AKHIL J

MECHANICAL DESIGN ENGINEER

PROFILE

Active learner with 6 years of experience eager and ready to improve my skills and talents that offers professional growth while being resourceful, innovative and flexible.

REACH ME

+91-8148325630

akhilpadmasree@gmail.com

EDUCATION

2012 - 2016 : B.E. MECHANICAL ENGINEERING
DHANALAKSHMI COLLEGE OF ENGINEERING

2016- 2017: INTERNSHIP
INTERNSHIP AT HEXDOF ENGINEERING

CADD CENTRE
MASTER DIPLOMA IN AUTOMOTIVE CAD DESIGN

SKILLS

CATIA - Sheet metal design, Part modelling, Assembly design ,Drafting, Dynamic simulation

Creo - Part modelling, Assembly design ,Drating

UG NX - Sheet metal design, Part modelling, Assembly design ,Drating, CAE Analysis

WORK EXPERIENCE

ASHOK LEYLAND
DESIGN ENGINEER - LIFT AXLE SUSPENSION SYSTEM

DIAMLER TRUCKS
SENIOR DESIGN ENGINEER - SUSPENSION SYSTEM

TCS(PSA AUTOMOBILES)
SENIOR DESIGN ENGINEER - POWER TRAIN ADAPTIONS

ROLES & RESPONSIBILITIES

- Major role on design of structural parts for Dual tire Lift Axle suspension system(3D models & 2D drawing)
- Experienced in vehicle level packaging and clash analysis(DMU)
- Interaction with Vehicle integration team for packaging and mounting constraints
- Developing the pneumatic control circuit for tag lift axle and air suspension
- Development of plastic and polyurethane bushes for suspension system
- Suspension dynamic simulation for vehicle articulations and extracting the load input for FEA
- Structural analysis on lift axle components to evaluate their strength and reduce their failure
- Management on E-BOM and their technical specification in PLM
- Stack up tolerance for developing and assembly of structural parts
- Follow up with proto team for validation and stage release

EXPERIENCE

April 2018 - February 2021
ASHOK LEYLAND TECHNICAL CENTRE
LIFT AXLE SUSPENSION SYSTEMS

- New part development for In house Lift axle suspension system ,clearance and package study with vehicle integration ,Propeller shaft, Drive axle and frame to meet the requirements.
- Design calculation on load distribution for each axle, specifically to air suspended axle.
- Detail study on axle lift height in various conditions like Laden, Unladen, Bound and Re-bound conditions.
- Detail DMU packaging study on Load sensing valve assembly in turn able condition with other inter dependent sub-systems such as brake actuator ,wheel, shock absorbers etc.
- Interacting with (MED, CTL lab, Proto shop, CAE and vehicle testing) for stage release audit.
- Study and benchmark of axle parts and assembly from various competitors.
- Control logic circuit for pneumatic control of air suspension and Lift axle.
- Load sensing valve linkage MBD study to control the axle in Laden, Unladen, Bound and Re-bound conditions
- Assist my team on DFMEA study on in house Lift axle component to track and improve the product.

Feb 2021 - Nov 2021
DAIMLER TRUCKS INDIA
SENIOR DESIGN ENGINEER

- Finalizing Front , Rear & Pusher axle Suspension configuration (based on market requirements) for new variants truck model.
- Vehicle roll stability calculation for ARB requirement in new variants truck models.
- Ride height calculation for new variant truck models
- Design and development of ARB shackle mounting.
- Re-Design of shock absorber bracket development for higher load reaction.
- Pusher axle design(trailing arm design) development with supplier(WIL).
- Stack up tolerance for critical control arm bush design.
- Suspension Specbook for new variants truck models.

Dec 2021 - Present
TCS(PSA AUTOMOBILES)
SENIOR DESIGN ENGINEER

- Fuel lines development for PSA smart cars
- Packaging study with fuel filler pipe and other aggregate (rear fender, BIW and tyre envelope)
- CVS posistioning based on technical feasiblity for different types of PSA vechicle
- Perparation of Fuel lines drawings
- Handling Heat shield development independently with supplier
- DVVP study for Heat shield packaging and mounting study for heat shield with BIW
- Convergence with aggregate team and industrial team members for all mounting posistion based on technical feasiblity
- PLM for both fuel system and heat shield - ENNOVIA

ACHIEVEMENTS

- Study on of slipper end suspension and finalizing the axle lift, down and articulation conditions.
- Standardize the 6T Load sensing valve (LSV) with TAG lift axle
- Introduced TAG lift with some design changes in U-Bolt for Higher strength
- Concept development on dropped lift axle and steerable axle
- Dynamic simulation on 4123(41 Ton vehicle) with 26T Slipper end suspension to achieve the vehicle load calibration
- Implementation of Chain mounting design in 12.5T Pusher axle to restrict the rebound and avoid the fatigue failure

PROJECTS

- 10T Lift Axle suspension system
- 6T Lift Axle suspension system - self steerable (Modularity Based program)
- Air suspension in haulage (concept)
- Pneumatic control circuit

DATE :

PLACE : CHENNAI

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