

DHARMENDRA KUMAR

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STAFF ENGINEER - MECHANICAL

Self-motivated, Creative and Business savvy Mechanical Product Designer skilled in **medical devices, skin care products and electromechanical products** with 14+ years of progressive experience across a broad range of Plastic and Sheet Metal Products. Proven ability to combine vision, creativity and well-developed Project Planning. Strong capability to deliver the Products on time with all quality tests, verification and validations checks. **Leadership qualities to support technical and manufacturing team** along with cross functional coordination for the success of product. Areas of expertise include:

Design and Development	Medical Waste Management System	Design Processes
Plastic Part Development	Sheet Metal Part Development	Quality Process
Plastic Processing Technologies	End to End Product Development	Solidworks/Pro-e
3D Modeling	DFMEA/DFM/DFA	FEA-Ansys
GD&T	Six Sigma	DOE
Documentation	Team Building	Communication

PROFESSIONAL EXPERIENCES

STRYKER GLOBAL TECHNOLOGY CENTRE, GURGAON

February 2017 – Present

Staff Engineer

Key responsibilities for Surgical Waste management system

- Understanding of the Voice of Customer for new or existing product
- Exploring product feasibility according to user need and requirements
- Working with functional & Project Management to identify required skill sets for project execution
- Supporting and coordinating the teams to achieve the milestones from concept stage to product launch while adopting best practices in medical domain
- Conducting project reviews and brainstorming with stakeholders at each phase
- Coordination with all stakeholders to update and track the progress of the project
- DFM/DFA for the components/assembly with cross functional team
- Rectifying/ modifying the components/assembly as per DFM/DFA review
- Development of components/assembly for prototyping
- Communication with vender for development of physical/working prototyping
- Overall responsibility to develop test protocol and executing the test and analysis
- Inspection of prototype as per requirement and fitment check with assemble
- Development of 3D model for Final Tool components/assembly
- Preparation and Coordination with Quality Team and Vender for PPAP Process
- DFMEA for the components/assembly with cross functional team
- Release of 2D/ 3D drawing with minimum required GD&T for the tooling
- Coordination with vender for tooling and final component development
- Inspection of actual components as per requirement and fitment check with assemble
- Coordination with Quality Team for testing and execution of testing

Key Projects Executed/Contribution

Smoke evacuation System

Developed an innovative solution for smoke evacuation filter for surgical waste management system which **reduced the cost of existing filter approximately 33%**. Newly designed Filter now can be used to 4 times of life than the existing. New design in incorporated with mechanical counter which indicates the stops the overuse of the filter housing. Mechanical design features are incorporated in

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such a way that it is completely Ergonomically and well accepted by medical staff. To verify the functionality **test protocols are developed first time and accepted globally in Stryker.**

Provisional Patent is filed in US for innovative solution for replacement of cartridge for Smoke Filter which also detect the number of uses mechanically.

Laurels & Accolades:

Received Appreciation / Award for:

- **Provisional Patents filed in USA for Smoke Filter (2019)**
- Appreciation award for filing patent
- Stryker Super Star awarded

FORZA MEDI INDIA PRIVATE LIMITED, MANESAR
Manager – Product Design and Development

September 2016 – February 2017

Key responsibilities for Passive Wheelchairs

- Analyze business requirements and prepare documents for process flows.
- Monitor efficient working of all projects and ensure compliance to project plan.
- Coordinate with team to resolve all issues and supervise meetings for same.
- Administer all projects and ensure completion within required timeframe.
- Monitor all aspects of products such as pricing and legal requirements.
- Maintain knowledge on all regulation issues and competitor business.
- Manage all products in product line and maintain knowledge of pricing for individual product.
- Allocate appropriate resources for project and prioritize projects.
- Coordinate with product management team and perform product testing on various process.
- Manage various teams and identify representatives for same.
- Administer all user centric designs and ensure compliance to key deliverables.
- Identify all issues and resolve it effectively to achieve all objectives.
- Coordinate with stakeholders and product management teams and prepare required documents.
- Manage projects for product life cycle development.
- Train staff for all operation business activities and maintain consistency in same.
- Coordinate with various departments and prepare list of market requirements and prioritize work.

Key Projects Executed/Contribution

PU Arm Pad for Wheelchair

Improvement in production of PU foam for the arm pads for active and passive wheel chairs by 5%. Proposed the new design of nozzle which injection the mixed PU solution into the die cavity. New design for nozzle has extended nozzle which minimize the over filling and die cavity and reduced the waste of raw material.

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PENTAIR WATER LIMITED, NOIDA
Senior Project Engineer - Team Lead

December 2010 – September 2016

Key responsibilities

- Understanding of the Basic requirement from Marketing or VOC for new or existing product
- Feasibility of the new/existing product requirements
- Brainstorming with different departments for requirement and scope
- Support Team to Generating Concept on Paper and 3D CAD Software
- Generation of the Bill of Material for existing and new product as per requirement
- DFM/DFA for the components/assembly with cross functional team
- Rectifying/ modifying the components/assembly as per DFM/DFA review
- Development of components/assembly for prototyping
- Communication with vender for development of physical/working prototyping
- Inspection of prototype as per requirement and fitment check with assemble
- Development of 3D model for Final Tool components/assembly
- Preparation and Coordination with Quality Team and Vender for PPAP Process
- DFMEA for the components/assembly with cross functional team
- Release of 2D/ 3D drawing with minimum required GD&T for the tooling
- Coordination with vender for tooling and final component development
- Inspection of actual components as per requirement and fitment check with assemble
- Coordination with Quality Team for testing
- Rectifying/ modifying the components/assembly as Quality Test feedback
- Final Release of all 2D/3D drawing and documents for mass production at assembly line
- Coordination with production team for any sort of trouble shoot

Key Projects Executed/Contribution

RO System for TATA

Development of 4 and 5 stages RO System for TATA. Projected is completed from the VOC from TATA till the dispatch of RO System. System needs to be slim and multi-staged. Front cover and Back cover were injection moulded. It was having a hinge mechanism for easy opening for the better service. Technical issues were faced for injection moulded parts for RO system and all the issues sorted out with injection moulding process skill gained.

RO systems were performed above expectations of the TATA and were successful in market. TATA ordered next lot of units (5000) within 3 months of duration.

Meltblown Filter Cartridge

Melt blown Cartridge is a very common product for water filtration. Whole setup is commissioned at our manufacturing plant, but main challenge was to produce the quality product from the setup. This set up is having around 24 variable parameters and few fixed parameters. Challenge was to come to fix set of parameters so that same cartridges can be produced with consistency. Intuitive as well as scientific approach is used to arrive at fix set of parameters. Tests were done on all the trials produced. A successful produced is achieved.

This product is very successful in market and more than 3lakhs of such cartridges have is sold out in the market within a year of launch.

Laurels & Accolades:

Received Appreciation / Award for:

- Certificate of Appreciation – 2014 for developing a new melt blown filter product
- Certificate of Appreciation – 2015 for fulfil the customer requirement above expectations

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EAST WEST DESIGN SOLUTION LIMITED, DELHI

September 2008 – November 2010

Senior Design Engineer

Key Responsibilities

- Understanding of the Basic requirement from Marketing
- Brainstorming with Industrial Designers for requirement and scope
- Coordination with Industrial Designer to understand the aesthetics of the Product
- Feasibility of new product requirements for manufacturing
- Generating Concept on Paper and 3D CAD Software
- Development of components/assembly for prototyping
- Communication with vender for development of physical/working prototyping
- Inspection of prototype as per requirement and fitment check with assemble
- Communication and update to marketing team for their customer update

Key Projects Executed/Contribution

Vibrating Mascara

Working prototype for an innovative Eye Liner Mascara is developed. This mascara has a vibrating brush which could rotate to and fro with a small air blower fan. This motion helps the user to apply the mascara on eyelashes uniformly and air blower help to mascara get dry quickly. A very small profile (wave) component was used to generate the vibration along with to and fro motion with help of a small DC motor. Mascara was given an automatic on off feature in cap so that battery life can be saved.

Provisional Patent was filed in US for this innovate mascara

Laurels & Accolades:

Received Appreciation / Award for:

- **3-Design Patents filed in USA (Not Granted)**
- Awarded one-week family vacation by company

SECURE METERS LIMITED, UDAIPUR

July 2005 – August 2008

Executive –II, Design Engineer

Key Responsibilities

- Understanding of the Basic requirement from Marketing or VOC for new or existing product
- Feasibility of the new/existing product requirements
- Brainstorming with different departments for requirement and scope
- Generating Concept on Paper and 3D CAD Software
- Generation of the Bill of Material for existing and new product as per requirement
- DFM/DFA for the components (Plastic or Sheet metal)/assembly with cross functional team
- Rectifying/ modifying the components/assembly as per DFM/DFA review
- Development of components/assembly for prototyping
- Communication with vender for development of physical/working prototyping
- Inspection of prototype as per requirement and fitment check with assemble
- Development of 3D model for Final Tool components/assembly
- DFMEA for the components/assembly with cross functional team
- Release of 2D/ 3D drawing for the tooling
- Coordination with vender for tooling and final component development
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- Coordination with production team for any sort of trouble shoot
- Preparation of CMMI documents for every phase of the Design Process

Key Projects Executed/Contribution

GSM Module

A GSM Module is developed which can communicate with all the meters and can send the data to centralized location. Plastic Base and Cover is injection moulded for this module. These modules also have an antenna which needs to be protected from the ESD. For that purpose, a special rubber part is designed to cover the antenna base. ESD test is performed with fully working module and passed the test. Also, others mechanical tests were performed, and module is passed.

Common Adopter Plates for Different Meters

A common Plastic Adopter plate needs to be developed so that meters of different manufacture's meter can be fixed on the same plate. Plate was having a rectangular cut at the bottom which was an area of concern because of weld line development in injection moulding process. Also, plate needs to be thin and strong enough to hold the meters. Rubs were given at the back side of the plate to strengthen it and injection point is chosen at the bottom side of the plate so that weld mark can reduce.

Laurels & Accolades:

Received Appreciation / Award for:

- o Spot award for **Preparing Design Guidelines for Packaging and Decal/Rating Plates.**
- o Spot award for Preparing **Cost calculator for plastic parts** in Visual Basic

EDUCATION AND TECHNICAL PROFICIENCIES

B.Tech. (Mechanical Engineering)
Indian Institute of Technology, Delhi – 2005

Technical Skills
Adobe Photoshop, Illustrator, CorelDraw, Microsoft Office (Word, PowerPoint, Outlook, Excel)
Microsoft Visual, Microsoft Project

PERSONAL DETAILS

Date of Birth: 15th May 1981.
Nationality: Indian.
Marital Status: Married.
Valid Visa: USA-B1/B2.
Present Address: Ghaziabad, UP

Languages Known: English and Hindi.
Passport: Valid till July 2018.
Number of Children: 2 (Daughters).
Interest/Hobby: Astronomy