AJAY KUMAR VADDI

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Hyderabad

Career Objective:

I am seeking an experienced Mechanical Design Engineer position in a technological solution department where I can enhance and utilize my learning, knowledge and skills.

Skill Set:

Design Tools:

- **CATIA V5 (R26):** Part Design, (GSD) Generative Shape Design, Assembly Design, Wireframe & Surface Design, Sheet Metal Design, Composite Design, Drafting.
- **Unigraphics (NX):** Part Design, Sheet Metal Design, Assembly, Drafting.
- **AutoCAD:** 2D drawings.
- **PLM:**Teamcenter

Office Tools:

- Microsoft office word, Microsoft Excel, Microsoft Power point, Microsoft Outlook

Technical Skills:

I am a 6.7 Years of experienced Mechanical design engineer working at Collins Aerospace, Hyderabad. My experience lies in design and development of Aero structures, Aero seating, Interiors, Electro mechanical products, Shafts, Bearings.

- Experience in Concept generation and detail design of Aero structures (Primary, Secondary), Aero seating, Interiors and Electro mechanical components, Shafts, Bearings.
- Experience in preparation of technical compliance for customer specifications at the time of proposal and concept generation as per customer specifications.
- Adept experience in 3D modeling and drafting of component and assembly.
- Generation of Machining, Sheet metal, Casting, Forging, Plastic and composite parts drawings with application of GD&T according to ASME Y14.5, ASME Y 14.8, ASME Y14.37, ISO 2768 and by using organizational best practice documents.
- Selection of fits and tolerance as per IS 919 and Stack-up analysis.
- Knowledge on manufacturing and composite lay up process.
- Selection of fasteners based on preload calculations, torque requirements and material properties (DIN, NAS, CCR, CSR, DCB, HELICOILS).
- Cross function collaboration with Analysis department, Tooling department and manufacturing department for jigs, fixtures, GSE, GHE and composite manufacturing tools etc.

- Creation of layouts for assembly and module interface.
- Customer communication regarding project status and process drawbacks in telephone and direct meetings with presentations & status documents.
- Active experience on develop, coordinate or monitoring of all aspects of Design, production including selection of materials, Vendor selection and evaluation of vendor manufacturing capabilities and brought out specification creation.
- Experience in preparation and release of production documents like PDR, CDR, Bill of Materials (BOM), Assembly, integration and Modularization, Tolerance stack up, QAP, ATP, Qualification test procedures and purchase indents in SAP.
- Technical proposals and costing estimation for new projects.
- Good knowledge of DFMEA and PFMEA (control plan).

Organizational Experience **Dec 2015-Till date**

1. **Collins Aerospace, Hyderabad, India** **Jan 2022-Till date**
   Design Engineer
2. **VEM Technologies Pvt. Ltd. (Aerospace & Defense) Hyderabad, India**
   Design Engineer **Dec 2015-Jan 2022**

Professional Projects:

1. **Seating Interior Design (Collins Aerospace).**
   Tools: Unigraphics (NX), Teamcenter
   Conceptual design of different seating products.
   Generations of drawings for sheet metal, Machined, Plastic, Composite, Envelope and assemblies.
   Generation of Change notice, Proof of checks.
2. **Design, Fabrication, Assembly and Installation of Advanced Fighter Aircraft (AMCA)**
   (Client - Aeronautical Development Agency (ADA)-Bangalore)
   Tools: CATIA V5, Unigraphics (NX)
   Advanced Medium Combat Aircraft (AMCA) is a Fifth Generation Twin Fin Twin Engine Fighter Aircraft.
   - Design of Rear fuselage and Horizontal Tail Modules/Sub-Assemblies by using external numerical master geometry (NMG) with some of the work benches used are Sketcher, Part Design, (GSD) Generative shape design, surface design, Sheet metal design, Assembly Design.
   - Designing of indexing for control surfaces (Flaps, Aileron, Flaperon, Horizontal tail, Rudder) rotation ($+20^0$ to -20^0 with 5^0 interval).
   - Deriving of assembly sequence, modularity design, Interface control, clash analysis.

- Torque requirement and Preload calculations for Fasteners with respect to composite and Metallic structure, and fastener lay out.
- Pylon attachment and pylon interface design for the aircraft for elevation at -10^0 tilt and elevation at $+30^0$ tilt.
- Generation of Metallic and Composite part drawings by using GD&T as per ASME 14.5.
- Generation of Assembly drawings, Station drawings, Interface control drawings (ICD).
- Generation of drawings for composite and metallic test specimens as per ASTM standards and testing.
- Generation of Technical documents like BOMs, PDR, CDR, QAP, Module interface and Assembly, Tolerance stack up.
- Cross function collaboration with Analysis department, Tooling department and manufacturing department for jigs, fixtures, GSE, GHE and composite manufacturing tools etc.

3. Oleo Pneumatic Retractable Landing gear (VEM Technologies indigenous development)

Tools: Unigraphics

- Conceptual design of landing gear system retraction and extension mechanism.
- Detail study of landing gear system drawings.
- Generation of 3D models from 2D drawings.

4. Casing Inlet Fan (Client-Gas Turbine Research Establishment (GTRE) – Bangalore.

Tools: Unigraphics

- Development of 3D Models and released 2D drawings for manufacturing of Gas Turbine Engine.
- Monitoring manufacturing process and testing procedures as per customer requirements.

Educational Qualifications:

Qualification	Board/University	Year	Percentage
Bachelor of Technology in Mechanical Engineering	Rajiv Gandhi University of Knowledge Technologies (AP IIIT-NUZVID), Andhra Pradesh, India.	2011-2015	76.1%

Declaration:

I do here by declare that the above information is true to the best of my knowledge.

Date:

Place: Hyderabad. V. Ajay kumar