

Naser Hossain

Engineering, R&D and Smart Manufacturing Leader

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SUMMARY

Accomplished Mechanical Design Leader, PMI-certified PMP and Six Sigma Black Belt- having led 15+ member cross functional, global teams. Experienced in Strategic Planning, Process Mapping, Risk Mitigation, NPD/NPI, 3D Printing, Finite Element Analysis, Lean Manufacturing, and Industrial Automation. Holder of 10+ patents in medical devices, consumer products, and industrial automation. Led 50+ product design rounds for top biotech, consumer goods, and industrial manufacturing companies. Over a decade of leadership in technical roles, excelling in talent acquisition, team building, and operational excellence. Specializes in manufacturing scale-up and executive alignment sprints. Proficient in Spanish with significant manufacturing experience in Mexico.

SKILLS

AI/ML IN SMART MANUFACTURING | KAIZEN/KANBAN/GEMBA/TPM/GMP | VALUE ENGINEERING | SQDC/SPC | DMAIC/DFX/DFMEA/DFSS | CATIA/NX/SOLIDWORKS | FINITE ELEMENT ANALYSIS (FEA) | INDUSTRIAL DESIGN | DESIGN OF EXPERIMENTS | SCIENTIFIC INJECTION MOLDING | MOLD DESIGN | DESIGN THINKING | ERP & PLM | SPC/MINITAB/R | MATERIAL/POLYMER RESEARCH | ANSYS/ABAQUS/DYNA/COMSOL/OPENFOAM | CMMS | TEAMCENTER/WINDCHILL/ENOVIA | TRELLO/ASANA/JIRA/MS PROJECT | PYTHON/POWER-BI

WORK EXPERIENCE

Mettler Toledo, San Diego, CA

01/2021 – Present

Director of Engineering, R&D and Smart Manufacturing

- Spearheaded innovative injection molding techniques, slashing costs by 15% through value engineering.
- Directed end-to-end product lifecycle management, from initial concept to successful market launch, resulting in a 25% increase in quarterly sales and a 15% reduction in development costs.
- Implemented FEA methods using virtual prototyping simulation tools- cutting physical prototyping by 50% and saving \$500K annually.
- Standardized FEA for mold flow, drop tests, and structural simulations, enhancing design decisions.
- Applied ASME Y14.5 GD&T standards for developing QC/QA specs, ensuring precise IQ-OQ-PQ runs.
- Led a comprehensive overhaul of RFX/RFQ protocols, utilizing predictive analytics, which culminated in \$15M annual savings on tooling and a 20% reduction in supply chain lead time.
- Led Lean and Six Sigma initiatives, improving manufacturing excellence through KAIZEN and GEMBA events with waste reduction champions.
- Employed SPC techniques in Minitab for trial validations and FAI reports.
- Engineered advanced benchtop robots with precision automation, cutting assembly errors by 30% and increasing production efficiency by 25% within the first quarter.
- Championed cross-departmental workshops, resulting in a 35% increase in team collaboration and reducing project delays by 20% through improved stakeholder communication.
- Introduced innovative project management tools and streamlined workflows; improved team productivity by 20%, accelerating project turnaround times and enhancing overall team performance.
- Maintained ISO9001 and ISO13485 compliance, ensuring high product quality standards.
- Sponsored automation projects using CV/AI/ML techniques and tools to reduce overhead by 25% for both HMLV (High Mix, Low Volume) and LMHV (Low Mix, High Volume) processes.

Niagara Bottling, Los Angeles, CA

01/2017 – 01/2021

Design Engineering Manager

- Spearheaded the transition to simulation and virtual prototyping for design decisions, utilizing Non-Linear Finite Element Analysis (FEA) for injection molding, blow molding, and structural integrity analysis of molded parts.
- Led hands-on ideation, prototyping, design, testing, and rollout of consumer products using advanced CAD/CAE tools and FEM/FEA methods for structural and topological optimization.
- Established DOE methods and testing setups for R&D and Manufacturing teams, implementing Total Preventative Maintenance (TPM) strategies.
- Established standardized Non-Destructive Testing (NDT) techniques for precise measurement of difficult-to-reach dimensions in mold components and plastic parts.
- Headed a team of approximately 7 engineers and scientists in a dedicated R&D environment.
- Applied ASME Y14.5 GD&T and Statistical Analysis principles to enhance injection mold and tooling design efficiency.
- Led the submission of over 10 design and utility patents within the design group as a contributing inventor.
- Administered a team of technicians and shop floor personnel, overseeing production and R&D equipment operations.

Schlumberger, Houston, TX

10/2013 – 12/2016

New Product Development (NPD) Engineer II

- Conceptualized material selection, tool building, NDT/NDE cell construction, and testing for subsea oil extraction projects.
- Led instrumentation and tooling projects valued at over \$5 million in the North Sea and Gulf of Mexico regions.
- Recruited, trained, and supervised a team of 3 junior engineers.
- Facilitated QC and Supply Chain teams with API 6A/17D qualification processes.
- Played a key role in defining Finite Element Analysis (FEA) standards across the company.
- Conducted finite element simulations on hyperelastic resin materials.

NASA Kennedy Space Center, Orlando, FL

08/2012 – 08/2013

Research Assistant-NASA EPScOR

- Led technical liaison efforts for a \$750K+ academic project with NASA KSC.
- Conducted fluid mechanics simulations to analyze erosion patterns on NASA assets.
- Designed a Thermal Barrier Coating system validated through numerical models using plasma impingement.
- Collaborated with NASA hardware and system teams at KSC to assess and strategize improvements for flame trench assets, focusing on SWOT analysis.
- Analyzed structural failures in existing flame trench coatings and implemented system-level optimizations.

EDUCATION

Louisiana State University, Baton Rouge, LA
Master of Science – Mechanical Engineering

08/2013

Bangladesh University of Engineering and Technology, Dhaka, BD
Bachelor of Science – Mechanical Engineering

10/2010