

Career Summary

- **8+ years** of progressive experience in **Product Design and Development of the Medical & Automotive product as Mechanical Engineer.**
- 2+ years of domain expertise in Design & development of Medical & life supporting devices components.
- Good knowledge and Experience in **Concept Design & Detailed Design, Fixture Design, Prototype Manufacturing, GD&T, Stack up analysis, Manufacturing support, Physical & Material characterization testing, Design Verification (DV) Testing, Drafting with GD&T Application** for Medical devices.
- Experience in Safety and Design **FMEA, DFM, & DFA, Design control, Reliability/Verification Test planning and execution**
- Good knowledge and Experience in **Finite Element Analysis, Design Optimization, Structural and Contact analysis (linear & nonlinear)** of the various Medical products and Automotive devices using CAD and CAE tools.
- Experience in linear and non-linear simulations, Kinematics simulation & FBD, Hand calculation, Vibration analysis, Modal testing by using FFT Analyzer and Fatigue Life evaluation using HCF and LCF methods and Exposure in **Design Optimization** for structural design applications.
- Possess good knowledge in ANSI/AAMI/ISO 25539-1:2003, ASTM F2182-09, IEC 60601-1 standards
- Capable of developing **Designs** from **paper to product** with **material selection** and **cost reduction.**
- Capable of **working on multiple projects** and teams from numerous **offshore** and **onshore locations.**
- Work with clients on their projects to establish the product development & manufacturing processes and resolve any technical problems faced in establishing the working methodology.

Technical skills

- CAD and PLM Tools : Solid works, Auto CAD, Solid Edge, and CATIA-V5, cPDM, Windchill.
- CAE Tool : Altair Hyper works, Abaqus, Opti struct, ANSYS & NASTRAN
- Testing tools : Instron, Keyence and FFT Analyzer.
- Statistical and other Tool : Minitab, MATLAB, and C programming

Educational Qualification and Visa Details.

- Bachelor of Engineering in Mechanical Engineering
- Work permit-H1B

Professional Experience

Company : BWI (Biosense Webster Inc)- J&J group(Through HCL)

Duration : September 2017- Present

Role : Mechanical engineer.

Project : Design and Development of the Cardiovascular Catheter. (Mapping and Ablation) -R&D team is in the process of developing a new catheter platform to meet the new business requirements. The project involves R&D design phase, new component design, characterization testing, evaluating feasibility of incorporating new components in current assembly process and providing better solution to improve the process related to the new catheter development.

CIP-(Cost Improvement Program)-Supplier Negotiation, New supplier Development, Design modification, material change, Process change (from Machined to Injection moulded) for the Current Existing Products.

Responsibilities:

- Conceptual Design and development of Ablation and Mapping Catheter components (Machined and Injection Moulding parts), characterization and feasibility testing on Design Iterations and optimization based on testing and investigation.
- Engineering and Quality Support on Supplier development and Component qualification activities (Nitinol, Injection Molded Plastic parts, platinum and palladium alloys, peek tubes, Packaging components)- Statistical process control, GRR, MSA, PQ, Control plan and FAI for new components to qualify for production level.
- ECO/ECN changes, CAD Engineering support – 3D Model generation, drawing creation for component and Assembly level including GD&T Application, Tolerance stack up Analysis.
- Engineering Support on DFMEA and PFMEA Activates, Design verification testing Activities-Writing Test Protocol, PFD, PI, test Execution, report generation, Failure Investigation.
- Engineering Support on Equipment validation (IQ, OQ, PQ), Test Method Validation protocols preparation, Test execution, Report generation, Component qualification review, support for clinical testing activities.

Company /client : Marquardt ,Bergstrom, Delphi Automotive,Takata products (Offshore HCL)

Duration : July 2011- June 2017

Role : Member technical staff, Lead engineer(FEA analyst).

Project :

- Design and Development of the Electronic Steering Column Locking unit, Key FOB, Automotive Interior switches. (Marquardt)
- Design and Development of the Automotive Advanced Driver Assistance camera unit. (Takata)
- Design and Development of the Automotive HVAC, Heat Exchanger (Exhaust Gas Heat exchanger, Charge air coolers, Transmission oil coolers & Condenser unit) (Bergstrom, Delphi Auto Motive).
- FE modeling of the Automotive & Heavy Engineering components For Honda and caterpillar

Responsibilities:

- Conceptual Design, Detailed Design and development of the Automotive products using CAD tools- Catia, Solid works and Auto CAD.
- ECO/ECN changes, Tool & Fixture design, CAD Engineering support- 3D Model generation, Drawing creation for part & Assembly level with GD&T application. Tolerance stack up analysis.
- Design Optimization using Topology, Topography and material optimization modules from Altair Opti struct.
- Structural validation using FEA Simulation:
 - FE Modelling of Automotive components (BIW, Full vehicle).
 - Structural (Linear and Nonlinear Simulation-Geometry, contact, material), Durability and Thermal Simulation.
 - Vibration-Modal, Harmonic, random, Shock, transient Vibration analysis, Drop Simulation.
 - Fatigue life Simulation using HCF (High cycle fatigue) & LCF (low cycle fatigue) in N code.