic projects; gained hands-on experience.in PV testing lab as an integral part of coursework **3.59/4**

Bachelor of Science in Mechanical Engineering **December 2020**

Savitribai Phule Pune University, Pune

Engineering Design, Quality Management, Sustainability and Environment, Operations Management **8.19/10**

TECHNICAL SKILLS

- **Design and Modeling**: AutoCAD, PVsyst, Helioscope, CATIA, SolidWorks, MATLAB, FEA, JMP, Ansys
- **Business Enterprise:** ERP, MRP
- **Microsoft Office Suite**: Word, Excel, and PowerPoint
- **Certifications:** Procore Engineer Certification | Lean Six Sigma Yellow Belt | Introduction to Renewable Energy –SEI

EXPERIENCE

Junior Officer II (CGL Mechanical Maintenance Dept.) **August 2015-September 2017**

POSCO MAHARASHTRA STEEL PVT LTD, MH, India

- Successfully commissioned Furnace & Cooling Tower in CGL, significantly optimizing efficiency and performance.
- Effectively led mechanical maintenance for key sections, notably improving reliability.
- Strategically implemented preventive strategies, substantially reducing operational losses.
- Rigorously ensured strict safety compliance, consistently maintaining a zero-incident environment.
- Diligently managed detailed records, showcasing exceptional attention to detail and communication skills.
- Actively collaborated with engineers and contractors on comprehensive maintenance and repairs.
- Utilized ERP systems for efficient material management and addressing the needs of the mechanical department.

PROJECTS

- **Infrared-Electroluminescence-UV Fluorescence Imaging of PV Modules:** In our project, we employed UVF, Electroluminescent, and infrared imaging to detect PV module defects swiftly and affordably.
- **Hotspot Testing of Photovoltaic Modules:** In our experiment, we aim to detect hotspots within the module, which are critical areas that could harm the entire module. Identifying these hotspots allows us to anticipate and prevent module failures under harsh conditions, ensuring its durability and long-term performance.
- **Performance Of Photovoltaic Modules:** We discovered the true impact of irradiance change on the IV curve from the experiment. Additionally, the PV curve is impacted by the cell's temperature.
- **PID Testing of Photovoltaic Modules:** This project aims to enhance the durability of crystalline silicon photovoltaic modules, focusing on mitigating potential-induced degradation (PID) through a humidity and foil method to improve long-term reliability.
- **Heat Recovery from Furnace Flue Gases:** Developed a low-cost solution for improving furnace efficiency by recovering waste gas, directly relevant to focus on energy efficiency and performance improvement.

PUBLICATION AND AWARD

- Selected by the Indian government for a "**National Overseas Scholarship**" for higher education. **March 2022**
- **Contactless Electromagnetic Braking System,** IRJET: Volume 7, Issue 5 **May 2020**