



JOB DESCRIPTION

JOB TITLE: Senior Mechanical Design Engineer

JOB CODE:		EXEMPT/NON-EXEMPT:	EXEMPT
REPORTS TO:	Engineering Manager	DEPT.:	Engineering
DEPT. APPROVAL:	VP-GM	DATE:	04/24/2020
MANAGER LEVEL:		EEO CODE:	

BRIEF POSITION SUMMARY:

The Senior Mechanical Design Engineer will take technical lead on specific projects as identified by the Engineering Manager. Additionally will assist the Engineering Manager in coaching other Mechanical Engineers to develop design skills and work to the departmental processes.

Researches and develops ideas for new products and systems. 9 to 13 years in the aerospace industry with both commercial (Part 23 and 25) and defense programs. Manufacturing exposure a must. Must have experience designing with composite material.

DUTIES and RESPONSIBILITIES:

- Plays an integral role in all structural designs for the Advanced Design team
- Perform aircraft conceptual and preliminary structural design and analysis
- Perform trade studies (weight, performance, structural sizing)
- Create engineering designs, layouts and drawings for aircraft composite and metallic parts.
- Lead a team of designers/draftsman to complete engineering drawing packages
- Complete designs using Catia/Solidworks design software
- Knowledge of composites manufacturing - hands-on experience with composites part fabrication and assembly processes a plus.
- Experience in the analysis of structural systems using strength of materials and finite element based methods
- Experience with free-body diagrams and classical stress analysis techniques
- Knowledge of composite structural analysis and sizing using classical and finite element methods
- Experience with composite finite element modeling
- Working knowledge of GD&T.
- Problem solving skill sets

- In-depth understanding of maintaining complex Bills of Material
- Pursues all cost saving opportunities to maximize project profitability.
- Performs critical path analysis and prepares and implements work-around plans to ensure the successful completion of projects.

EDUCATION, EXPERIENCE & QUALIFICATIONS:

- College education and exposure to specific area of interest to include manufacturing or mechanical Design engineering fields.
- Degree, Mechanical Engineering with equivalent experience.
- Extensive experience in a similar role ideally within Military/Aerospace or similar industry.
- Supervisory experience.
- Collates cost data relating to the mechanical design.
- Ensures the mechanical design functionally meets the user's requirements.
- Produces designs to specified deadlines and achieves the required timescales.
- Sets an example to the other members of the mechanical design team on how to manage designs.
- 9 to 13 years of related experience.
- Must pass pre-placement drug screen and background investigation.
- Ability to obtain and maintain a U.S. Security Clearance at the appropriate level (requires a U.S. Citizenship)
- Confident, proactive character, ability to take the lead in challenging situations.
- Excellent verbal and written communication skills.
- Effective problem solving capabilities.
- Good IT skills.
- Critical thinking along with Active listening.
- Committed to undertaking professional development.
- CATIA V5 / Solidworks (10,000+ hours minimum).
- NASTRAN/FEMAP
- GD&T experience.
- Self-starting team player with the ability to work tight deadlines.

PHYSICAL REQUIREMENTS:

- Must be able to sit/stand for extended periods – 8 hours min.
- Must be able to stoop, kneel, climb, bend and be able to reach overhead and below the shoulder.
- Continuous use of both hands; including grasping, pulling and pushing.
- May be exposed to high level noise, dust, vibration and chemical fumes (within OSHA limits).