Ankit Panigrahi

Design Engineer

https://ankitpanigrahi78.github.io/portfolio/
Work Experience – 2.3 Year
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PROFILE

Product Engineer with 2+ years' experience in **product lifecycle management**, aerospace **systems design** & **test** — including LRUs, test rigs, and mission-critical fuel systems. Experienced in CAD modeling, system validation, technical proposals, **ICDs**, and **qualification reports**, working with engineering and **business development teams**.

Naukri : https://www.naukri.com/mnjuser/profile

LinkedIn: https://www.linkedin.com/in/ankit-panigrahi-4b520a209/

EDUCATION

		Pass-Out
B. Tech	GITA Autonomous College, Bhubaneswar	2023
12th	Times Scholars Gurukul, Bhubaneswar	2019
10th	Army Public School, Kanpur	2017

CERTIFICATIONS

- GD&T Fundamentals & MATLAB Training
- Aerospace Manufacturing Workshop
- Master Certification Course in CAD & CAM
- CATIA Piping, Tubing & DMU Training – Dassault Systèmes

TECHNICAL SKILLS

Combat Aircraft Fuel System Design and Development	GD&T, BOM Management, **System Design**, Process Sheet, Engineering Drawings, **Manufacturing Knowledge** (Precision machining, aerospace sheet metal, assembly & integration, **process optimization and cost reduction**, Product Development, **Report Making (Microsoft Office),** KOP, Piping, Tubing, Aerospace technical documentation **(technical proposals, ICDs, qualification reports), compliance matrix, test procedures (QTP, ATP), BOM management**, Root Cause Analysis (RCA), **System Support**
Computer-Aided Design (CAD)	Catia V5, SolidWorks, AutoCAD, Creo, NX Unigraphics
Product Life Cycle Management (PLM)	**Enovia**, Teamcenter [Basic]

WORK EXPERIENCE

CTTC (Ministry of MSME); Junior Project Engineer **Apr 2023 – Present**

Project Experience	**CTTC – Chandrayaan Mission Work** • Completed **3-month intensive training** on aerospace manufacturing workflows, from CAD modeling to testing. • Contributed to **satellite/space systems design & testing** for Chandrayaan mission hardware. • Worked on CAD modeling, manufacturing inspection, and qualification testing of mission components.
	Deputed to **ADA** (**Aeronautical Development Agency**) for the Design and Development of LRUs [Line Replaceable Units] & System Design.
	Retractable Probe, Drogue & Relief Valves (LRUs) for LCA Tejas & Fuel System Pipeline Routing for Fuselage Tanks **Responsibilities:** • Prepared **LRU-level requirements document** for the 4.5 Gen Light Combat Aircraft fuel system, ensuring alignment with **ISO, AS9100, MIL-**

Project Experience	**STD, Stanag** standards and airworthiness requirements set by **CEMILAC** & **ARDC** (Certifying Agency). • Developed detailed **compliance matrices** covering aerospace quality standards, environmental testing, and certification parameters. • Collaborated with cross-functional teams to capture project requirements and align engineering designs with stakeholder objectives. • Designed and developed **combat aircraft fuel system LRUs** in compliance with **MIL-STD-810H**, supporting **Preliminary Design Reviews (PDRs)**, **Critical Design Reviews (CDRs)**, and indigenous product development initiatives. • Created **Interface Control Documents (ICDs)** and developed **Part BOM (PBOM)** and **Manufacturing BOM (MBOM)** using **CATIA** and **Enovia**, ensuring full traceability through the **product lifecycle**. • Performed **theoretical stress analysis** using hand calculations to validate structural integrity. • Developed manufacturing methods and detailed **process models** to meet aerospace quality and cost objectives. • Produced **2D schematic drawings** in AutoCAD and comprehensive **assembly procedures** in line with aerospace documentation standards. • Designed and simulated **3D CAD models** for functional testing, supporting validation activities. • Prepared **Master Drawing Index (MDI)**, **Kit of Parts (KOP)**, and process sheets for aerospace assemblies. • Developed **Digital Mock-Ups (DMU)** for design validation and integration planning. • Prepared **technical reports, presentations, and project documentation** compliant with aerospace standards for review boards and certification audits. • Managed and updated **Bills of Materials (BOMs)** for all components and assemblies. • Provided technical documentation and presentation support during design reviews, aiding in **strategic decision-making**. • Worked closely with senior engineers and reporting officers, supporting all phases of LRU design, manufacturing, integration, and qualification.
	<u>Universal Test Rig for Valves (LRU Development) & Testing</u> **Responsibilities:** • Designed 2D/3D CAD models for aerospace test rigs (fuel & pneumatic) per **ASME SECTION VIII Div 1**. • Conducted high/low temperature, altitude, and endurance testing for qualification. • Prepared and executed **ATPs** for component approval. • Coordinated cross-functional teams for testing, setup, and integration issue resolution.
PERSONAL SKILLS	
Others	1. Problem Solving, Cross-Functional Collaboration. 2. Client-facing Communication. 3. Project Handling and Public Speaking. 4. Teamwork & Quick learner. 5. Negotiation Skills & Presentation Skills.