PREM KUMAR SEKAR

Mobile: 9176192123; E-mail: prem@engineer.com

To work in a challenging and dynamic environment and to keep adding value to the organisation that I represent and serve, while concurrently upgrading my skills and knowledge.

PROFESSIONAL SYNOPSIS

Experienced Mechanical Design Engineer with a demonstrated history of working in the automotive industry design and development activities. Skilled in PTC CREO, CREO Simulate and PLM (Windchill). Strong professional with a Master of Technology focused in Computer Aided Design (MTech CAD) from SRM Institute of Technology.

AREAS OF EXPOSURE

- Hands-on experience in 3D Modelling Packages
- Product life cycle management (PLM)
- Developing and Understanding Engineering Drawings
- Knowledge of Geometric Dimensioning and Tolerance (GD&T)
- Knowledge in DFMEA, DFM, DFA & Tolerance Stack-up
- Vehicle Body parts analysis against cost down or problem
- Benchmarking with competitor products

ORGANISATIONAL EXPERIENCE

1. ROYAL ENFIELD LTD

Location **:** Chennai
Term **:** September 2017 to Present

COMPANY PROFILE:

Royal Enfield is an Indian motorcycle manufacturing company with factories in Chennai, India. Established in 1893, Royal Enfield is the oldest motorcycle brand in the world still in production, with the Bullet model enjoying the longest motorcycle production run of all time.

JOB RESPONSIBILITIES:

- Design systems and components for new and updated motorcycles with regard to manufacture, assembly and quality
- Motorcycle Bodywork parts design, development and integration from concept generation to production.
- Experience in various phases of design and development activities namely DFM, DFA & Design Verification Plan (DVP) and Testing.
- Responsible for design of components/subsystems including their performance testing, interfaces studies, benchmarking studies etc.

- Generate ideas through Benchmarking, Initiate engineering changes for new products.
- Liaise with Industrial Design, CAE, Testing, SQA, Manufacturing, Assembly & Suppliers for new product development.
- Product, Tooling & Process knowledge for Motorcycle components.
- Very good knowledge in the Vehicle Integration (Engine, Exhaust, Intake system, Electrical)
- Knowledge in Homologation Regulations for Motorcycle parts.
- Good knowledge in GD&T and well experience in using PTC Creo, Simulate and Windchill.
- Support for new vehicle build activities and providing solutions for assembly, production and field issues
- Design Validation (Testing) Support for New Product Development
- Responsible for preparing and updating the Technical parts list for the vehicle general assemblies.
- Design Release activities like design reviews, packaging reports (compatibility between adjacent parts).

Projects Undertaken:

1. **Seat Development for Interceptor:**
   - Design and Development of Packaging of Seat with Bike Undercarriage and other surrounding components
   - Seat Mounting ease considering the service and assembly sequences.
   - Detailed checking of styling data received from Industrial Design Team.
   - Benchmarking and data collection of competitor vehicles.
   - Static Analysis of Seat Pan in CREO Simulate before proceeding with full CAE Analysis.
   - Design input to the CAE team and solving CAE requirements.
   - Design Release of proto components and DFM initiation and supplier discussion.
   - Review of manufacturing, assembly issues in proto stage and ensure implementation of suitable corrective actions.
   - Review DFM, DFA inputs with CFT to meet targets.
   - Support for ED2, Alpha, Beta, Pilot, SOP vehicle builds.
   - Solving Testing Issues as per DVP.

2. **Design of GA Rear Bodyworks**
   - Design and Development of Packaging of Tail lamps, Trafficator mounting, Front & Rear.
   - Homologation Regulation checks all parts in GA.
   - Complete engineering of Front & Rear mudguard assembly including packaging of components, defining mountings, Assembly sequences, Service & Maintenance check and considering Fastener selection.

3. **Design of Electrical Components:**
   - Design and Development of Packaging of Indicator, Tail Lamp and rear Mudguard for two variants with common Chassis and Engine but with different characteristics.
   - Packaging of all Electrical parts and routing as per the layout without affecting the ID intent Detailed checking of styling data received from ID studio.
   - Benchmarking and data collection of competitor vehicles.
   - Complete engineering of GA Electrical & Side panel assembly including packaging of all individual components, defining of mountings, Assembly

sequences, Service & Maintenance check, considering homologation requirements & Fastener selection.
- Designing of sheet metal bracket and plastic parts considering assembly sequences to achieve the design requirement
- Coordinated with the various CFT teams (Engine and Electrical) for Design and developed new exclusive parts from scratch level-based packaging and functional requirements.
- Preparation of DFMEA document, DVP creation with Cross Functional Team.
- Coordination with CAE, Testing, Suppliers & Production plant during different stages of the project.
- Drawing release for proto and support for proto making

2. AUTOMOTIVE ROBOTICS INDIA PVT. LTD.

Location **:** Chennai
Term **:** January 2016 to August 2017

COMPANY PROFILE:

Automotive Robotics is a global service provider to OEM's in the areas of Engineering Design, Manufacturing Services, Electronics, Embedded Integration and Product Developments.

JOB RESPONSIBILITIES:

- Create Hydraulic Components for CAT Machines using PTC CREO.
- Collaborating with CAT US Engineers for designing Hydraulic Components.
- Converting Bucyrus Standards to CAT Standards. Modelling & detailing as per CAT standards. Detailing of large frame assemblies for Bucyrus Facility.
- Create an Engineering Change Order as per Production Requirement, New Product Implementation (NPI) or Continuous Improvement Process.
- Create a Change Notice to require drawing and design changes for the models and drawings from a variety of source documents using Creo-2.0.
- Design modifications as per requirement are captured in Notice through EDN.
- Upload the completed models and drawings to Teamcenter and EDN and Create Process Flow in Teamcenter as per change request and approve the process in various stages till the Drawing gets released.
- Selecting materials for hose, tube, and hybrid assemblies like end coupling, adapter, flange, seal, etc.,
- Applying GD&T as per ASME Y14.5
- Choosing the suitable weld symbols and weld sizes for assemblies like Frame, case, support and bracket assemblies.
- Created background drawings for groups like engines and hoses.
- A regular communication with process partner regarding the status of the work

3. CENTRAL INSTITUTE OF PLASTIC ENGINEERING AND TECHNOLOGY

Location **:** Chennai
Term **:** September 2015 to December 2015

COMPANY PROFILE:

CIPET has its core competency by offering high quality services to customers in the area of Tooling, Precision Machining on CNC machines, Design and Manufacturing of Moulds, Tools & Dies for manufacturing plastics products, plastics product manufacturing through state-of-the-art Injection moulding machines, Blow moulding,

Pipe and Film extrusion, Testing and quality control for Plastics Materials and products.

JOB RESPONSIBILITIES:

- Training students in CAD/CAM/CAE Software's
- Working on Models from customers for Manufacturing at CIPET
- Mould-base designing and assembling

4. MAKS POWER CONTROLS

Location **:** Chennai
Term **:** June 2013 to February 2015

COMPANY PROFILE:

Maks Power Controls manufacture and supply a wide range of Bus duct and Electrical panels that finds its wide application in several industries.

POSITIONS HELD:

- Design Engineer – June 2013 to April 2014
- Production Engineer – May 2014 to February 2015

JOB RESPONSIBILITIES:

- Create drawings as per Customer requirement in AutoCAD for Production
- Create 3D models for Supplier Knowledge
- Assign the work to Production Team
- Check the Raw material from Vendor before production use
- Inspect the electrical components, used for production
- To check the bend radius and quality of bend before the welding arrangement process.

EDUCATIONAL CREDENTIALS

- Completed **M.Tech Computer Aided Design** at SRM University, Ramapuram in 2019 with 70%.
- Completed **B.E. Aeronautical Engineering** from Vel Tech Engineering College, Avadi in 2012 with 62%.
- **HSC** passed with an aggregate of 63.8% from Padma Sarangapani Mat. Hr. Sec. School, Chennai in 2008.
- **Matriculation** passed with an aggregate of 68.5% Padma Sarangapani Mat. Hr. Sec. School, Chennai in 2006.

PUBLICATION

Topic	:	Numerical Simulation and Design Optimization of Baffle Perforations for Better Noise Reduction
Author	:	Prem Kumar S & K.C. Udaiyakumar
Publisher	:	International Journal of Vehicle Structures & Systems
URL	:	https://maftree.org/eja/index.php/ijvss/article/view/1465

CERTIFICATE

INTEGRATED ENGINEERING SOFTWARE PROGRAM ON AUTOMOBILE AND AEROSPACE PRODUCT DEVELOPMENT using CAD/CAM/CAE in **CIPET**, Chennai from MARCH 2015 to SEPTEMBER 2015.

PERSONAL DETAILS

Father's Name	:	Sekar Subramaniam
Mother's Name	:	Sumathi Sekar
Date of Birth	:	21st June 1991
Sex	:	Male
Marital Status	:	Single
Nationality	:	Indian
Languages Known	:	Tamil, English
Address	:	No. 20/44, Pachaiamman Koil Street, West Natesan Nagar, Virugambakkam, Chennai-600092

Place : CHENNAI

Date : **PREM KUMAR SEKAR**