Ankit Panigrahi

Design Engineer

https://ankitpanigrahi78.github.io/portfolio/
Work Experience – 25 months
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PROFILE

Experienced Mechanical Engineer with 2+ years in Combat Aircraft fuel system design and aerospace product development. Proficient in CAD modeling, theoretical analysis and simulation ensuring optimal performance of aerospace components. Skilled in engineering design, report generation, and product development, translating complex requirements into innovative solutions. Committed to advancing aerospace technology through precision and expertise.

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

TECHNICAL SKILLS

Combat Aircraft Fuel System Design and Development	GD&T, Bill of Materials Management, Process Sheet, Engineering Drawings Review, Manufacturing Knowledge (Milling Turning, Grinding and EDM), Assembly Process, Sheet Metal, Modeling, Interface Critical Drawings, Product Development, Report Making, Kit of Parts (KOP), RCCA (Root Cause Corrective Action), Technical Documentation, Root Cause Analysis (RCA)

TOOLS AND SOFTWARE

Computer-Aided Design (CAD)	Catia V5, SolidWorks, AutoCAD, Creo, NX Unigraphics, Autodesk
Simulation and Analysis	MATLAB, Theoretical Stress Analysis, Hand Calculations, Digital Mock-Up (DMU)
Product Life Cycle Management (PLM)	Enovia, Teamcenter [Basic]
Programming and Automation	HTML, CSS, Java Script, Python, VS Code, Notepad++ [Basic]

WORK EXPERIENCE

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

Project Experience	Deputed to **ADA** (Aeronautical Development Agency) for the Design and Development of LRUs [Line Replaceable Units].
	Retractable Probe, Drogue & Relief Valves (LRUs) for LCA Tejas **Responsibilities:** **1. Requirements** • Prepared LRUs Level Requirements Documents of the 4.5 generation Light Combat Aircraft Fuel System, ensuring alignment with performance and safety standards (ISO, AS9100, MIL-STD & Stanag). • Prepared Compliance Matrix with aerospace quality standards, environmental testing and airworthiness requirements set by CEMILAC (Certifying Agency).

Project Experience	**2. Design and Development** • Designed and developed combat aircraft fuel System LRUs in compliance with Military Standards (MIL-810H). • Assisted in indigenous LRU development, supporting Preliminary Design Reviews (PDRs) and Critical Design Reviews (CDRs). • Prepared Interface Control Drawings (ICDs) for LRUs. **3. Modeling and Drawing** • Prepared 2D schematic drawings in AutoCAD and Assembly Procedures as per standards. • Designed and simulated 3D CAD models for functional testing, tolerance stack-up, and fitment analysis, improving product manufacturability. • Prepared Master Drawing Index (MDI), Kit of Parts (KOP), and Process Sheets for aerospace components. • Developed Digital Mock-Ups (DMU) for product design validation using CATIA. **4. Simulation & Analysis** • Designed and analyzed Springs (Tensile & Compressive) and O-Ring using hand calculations and MATLAB. • Performed Theoretical Stress Analysis for LRUs components using hand calculations. **5. Technical Documentation and Support** • Prepared technical reports, presentations, and project documentation in compliance with aerospace standards. • Developed and managed Bill of Materials (BOMs) for aerospace components and assemblies. **6. Team Player** • Collaborated with cross-functional teams to enhance DFM/DFA, supporting design optimization for cost and reliability in aerospace applications. • Supported senior engineers and reporting officers in LRU development projects.
	<u>Acceptance Test Rig for Valves (LRU Development) Testing</u> **Responsibilities:** • Prepared detailed 2D technical drawings in AutoCAD for a Test Rig and coupling designs, ensuring precision and adherence to engineering standards. • Worked closely with design team to design and modeling workflows, translating reference data into functional prototypes for manufacturing and testing. • Created 3D CAD models to simulate real-world operational conditions. • Conducted hands-on support in equipment setup, validation, and maintenance for valve testing rigs used in aircraft fuel systems (Shopfloor) level.
PERSONAL SKILLS	
Others	1. Problem solving skills & Time Management. 2. Ability to work well under pressure. 3. Project Handling and Public Speaking. 4. Teamwork & Quick learner. 5. Negotiation Skills & Presentation Skills.