Nikhil Chavda

Hydraulic System Design Engineer

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CAREER AIM

Performance-driven Hydraulic System Design Engineer seeking enriching assignments in Design, Research & Development, or Product Technical Sales within Original Equipment Manufacturing.

SUMMARY

- 5+ year of experience in Design Engineering, Prototyping, Research & Development, Cost Reduction, New Product Development
- 6 month of experience in Product Management - Sales & Marketing
- Preparation of hydraulic component layout, basic engineering drawings with key focus on quality, cost and delivery for Proto Machine
- Adept in swiftly ramping/ completing up projects with competent cross-functional teams and ensuring on time delivery within pre-set cost parameters
- Track record of being involved in all new Fitments, Trials and Proto Testing
- Skilled in designing the product to meet customer requirement & translating the design model for a specific project using various tools

WORK EXPERIENCE

JCB India Ltd.

Hydraulic Design & Development Engineer — *July 2018 - Present*

Overall Responsibilities as Hydraulic Engineer:

- Selecting and Designing complete hydraulic system components, including Cylinders, Filters, Valve Blocks, Pumps & Motors, Steering Unit, Hydraulic Oil Cooler, Hoses and Pipes for various applications such as Suction, Pressure and Return lines; optimized system performance and efficiency by ensuring proper flow and pressure distribution throughout the system.
- Entire hydraulic system and aggregates routing.
- Preparation of Hydraulic Circuit in Automation Studio Software
- Preparation of document related Technical Reviews and their approvals for New Products
- Streamling Discussion with respective component's supplier for Feasibility Study, Development and Engineering Signoff
- Analyzing Drawing for Machine Build
- Implementation of Proto Machine for Testing and Validation of Design
- Involvement with testing team for meet the machine specification
- Resolving PCM Issues after launch of New and Current Product
- Hydraulic VA/VE for Current Product Lines
- Drawing Approval

Overall Responsibilities as Product Management:

- FABing for development of Brochures & Training Materials
- RGF/CUE Machine Monitoring & feedback
- Feedback Collection of operator & customer vs Competition
- New Variant Creation & Pricing Support
- Current product upgrades to improve Market Share
- Tracking PIP for Implementation

PROJECTS

Telehandler

Hydraulic Design & Development Engineer

New Option Introduction:

- Safety Feature
  Machine has LMI (Load moment indicator) system, which indicates the unsafe zone but this does not stop the hydraulic service. For partial and full cut the hydraulic service in various condition, introduced the hydraulic cutoff system in machine.

VA/VE:

- Fan Motor Optimization
  Hydraulic Motor was not generating enough Torque to maintain cooling performance in agri variant. For this implemented Bi-Directional Motor and fine tunned Hose Diameter to match Pressure Requirement
- Boom Down Noise
  During Boom Down Operation of Telehandler Machine, it was creating a unpleasnt noise. After doing proper research and calculation, a proper CB Ratio has been implemented and fine tunned oil cleaning procedure.
- Integrate the control valve and unloader valve

Mini Excavator

Hydraulic Design & Development Engineer

Localisation:

- Cylinders Localisation with Improvement in Life Cycle
- Hydraulic Tank Localisation with Improvement in Total Volume to resolve Boom Down Noise Issue
- Wheel Motor Localisation due to changes in structure

VA/VE:

- QRC Leakage Issue resolved by adding Ball Valve in Current
- Rotary Coupling Issue - Seal Extrusion & Broken Peg resolved with Localisation and Improvement in Cost Cutting

Backhoe Loader

Hydraulic Design & Development Engineer

New Option Introduction:

- Transmission System
  Upgrading Transmission System from Mechanical to Hydrostatic to Improve fuel efficiency, also downgrading Engine Power for cost

Across JCB

Hydraulic Design & Development Engineer

- Conducting thorough Technical Reviews for diverse products in India, including Backhoe Loaders, Excavators, Scissor Lifts, Booms, Telehandlers, and Wheel Loaders. Responsibilities include assessing circuit proposals, mitigating component risks, ensuring contamination control, obtaining supplier approvals, and verifying pressure, flow, temperature, and viscosity parameters.

Standard Procedures:

- Updating Hydraulic Standard to comply with recent changes
- Template creation of Hydraulic Component to ease the approval Process overall
- Maintaining List of Hydraulic Component and Checking their compliance with Standard

TECHNICAL SKILL

Hydraulics Analysis/Design using various technique,

- Unigraphics NX
- Teamcenter
- Automation Studio
- FESTO Fluidsim

Other Skill

- Data Analysis
- Advanced Excel
- Power BI
- Website Design
- Search Engine Optimization

INTEREST

- Badminton
- Blogging
- Travelling

EDUCATION

Qualification	Institution	Passing Year	Percentage
B.Tech.	National Institute of Technology, Surat	2018	72.5
H.S.C.	Gujarat State Education Board	2014	91.5
S.S.C.	Gujarat State Education Board	2012	87.4

PERSONAL DETAIL

Date of Birth: 12-08-1997
Address: C22, Sonanagar, Chankheda, Ahmedabad-382424
Language known: English, Hindi, Gujarati
Nationality: Indian

Nikhil Chavda