

Highlights of Experience

- ❖ 17+ Years experience in Vehicle Engineering /automotive product design, manufacturing /execution “ LCV, Passenger Cars , Electrical vehicles, Mining equipment /machinery(NPD)”
- ❖ 4 Years experience in New product development - Renewable & thermal energy products
- ❖ Leadership experience in developing core engineering team and program execution
- ❖ Exposure in Vehicle Engineering, Design & Calculations of sub aggregates, MBD, structural analysis & DMU, BOM release / fasteners & weld joints. D&D Lightweight high strength Battery Pack and E axle for EV
- ❖ Exposure in engineering drawings and critical GT&D
- ❖ Exposure in Vehicle & Sub system DVP arriving , Vehicle testing and Bench test setup for sub systems
- ❖ Exposure in manufacturing & process engineering in forging, castings, sheet metal forming
- ❖ Exposure in thermal engineering & products
- ❖ Exposure in design & development Heavy earthmoving equipment
- ❖ Engineering Software Exposure : Creo, Ansys, ADMS Car
- ❖ Tools : MS project and MS office

Academic

- ❖ MBA – International Business Year 2007-2009
- ❖ BE-Mechanical ; Aggregate - 73%; PSG College of Tech Year 1995-2000

Employment & experience

Industry: *Jayem Automotives Pvt. Ltd, India.*

2016 – till date

DESIGNATION: General Manager

Chief Engineer – Light Commercial electric truck Development to TICMPL (from 2022)

- Senior level Professional Execution in the vehicle engineering program with support of 26 engineering team for Automotive product design, development as per senior management assignment
- Responsibility : Benchmarking >Vehicle specification > vehicle layout & dimensions > individual aggregates design target setting & specification > Conceptual design > Integration > Pre DFMEA
- Responsibility and Accountability in Detailed engineering of : *Chassis , Suspension & Steering , Axle & e-Axle , Brakes, Wheels ,Cabin and Vehicle Dynamics, Hard point definition , Structural validation*
- Responsible for DMU finalization with Detailed DMU study and reports to Product Dev. team
- *Battery Pack with lightweight and better strength / thermal conductive pack design, EV sub systems (Battery Pack, motor, OBD and charger) thermal management with implementing heat pump concept for efficient heating.*
- DMU> BOM/DWG release DFMA, DVP Preparation of Build to Print Parts , Supplier / Vehicle DVP
- Vehicle homologation compliance – Digital and vehicle level confirmation (ARAI), Documentation
- Engineering time plan and lead time estimation including proto/testing/homologation plan

- Coordinate the Cross functional team to meet project milestone / gateway signoff
- Coordination with Testing team for Vehicle endurance testing and design validation

Project owner –e Tractor – Electrical Sub System design and implementation on ICE Tractor - M&M (2021-22)

- SOR & Specification setting along with customer for High volt tractor electrification
- Engineering Team setup & Program planning and execution
- Sub systems engineering & design, selection (HV Battery Pack , Transmission , Power train and HV motor Controller -adopt the Parker off the Shelf part)
- Bench level test setup to measure the sub systems performance
- Proto Build and testing > Project submission to customer

Product owner – Mining equipment Product development, System enhancement (2019 -2021)

- Horizontal track mounted mobile screening machine – Benchmarking > complete machine design > Development > Field testing
- Dual Fuel system (LNG + Diesel) design > implementation on Dump truck HD 785 > performance testing in Bench level and truck level at Mining site
- Benchmarking and D&D of 240T Dump truck suspension
- Concept design proposal of 100T dump truck electrification
- Systems design / engineering / implementation of Electrical excavator conversion
- OLD Dump trucks chassis structural validation and fatigue life study to meet the DGMS- safety requirement

Project owner – APC conversion of Ford 450 (2019 -2021)

- Armored Passenger carrier development on Ford 450 Rolling chassis as a turnkey project
- Responsibility of Project costing and approval from client & execution
- Body side panel design according to NIJ level and Suspension, frame structural up gradation > Proto Build > overall vehicle testing for new vehicle configuration > design update and low volume mfg. and supply

Project owner – Vehicle electrification concept vehicle and low volume production (2017 -2019)

- Passenger Car electrification (TATA Tigor eV-LV) ; (TATA Nexon eV – HV)
 - Electrical systems layout and vehicle specification and system specification definition
 - Responsible for Engineering / design of (AC cooled Battery Pack with Power train, suspension enhancement for new vehicle layout) and MFG DWG release for Proto Development / Build > low volume production
 - Vehicle performance & validation > feedback review > design update

Project Manager – PASSENGER CAR SPORT VARIANT D&D and low volume PRODUCTION –JTP (2017 -2018)

- Passenger Car SPORTIER BRAND TIAGO / TIGOR JTP DEVELOPMENT WITH TML
 - Responsible to Design / Develop New suspension & steering system and damper tuning to meet the product requirement
 - Responsible for vehicle testing and validation of the all new components and aggregates

- PAT , MIXED DURABILITY (CITY +HW + HILLS), High way durability ,TTC
- Vehicle documentation for homologation
- Responsible for DFMEA and DVP preparation and supplier co ordination
- CAPA preparation for field failures

Project owner – Passenger Car (TATA Kite) suspension enhancement (2016 -2017)

- Handling complete vehicle engineering & Program execution
- Design target setting for customer requirements
- Suspension & Steering engineering design > vehicle Dynamics & Hard Point definition > concept design & Mule development > Validation

Industry: Greenera Energy India Pvt. Ltd, India.

2012 - 2016

DESIGNATION: Manager – Business Development and Product engineering

New Product developments

- Renewable energy solution (research & development , execution planning)
 - Parabolic trough concentrating steam generator for process heating
 - Automatic sun tracking systems (Rotary actuator & Linear actuator)
 - Thermal engineering and development of Air heating system
 - Special purpose fixtures for system implementation
- Thermal engineering and developments
 - Research and development of receiver pipe
 - Development of energy efficient electrical & diesel boilers and hassle free integration

Industry: Jayem Automotives Ltd, India.

2005 – 2012

DESIGNATION: Project Manager (Design & Development)

All Wheel Independent suspension design & development for Special Purpose Vehicle (LCV Development)

- Project planning & execution & client interaction
- Benchmark vehicle data measurements & analysis
- Suspension & steering Hard points definition
- Multi body Dynamic analysis of Suspension , Steering(out sourcing)
- Concept Layout Design -Suspension, Steering, Propeller shaft & Drive line
- Design of all wheel independent axle & drive line by using GKN dive shaft
- Individual parts Design & Packaging and maintain the parts commonality (Suspension , Fame, Axle & Drive shafts ...)
- Vehicle Packaging & Integration , Design Validation & verification
- Parts manufacturing & Proto Vehicle Built , DFM, DFA & DFS

Passenger CARs suspension enhancement for High Power & High speed vehicle handling

- Bench mark vehicles Maneuvers and Data measurements
- Identification vehicles parameter changes and Target setting for improvement
- Suspension Hard point definition , MBD analysis and Hard point adjustment for the selected vehicle chassis Layout, Vehicle Parameters Definition
- Suspension parts design & Integration & Validation (Front & Rear)
 - Mc strut (Spring /Damper),ARB, Wheel carrier , wishbone, Chassis clevis & Mounts, Tie rod, sub frame
- Assembly Drive line & wheel end design ,packaging against the wheel articulation in all condition (Drive shaft , hub, bearings, CV joints)
- Vehicle Built (Suspension, chassis , mounts & drive line) & Testing & Data Logging (RLD)

Tooling & Manufacturing Engineering

ROLE: Process Engineering & Proto components manufacturing

Duration: 30 Months

Tool Design for low volume production components e.g. Castings (MATERIAL: Aluminum, SG IRON, GCI, Steel Casting & Investment Casting), Sheet metal fabrication components, assembly & FRP, Plastic components.

- Gear box housings, Clutch housings
- Knuckle , Stub axle , Drive shaft & flange (FORGING & CASTING COMPONENTS)
- Cylinder Head & Block, Carrier Housing
- Inlet & Exhaust Manifolds, Break Drum & Disc, Hub.
- Upper wishbone , Pitman arm & Idler arm (Steel casting)
- Lower wishbone assy. (Sheet metal) , Chassis Sub Frame & Brackets
- FRP components development (e.g. Front bumper, Pillars, Grill , Console bucket ...)

Industry: V Design product development & Engineering services, India.

2001 - 2005

DESIGNATION: CAD Engineer

- Reverse engineering
- Pattern design for casting components (Manifolds, Axle, Cylinder head & block...)
- Plastic part tool design
- Plastic part design & Industrial styling
- Legacy conversion & Drafting , GT&D
- CAD design cylinder head & blocks for 2 Cylinder gasoline engine

Personal Details

- ❖ Date of Birth : 20th May 1977
- ❖ Sex : Male
- ❖ Current location : Coimbatore, Tamilnadu, India
- ❖ Language Proficiency : English, Tamil and Hindi