

NANTHA KUMAR

R & D Design Engineer

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📍 6A, BTM Phase 1, Phase II, Electronic City, Bangalore, India.

EXPERIENCE

Senior Product Design Engineer

Norateel India Power Components

📅 10/2024 - 01/2026 📍 Bangalore, India

A company specializing in power components

- Prepared detailed General Arrangement (GA) drawings in accordance with customer specifications and project requirements.
- Developed core and coil manufacturing drawings, including the design of winding fixtures to support accurate and efficient production.
- Created, reviewed, and released fabrication drawings and Bills of Materials (BOMs) to ensure manufacturing accuracy and smooth workflows.
- Ensured all designs complied with international standards and internal engineering guidelines.
- Coordinated design activities with a global manufacturing network, aligning engineering deliverables across multiple sites.
- Performed design validation using simulation tools and Finite Element Method (FEM) analysis to verify performance and reliability.
- Implemented design optimization initiatives to improve cost efficiency, manufacturability, and overall product performance.
- Participated in cross-functional design reviews, providing technical recommendations and driving design improvements.
- Executed independent design and engineering projects, demonstrating strong ownership, initiative, and the ability to work with minimal supervision.
- Maintained design documentation and revision control in compliance with ASME Y14.5 and company standards.
- Applied Geometric Dimensioning & Tolerancing (GD&T) and conducted tolerance analysis to ensure functional integrity and assembly compatibility.

Senior Product Design Engineer

Salzer Electronics Limited

📅 03/2021 - 08/2024 📍 Coimbatore, India

A leading manufacturer in electrical wiring systems and technology

- Partnered with cross-functional teams to deliver innovative engineering solutions aligned with product, manufacturing, and business objectives.
- Collaborated closely with electrical, manufacturing, quality, and procurement teams to develop designs meeting technical, cost, and manufacturability targets.
- Led end-to-end product development cycles from concept and design through testing, validation, and product launch.
- Created detailed 3D models and prototypes using Creo 9.0, conducting performance testing to ensure design quality and reliability.
- Developed robust, cost-efficient designs using DFMEA, DFMA, GD&T, and tolerance stack-up analysis methodologies.
- Managed Bills of Materials (BOMs), product costing, and engineering documentation using PTC Windchill PLM and related lifecycle management tools.
- Coordinated design activities with global engineering teams across multiple time zones to ensure alignment and timely delivery.
- Ensured product compliance with UL, IEC, RoHS, and REACH regulatory and industry standards.
- Conducted laboratory testing to validate designs against technical specifications and customer requirements.
- Served as a key liaison between engineering, project management, and leadership teams, enabling clear communication and effective decision-making.
- Improved design processes and workflows, reducing design iterations and accelerating project delivery timelines.
- Demonstrated agility in fast-paced environments by adapting to shifting priorities with a proactive, solutions-driven mindset.
- Mentored junior engineers and supported knowledge-sharing initiatives to strengthen team capability and drive continuous improvement.
- Drove design reviews and technical risk assessments, identifying potential issues early and implementing corrective actions to ensure on-time project delivery.

SUMMARY

With a decade of experience as a Design Engineer in Electrical and Electronics products, I prioritize innovative solutions paired with customer satisfaction. I excel in cross-functional collaboration, guiding projects from concept through execution while adhering to industry standards. My commitment to quality and regulatory compliance underpins my success in driving engineering initiatives

STRENGTHS

⚡ Product Development Expertise

Proficient in Product Development across various product types

KEY ACHIEVEMENTS

🧠 Independent Project Execution

Successfully executed design and engineering projects independently with minimal supervision



Strength in Geometric Dimensioning and Tolerancing

Conducted tolerance stack-ups, fits, and clearances analyses enhancing design compliance

SKILLS

[3DModeling](#) [Autodesk Inventor](#) [Creo 9.0](#) [SolidWorks](#)

[2D Drafting](#) [AutoCAD](#) [Microsoft Office](#) [Outlook](#)

[PDM](#) [PLM](#) [Symphony](#) [Windchill](#) [BOM](#)

[Costing](#) [Balloon Drawing](#) [ISO](#) [Process Flow chart](#)

[Calculation](#) [Force](#) [Strength](#) [Weight](#) [Fits](#) [GD&T](#)

[Tolerance Stack-up](#) [Prototyping](#) [SLA](#) [Vacuum Molding](#)

PROJECTS

Disconnecting and Earthing Device (Patent)

📅 03/2021 - 08/2023

Project focus on safety devices for railway applications

- Successfully implemented a Disconnecting Earthing Device for railway coach maintenance
- Aligned the device with IEC 60974-3 standards and managed high capacities

Ammeter & Voltmeter

📅 03/2021 - 08/2023

Development of next-generation measuring instruments

- Designed and implemented an ammeter and voltmeter for current and voltage measurement
- Optimized the PCB design for improved precision

120kVA Transformer

📅 10/2024 - 06/2025

The project focused on Transformer Energy

Distribution From Wind Turbines.

- Involved in the design, analysis, and optimization of transformer-based energy distribution systems used in wind turbine applications.
- Designed the Enclosure with IP 24 Standard

EXPERIENCE

Senior Product Design Engineer

[Adroit Tools & Components Pvt. Ltd \(Sister Concern of Salzer \)](#)

📅 06/2018 - 02/2021 📍 Coimbatore, India

A provider of precision tools and components

- Led the full product development lifecycle, from concept and specifications through detailed design, supplier alignment, validation, and production launch.
- Developed detailed 3D CAD models, 2D manufacturing drawings, Bills of Materials (BOMs), and technical documentation in compliance with engineering standards and guidelines.
- Supported Engineer-to-Order (ETO) projects, ensuring precision, adherence to customer specifications, and timely delivery.
- Provided hands-on technical support for production issues, implementing practical design solutions and guidance to resolve manufacturing challenges.
- Partnered with product management to translate voice-of-customer (VOC) insights into high-impact product features and design requirements.
- Updated, standardized, and maintained technical drawings to meet current industry and internal engineering standards.
- Performed tolerance stack-up, fit and clearance analysis, and stress, strain, and flow simulations to validate design integrity.
- Implemented process improvements and standardization initiatives to streamline design workflows, reduce errors, and accelerate product development timelines.
- Partnered with suppliers and external stakeholders to resolve technical challenges, ensure quality standards, and support timely production ramp-up.

Plastic Product Design Engineer

[Craftsman Automation Limited](#)

📅 01/2016 - 04/2018 📍 Coimbatore, India

A leading manufacturer in automobile and industrial components

- Selected appropriate plastic materials based on mechanical performance, thermal resistance, environmental exposure, and cost considerations.
- Applied Design for Manufacturability (DFM) and Design for Assembly (DFA) principles to minimize defects, reduce tooling complexity, and improve production efficiency.
- Performed tolerance analysis and applied GD&T to ensure dimensional accuracy and proper fit with mating components.
- Supported tooling trials, mold flow analysis, and first-article inspections to validate part quality and manufacturability.
- Collaborated with suppliers during tool design, sampling, and production ramp-up to resolve molding issues such as warpage, sink marks, and flash.
- Reviewed and approved engineering changes (ECR/ECO), ensuring controlled updates to drawings and documentation.
- Ensured compliance with relevant automotive and industrial quality standards and internal design guidelines.

EDUCATION

MBA-Master of Management Studies

[Indian Institute of Management Indore](#)

📅 01/2026-05/2028

B.E - Mechanical Engineering

[INDIAN INSTITUTE OF INDUSTRY INTERACTION EDUCATION AND RESEARCH](#)

📅 08/2020-05/2023

Diploma in Tool Engineering

[PSG College Technology](#)

📅 08/2011-05/2015

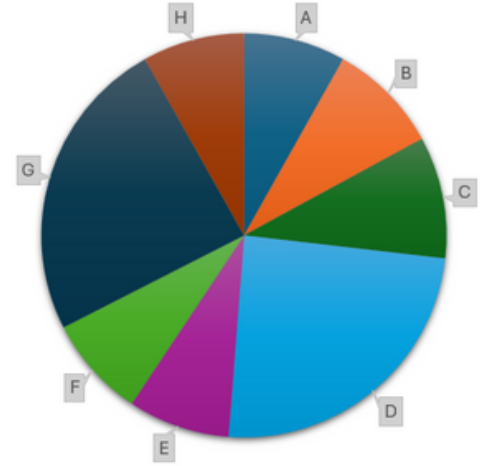
OTHER PROJECTS

[12.5-100kVA Transformers](#) [Reactors](#) [MCB](#) [RCCB](#)

[Rotary Switch](#) [Circuit Breaker](#) [Connectors](#) [Meters](#)

[Modular Switch](#) [Industrial Plug Socket](#) [Rotary Switches](#)

MY TIME ALLOCATION



- Ⓐ Concept & Creation
- Ⓑ Project Discussion & Costing
- Ⓒ Costing & Approval
- Ⓓ 3D Modeling & 2D Drafting
- Ⓔ Prototyping & Development
- Ⓕ Production Documentation
- Ⓖ Testing & Rectification
- Ⓗ Final Implementation

LANGUAGES

English

Fluent



Tamil

Native



CERTIFICATION STANDARDS

[IS](#) [UL](#) [IEC](#) [CE](#) [ROHS](#) [REACH](#)

[RCM](#) [CSA](#) [Ingress Protection](#)

CLIENTS

[L&T](#) [RR](#) [V-Guard](#) [Panasonic](#) [Schneider Electric](#)

[Railway Coach Factory](#) [TMEIC](#) [Teradyne](#) [Astrodyne](#)

[ABB](#) [Vestas](#)

PRODUCTS PROCESSES

[Injection Moulding](#) [Extrusion](#) [Piercing](#) [Bending](#)

[Blanking](#) [Coining](#) [Embossing](#) [Welding](#) [Soldering](#)

[Ultrasonic Welding](#) [Clamping](#) [Wire Routing](#)