Ankit Panigrahi

Design Engineer

https://ankitpanigrahi78.github.io/portfolio/

Work Experience – 24 months

PROFILE

Experienced Mechanical Engineer with 2+ years in **Light Combat Aircraft fuel system design** and **aerospace product development**. Proficient in **CAD modeling, simulation, and theoretical analysis**, 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

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Naukri : https://www.naukri.com/mnjuser/profile
GitHub : https://github.com/dashboard
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 Technical Documentation	GD&T, Bill of Materials, Process Sheet, Drafting, Manufacturing Knowledge (Milling Turning, Grinding and EDM), Assembly, Sheet Metal, Modeling, Interface Critical Drawings, Product Development, Project Management, Report Making

TOOLS AND SOFTWARE

Design and Development	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 [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 for the 4.5 generation Light Combat Aircraft Fuel System, ensuring alignment with performance and safety standards (MIL, STANAG).
- Ensured compliance with aerospace regulatory standards and airworthiness requirements set by CEMILAC (Certifying Agency).
- Achieved requirements of technical specification, including weight and space envelope.

2. LRUs and Development

- Designed and developed combat aircraft fuel Sub-System LRUs in compliance with MIL Standards (MIL-F-38363A & MIL-810H).
- Assisted in indigenous LRU development, supporting Preliminary Design Reviews (PDRs) and Critical Design Reviews (CDRs).
- Prepared Interface Control Drawings (ICDs) for LRUs.

Project Experience	**3. Modeling and Drawing** • Prepared 2D schematic drawings in AutoCAD and Assembly Procedures as per aviation standards. • Created 3D CAD models to simulate real-world operational conditions. • 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. • Estimated fuel tank pressurization requirements using hand calculations. • Performed Theoretical Stress Analysis for LRU components. **5. Technical Documentation and Support** • Prepared technical reports, presentations, and project documentation in compliance with aviation standards. • Developed and managed Bill of Materials (BOMs) for aerospace components and assemblies. **6. Leadership and Collaboration** • Worked closely with manufacturing teams to improve Design for Manufacturing (DFM) & Design for Assembly (DFA). • Supported senior engineers and reporting officers in LRU development projects.
	Test Rig for Valves (LRUs) Testing **Responsibilities:** 1. Was responsible created detailed 2D technical drawings in AutoCAD for a Test Rig and coupling designs, ensuring precision and adherence to engineering standards. 2. Was responsible to design and modeling workflows, translating reference data into functional prototypes for manufacturing and testing. 3. Was responsible to created 3D CAD models to simulate real-world operational conditions. 4. Was responsible for the Rig Manufacturing at workshop level.
	Test Rig for Probe Testing **Responsibilities:** 1. Was responsible for prepared the Overhaul task of Air to Air Refueling (AAR) Probes in the coordination with Indian Airforce. 2. Prepared the Organization (O) Level and Intermediate (I) Level inspection perform on probe Assembly.

PERSONAL SKILLS	
Others	1. **Problem solving** skills & Ability to work well under pressure. 2. **Project Handling** and **Public Speaking**. 3. Teamwork & Quick learner. 4. Team Management & confident in **communicating**. 5. Good at solving logical problems.

PERSONAL PROFILE			
Name	**Ankit Panigrahi**	Marital Status	**Unmarried**
Date of Birth	**25th June 2002**	Gender	**Male**
Nationality	**Indian**	Language Known	**English, Hindi, Odia**