Job Description: Product Engineering Head

i. General Information	
Role: Product Engineering Head	**Department: Product Engineering Armor**
Division: Armor Business	**Job Grade/Level: 2**
Functional Reporting: Business Head	**Administrative Reporting: Business Head**

ii. Job Objective

Lead all Product engineering department activities, spanning across Helmet, Body Armor, Vehicle Protection, development and testing. Provide superior technical knowledge in all areas of Product Engineering life cycle. Responsible for providing leadership and management to a team of Product Engineers. Responsible for new product development plan along with Product Manager. Work on RCA and CAPA for Product Engineering customer complaints. The role has full budgetary responsibility for the Product Engineering department and implementing continuous improvement principals by highlighting deficiencies and recommending changes in training, working practices and processes.

iii. Key Responsibility Areas

Execution	▪ Project Management - Effectively manage the Product Engineering department 'running projects (scope, timeline, budget) and monitor project budgets with a focus on efficient execution in alignment with PMP principles and tools like MS Project/MS CRM for tracking timelines and budgets. ▪ Product Development - Oversee end-to-end development of armor products, create USPs in product design along with new product development while meeting customer requirements and competitive differentiation in defense manufacturing markets. ▪ Process Improvement- Lead activities to improve First Pass Ratio, design time, and manpower utilization, enhancing operational efficiency and aligning with Lean Manufacturing and Six Sigma methodologies. ▪ "Risk Management" or "Engineering Analysis - Experience with DFMEA, FEA etc. for systematically identification and mitigation of potential design failures during the development phase, ensuring product reliability, safety standards like NIJ or BIS and simulate how products respond to real-world forces. ▪ Deep understanding of ballistic materials like Kevlar and their properties for impact resistance. ▪ Setting the target cost for new product along with the Product Manager and working towards alignment of design procedures to achieve the target cost. ▪ Running SGAs and DMAIC projects in Product Engineering and reporting of results to Armor head. ▪ Skills in managing timelines, budgets, and cross-functional teams using tools like MS Project/MS CRM. ▪ CAD tools - (SolidWorks/AutoCAD), DFMEA, FEA, and deep understanding of ballistic materials like Kevlar. ▪ Lead the team in new product development design process along with testing and prototype development. ▪ Visualize project timelines and milestones for better planning and alignment across teams. ▪ Knowledge of Lean Manufacturing and Six Sigma methodologies to optimize production processes. ▪ Report on achievement of targets and identify any actions required ▪ Oversee Engagement and team building exercises for Product Engineering team.

Coordination & Reporting	▪ Coordinate with Product Manager to set the target of New Product Cost. ▪ Prepare and present Action plan for Product Engineering team to achieve the KPI. ▪ Create the road map for Design, protype development and testing process improvements along with different units in PE. ▪ Coordinate with Design lead for Feasibility study of New projects
Development	▪ Development of Training plan for PE team to improve the design process. ▪ Contribute to the creation and implementation of best practices in product engineering; planning vision, strategy, policies, processes, and procedures to aid and improve design performance ▪ Development and implementation of SGA and DMAIC projects to improve current design processes including testing and prototype development.
iv. Key Performance Indicators	
Project timeline	Manage projects in estimated timelines, and submission and implementation of PDCA for delayed projects.
Target Cost	Complete projects in estimated product cost given by sale steam.
First Pass Ratio	Improvement in designing processes and training of Design Engineers to improve first Pass ratio in testing of designed prototypes.

v. Stakeholder Interactions

Type of interaction	Interaction with	Nature of interaction
Internal	Product Manager	Work closely to ensure customer requirements are captured properly in the product
Internal	Design lead	Decision on the feasibility of a product. Development of SGA and DMAIC projects. PDCA/ CAPA for customer complaints.
Internal	Project Manager	Approval of PDCA received for delay in timeline from design engineer and sharing with Project Manager
External	Sales	Customer complaints received and sharing of CAPA report.

vi. Job Specifications

Qualification	Min. qualification required	B. Tech in / Mechanical /Industrial Engineering/ Industrial Design/ Material Science
	Other desired Certifications	PMP (PMI) AutoCAD certification / Certified SolidWorks Professional (CSWP).
Relevant Experience	Min. no. of years of relevant experience required	15 Years of Overall Experience. Min 03 years in Leadership /Head role.
Knowledge and Skills Required		• Able to perform in high level Technical & Management role. • Able to demonstrate experience of working within a Product designing environment . • Familiarity with safety standards like NIJ (National Institute of Justice) for ballistic protection and ISO certifications • Strong working knowledge of 2D and 3D CAD. • In depth knowledge and experience of Design Failure Mode and Effect Analysis (DFMEA), Failure Mode and Effect Analysis (FMEA), Production Part Approval Process (PPAP), and Lean Manufacturing techniques such as Six Sigma

	• Experience of New Product Introduction, reworking design changes and upgrades through to production • Experience of managing a team of minimum 20 (Preferable 30)