SAMPREETH KANDOTH

Stockholm 114 15, Sweden
LinkedIn: Sampreeth Kandoth

kandoth@kth.se
+46 734812965

Graduate in Machine Design from KTH Royal Institute of Technology with a background in Mechanical Engineering, specializing in Engineering Design, Testing and Tribology. Proven track record in Engineering design, product optimization and Tribology through various projects and activities. Skilled in powerful software tools for addressing complex engineering challenges efficiently and smartly. Committed to sustainable and innovative engineering problem solving aiming to make a meaningful impact in areas that are in need of expertise.

Education

2022-2024: **Master of Science in Engineering Design Track Machine Design**
KTH Royal Institute of Technology, Stockholm, Sweden

2017–2021: **Bachelor of Technology (Honors) in Mechanical Engineering**
APJ Abdul Kalam Technological University, Kerala, India.

Work Experience

Master thesis – Axel Christiernsson International AB - KTH Royal Institute of Technology Jan – Oct 2024

- Developed an electric system for a test rig for testing bearing current and shaft voltage to study the electric performance of greases.
- Tested more than 150 steel and hybrid bearings for studying grease performance and improving energy consumption.
- Oversaw the test management using LabVIEW and extensive data collection and processing using MATLAB.
- Performed an in-depth literature review on the tribology of greases and bearings, bearing current and shaft voltage.
- Customized bearing seal that fits the requirement of the test improving test condition and reliability.

Research Intern- KTH Royal Institute of Technology

Bearing testing Jun – Aug 2024

- Undertook tests on deep groove ball bearings to compare the performance of different greases and to analyse grease behaviour under different operating conditions.
- Developed MATLAB-based speed profile and managed test parameters in LabVIEW, enhancing test accuracy and control
- Performed sensor mounting, assembling and disassembling of the test rig, laboratory treatment of test specimen and ultrasonic cleaning, to maintain high testing standards and equipment accuracy

Design of Elastomer bearing test rig Jun – Aug 2023

- Designed a test rig that analyzes the compression and shear characteristics of an elastomer bearing used in a wave energy converter.
- Established requirement specifications and developed and selected concepts by ensuring project alignment and feasibility.
- Modelled, optimized and created manufacturing drawings using Autodesk Fusion 360 for efficient production and assembly.
- Selected components for the design ensuring quality and cost efficiency

Conducted tests on ETM Jun – Aug 2023

- Conducted tests on Electronic Taction Machine (ETM) and analyzed tribological characteristics of various grease in replicated gear contact conditions.
- Acquired expertise in laboratory protocols and specialized training in precise handling of test equipment.

Testing and analysis of Elastomer bearing. Jun – Aug 2023

- Tested elastomer bearing used in wave energy converter is to analyze the shear and compressive behaviour.
- Prepared the test rig and the elastomer bearing and conducted comprehensive testing ensuring adequate setup for reliable results
- Analyzed the results and found vital conclusions and delivered a detailed report of elastomer-bearing performance.

Junior Research Officer- Government of Kerala, India Nov 2021- Jun 2022

- Worked as a Junior Research Officer in the Commission for Reforms in Higher Education assigned by the Government of Kerala undertaking research tasks assisting the commission
- Collected and analysed a large amount of data from the whole higher education society of the state to draw actionable conclusions
- Organised meetings for the commission overseeing logistics, scheduling and participant management to facilitate productive sessions.

Project Achievements

Design of Cable gland of Street Macro 5G substation- KTH 2023

- Redesigned the cable gland of the 5G substation of Ericsson by enhancing the ease of installation extending product life and reducing worker's error.
- Conducted tests on the prototype to verify compliance with the requirement, validating product reliability and effectiveness
- Evaluated and selected rubber seal after an extensive study maximizing recyclability, performance and durability.
- Generated concept and developed detailed manufacturing drawings using Autodesk Fusion 360 for efficient manufacturability.

Development of RCF test rig - KTH Feb – Apr 2023

- Contributed to the development of the Rolling Contact Fatigue test rig in KTH, procuring expertise in machine development and equipment functionality
- Performed assembling and dissembling of the test rig using different components to check compatibility, improving machine skills and improving hands-on expertise.

Design Improvisation of Natural Draft Incinerator for RUBCO 2021

- Designed a feeding mechanism by improving the feeding rate and solving the backfiring problem for effective waste management.

Software Tools

❖ SOLIDWORKS	Advanced	❖ ANSYS	Intermediate	❖ LabVIEW	Intermediate
❖ Autodesk Fusion 360	Advanced	❖ LaTeX	Intermediate	❖ ADAMS	Beginner
❖ MATLAB	Advanced	❖ Solid Edge	Intermediate		

Engineering Skill Sets

- ❖ Computer-Aided Design (CAD)
- ❖ Finite Element Modelling (FEM)
- ❖ Product architecture DSM
- ❖ Product Life Cycle Management
- ❖ Monte Carlo Simulation
- ❖ Fractional Factorial design
- ❖ Quality function deployment (QFD)
- ❖ Pugh Evaluation Matrix
- ❖ Technical drawing
- ❖ ANOVA
- ❖ Morphological chart
- ❖ Design of Experiment

Certifications

- **Certified SOLIDWORKS Professional in Mechanical Design** (CSWP), **Dassault System**
- Autodesk Fusion 360 integrated CAD/CAM/CAE, Autodesk, Coursera

Languages

English: Proficient Swedish: Beginner Malayalam: Mother Tongue Hindi: Advanced