



Zoomlion Heavy Industry N.A., Inc.

Sr. Mechanical Engineer - Excavator

Department: Engineering

FLSA Status: Exempt

Grade/Level:

Job Type: Regular

Work Schedule:

Monday through Friday unless traveling.

Job Status: Full Time

Reports To: Engineering Manager - Structural Systems

Amount of Travel Required: up to 25%

Positions Supervised: None

POSITION SUMMARY

Perform engineering duties in planning and designing machine components and systems for the construction division, especially hydraulic excavator. This includes direct involvement in all related design activities and engagement with cross-functional support staff to ensure project goals are met. Evaluate products, parts or processes for cost efficiency and reliability and work with other members of the engineering staff in a team environment to ensure that production is completed per project plan and timely.

ESSENTIAL FUNCTIONS

Reasonable Accommodations Statement

To accomplish this job successfully, an individual must be able to perform, with or without reasonable accommodation, each essential function satisfactorily. Reasonable accommodations may be made to help enable qualified individuals with disabilities to perform the essential functions.

Essential Functions Statement(s)

- Provides technical leadership for development of excavator or other earthmoving machines' structure design and validations.
- Lead, coordinate and execute new product introduction programs.
- Read and interpret blueprints, technical drawings, schematics, or computer-generated reports.
- Research, design, evaluate, install, operate, and maintain mechanical products, equipment, systems and processes to meet requirements, applying knowledge of engineering principles.
- Confer with engineers or other personnel as appropriate regarding any essential engineering functions and to implement operating procedures, resolve system malfunctions, or provide technical information and/or assistance.
- Recommend design modifications to eliminate machine or system malfunctions.
- Conduct research that tests or analyzes the feasibility, design, operation, or performance of equipment, components, or systems.
- Investigate equipment failures and difficulties to diagnose faulty operation, and to make

recommendations to maintenance crew.

- Develop and test models of alternate designs and processing methods to assess feasibility, operating condition effects, possible new applications and necessity of modification.
- Develop, coordinate, or monitor all aspects of production, including selection of manufacturing methods, fabrication, or operation of product designs.
- Specify system components or direct modification of products to ensure conformance with engineering design and performance specifications.
- Research and analyze customer design proposals, specifications, manuals, or other data to evaluate the feasibility, cost, or maintenance requirements of designs or applications.
- Write performance requirements for product development or engineering projects.
- Provide feedback to design engineers on customer problems or needs.
- Oversee installation, operation, maintenance, or repair to ensure that machines or equipment are installed and functioning according to specifications.
- Perform personnel functions such as supervision of production workers, technicians, technologists and other engineers, or design of evaluation programs.
- Apply engineering principles or practices to emerging fields, new technologies and engineering concepts and practices.
- Establish or coordinate the maintenance or safety procedures, service schedule, or supply of materials required to maintain machines or equipment in the prescribed condition.
- Study industrial processes to determine where and how application of equipment can be made.
- Design test control apparatus or equipment or develop procedures for testing products.
- Evaluate mechanical designs or prototypes for energy performance or environmental impact.
- Develop the design of products using computer-assisted design (CAD) in conformance to all appropriate industry standards.
- Assist designers in developing the design of products using computer-assisted design (CAD) or drafting equipment and software.
- Engage and participate in all relevant engineering activities including, DFMEA's, design reviews, tolerance stack-ups and engineering notifications.
- Confer with engineers or other personnel as appropriate regarding any essential engineering functions.

POSITION QUALIFICATIONS

Competency Statement(s)

- Accountability - Ability to accept responsibility and account for his/her actions.
- Detail Oriented - Ability to pay attention to the minute details of a project or task.
- Analytical Skills - Ability to use thinking and reasoning to solve a problem.
- Problem Solving - Ability to find a solution for or to deal proactively with work-related problems.
- Conceptual Thinking - Ability to think in terms of abstract ideas.
- Communication, Oral - Ability to communicate effectively with others using the spoken word.
- Communication, Written - Ability to communicate in writing clearly and concisely.
- Presentation Skills - Ability to effectively present information publicly.
- Judgment - The ability to formulate a sound decision using the available information.

- Initiative - Ability to make decisions or take actions to solve a problem or reach a goal.
- Innovative - Ability to look beyond the standard solutions.
- Organized - Possessing the trait of being organized or following a systematic method of performing a task.
- Systems Analysis - Ability to determine how a system should work and how changes in conditions, operations, and the environment will affect outcomes.
- Technical Aptitude - Ability to comprehend complex technical topics and specialized information.
- Self Motivated - Ability to be internally inspired to perform a task to the best of ones ability using his or her own drive or initiative.

SKILLS & ABILITIES

Education: Bachelor's Degree (four year college or technical school) Required, Field of Study: Mechanical Engineering or related field

Experience: 5 plus years of experience in design of structure mechanism and mechanical accessory systems in off road equipment preferably hydraulic excavator

Computer Skills: Microsoft Office Suite (Outlook, Word, Excel, PowerPoint, SharePoint, etc.)
CAD package of Siemens NX or PTC Creo required; FEA, CFD, FOPs/ROPs a plus.

Certifications & Licenses:

Other Requirements: Familiar with industrial engineering standards (ISO, ASME, SAE, etc.)
Familiar with FEA (Finite Element Analysis)
Familiar with structural design requirements for weld and cast designs
Familiar with Design for Assemblies and Manufacturing
Familiar with Engineering Changing Process Design for Six Sigma a big plus

PHYSICAL DEMANDS

N (Not Applicable) Activity is not applicable to this position.
O (Occasionally) Position requires this activity up to 33% of the time (0 - 2.5+ hrs/day)
F (Frequently) Position requires this activity from 33% - 66% of the time (2.5 - 5.5+ hrs/day)
C (Constantly) Position requires this activity more than 66% of the time (5.5+ hrs/day)

Physical Demands

		Lift/Carry	
Stand	F	10 lbs or less	O
Walk	F	11-20 lbs	O
Sit	F		

Manually Manipulate	O	21-50 lbs	O
Reach Outward	O	51-100 lbs	N
Reach Above Shoulder	O	Over 100 lbs	N
Climb	O		
Crawl	N	Push/Pull	
Squat or Kneel	N	12 lbs or less	O
Bend	O	13-25 lbs	O
Grasp	O	26-40 lbs	N
Speak	F	41-100 lbs	N

Other Physical Requirements

WORK ENVIRONMENT

Office environment in a controlled atmosphere building.

Prepared by: Deb Lauenstein, HR Director Date: 8/23/2017

Approval: Jack Wang, President/General Manager Date: 8/28/2017

The company has reviewed this job description to ensure that essential functions and basic duties have been included. It is intended to provide guidelines for job expectations and the employee's ability to perform the position described. It is not intended to be construed as an exhaustive list of all functions, responsibilities, skills and abilities. Additional functions and requirements may be assigned by supervisors as deemed appropriate. This document does not represent a contract of employment, and the company reserves the right to change this job description and/or assign tasks for the employee to perform, as the company may deem appropriate.