



NAYANKUMAR JAYESHBHAI SOLANKI

E-Mail: nayansolanki@gmail.com ~ Mobile: +91-9714914799

Versatile mechanical engineering leader having 16+ years of experience working with product design and development, executing projects at Engineering Centers and Operations involving various stakeholders for new product development projects, continuous improvement projects, Value engineering and value analysis projects, process improvement and optimisation projects, cost reduction drives etc. Targeting for senior level assignments in **New Product Development, Project Execution & Project Management, Value analysis & Value engineering projects** with an organization of high repute.

CORE COMPETENCIES

New Product Development

Project Execution & Management

VA / VE Initiatives

Vehicle Refinement

Engineering Change Management

Continuous Process Improvement

Product Engineering

Vehicle Development & Launch

Team Management

PROFILE SUMMARY

- **Drive ideation workshops**, plant mega workshops, supplier workshops, theme based idea generation workshops, benchmarking and technology workshops, process optimization workshops to identify cost saving opportunities using VAVE levers and methodologies.
- **Led entire product development activities** including conducting requirement analysis, finalizing design specifications, planning prototypes & tests, getting approval, and making necessary modifications in the designed one in **Automotive sector**
- **Identified the scope for planning, implementing & monitoring of product and process changes** to enhance efficiency, process flow, working practices, consumables, and so on for controlling and reducing the cost per unit produced
- **Participate in design reviews for all new product launches** to ensure the implementation of previous "lessons learned" and the application of any new product and/or process improvements. Early Identification of issues related to design, quality, budget and facility for implementation of projects along with plant and product line teams.
- **Developed various automotive components for passenger cars** such as Acoustic Package, Exhaust System, Tyres, Chassis Components, BIW Panels, HVAC systems Engine Components ensured the meeting of all design parameters and **Optimised NVH** at vehicle & subsystem levels.

ORGANISATIONAL EXPERIENCE

Since Dec'14 with Tata Motors Limited, Ahmedabad, Gujarat as DGM

Key Result Areas:

Since Oct'17: Project Execution and Management –VAVE Projects

- Steering the successful roll-out of projects including defining scope, setting timelines, analysing requirements, prioritising tasks and identifying dependencies as per norms
- Tracking and co-ordination of VAVE projects for execution and working in synergy with product engineering, manufacturing engineering, production teams, supply chain, operation quality teams **to achieve value engineering YoY financial targets of PVBU business**
- **Generate DMC cost opportunities through ideation**, and syndication of projects with all stakeholders design engineers, suppliers, manufacturing and marketing teams.
- **Engineering changes and design improvement modifications implementation, taking up for line trials with manufacturing.** Enable outcomes of try-outs issues and improvement proposals with engineering team and facility planning team for timely implementation. Investigate alternative designs to maintain performance while reducing cost and weight
- **Bridging engineering activities with the Plant Team** for communication, coordination & smooth execution, coordinating with stakeholders and Cross-functional Teams (CFT) for addressing complex issues

May'16-Oct'17: VATS (Vehicle Attributes and Technical Services)

- Acted as SPOC from VATS Function for engineering issues for Tiago, Kite-5 Project launch
- Drove **performance and quality improvements** for vehicle NVH, S&R, IDT, and climate issues resolution **as continuous improvement projects**
- Ensured the **meeting of new projects targets for enhancing overall vehicle performance**
- Represented VATS functions to management forums, quick response team, plant issues and field issues meetings

EDUCATION

- Bachelor of Mechanical Engineering Degree from National Institute of Technology, Surat in 2004

PROFESSIONAL AFFILIATIONS

- Society of Automotive Engineers (SAE) India and International
- Institute of Engineers

IT SKILLS

- MS Office, Technical – LMS Test Lab, Artemis Sound & Vibration Analyzer

PERSONAL DETAILS

Date of Birth: 14th December 1982
Languages Known: English, Hindi, and Gujarati
Address: A-502, Neptune Trinity, Sarabhai Road, Vadodara

- Managed engineering prototype shop activities and upcoming projects at Sanand

Dec'14-May'16: NVH Projects & New technology introduction

- **Competition benchmarking:** Evaluated competitor vehicles for NVH attributes and set up vehicle level targets for upcoming projects.
- **Created design guidelines, DVP** (Design validation plan) **& DFMEA** (design failure mode effect analysis) for Exhaust, Air Intake and Rotating Components, identification of gap with respect to customer requirements and competition.
- **Function analysis for Major components**, systems for cost saving opportunity identification and reduce complexity of components.
- **Prepared methodologies, test procedures and new competency** for vehicle & subsystem level testing
- **Designed subsystem level test rigs** for simulating events for correlating to vehicle level results
- **Identified new technology and introduced TML vehicle lines for cost opportunities.**
- Developed X104 Exhaust & Intake Systems DVP and set up component & vehicle level targets

Highlights:

- **President Award** for execution of **VAVE projects successfully March'21**
- **Outstanding contribution Award** from VP-Operation for contribution and commitment in **Aug'20**
- **President Award** for execution of **turnaround 2.0 program for cost reduction projects in Nov'18**
- Participated in many National & International technology events and product strategy workshops to understand future technology & product needs, some of these included SIAT symposium, SAE events, etc.
- **Independently & successfully executed Tata Tigor, Chevrolet Tavera BSIV projects** on product development
- **Acquired pre-launch approval for Tigor, Chevrolet Tavera BSIV products** from the customer, this was significant as it included a large number of activities including detailed discussions with customers on important topics like test specification, installation drawings, field trials, product release, and so on
- **Achieved saving worth INR 880 Lakhs** through cost saving measures such as **weight reduction, design optimization, and competitors benchmarking techniques**

Oct'05-May'14 with General Motors India, Vadodara, Gujarat as Senior Engineer

Key Result Areas:

Vehicle NVH

- **Competition Performance Benchmarking:** subjective & objective evaluation of noise & vibration attributes of new GM vehicle models against competitor's models. **Comparison of acoustic pack, systems, best designs of competition, new technologies.**
- Set up targets at the vehicle & subsystem levels through vehicle testing
- Ensured **timely launches of new program** launches, quality gate reviews, and post launch issues along with launch group. **Ensured lesson learnt of previous programs implementation in new programs.**
- **Identified root cause analysis** for vehicle level noise & vibration issues and **identified design solutions.** Resolved powertrain development problems and identified countermeasures with the Design Team
- **Conducted vehicle performance review** and buy-off rides of vehicles for media events Enhanced vehicles performance to meet regulatory norms and design standards

Vehicle Development Phase

- Designed & developed I-163 BS4 Exhaust System and eliminated whistle noise (6.5 to 8 kHz) through design modifications in muffler internals
- Addressed excessive vibration of gearshift lever by tuning lever mass and isolators
- Engaged in tuning & shifting of powertrain first bending mode frequencies from second engine order excitation frequencies
- Resolved whine/grinding noise of rear axle through improvement of hypoid gear quality
- Managed the tuning & standardization of engine mounts with BS-3 engines

- Developed acoustic package and managed tyre development program for overall in-cabin noise performance improvement

Vehicle Launch Phase

- Designed clutch system for clutch whoop noise and excessive vibration due to transfer of engine fourth order excitation from clutch housing to hydraulic clutch system
- Resolved through frequency modulation & introduction of spiral pipes and kuku-kuku noise in fuel injection pump by modifying the design of pipe outlet
- Developed turbocharger to eliminate laughing noise in the turbocharger by signal analysis and improvement in calibration for EGR opening & closing phenomenon
- Eliminated intrusion of horn noise & engine noise in the passenger compartment

Product Engineering

- Developed automotive components; **resolved plant quality issues** specifically related to **design, warranty & customer complaints**
- **Tracked engineering change management system** and maintained documentation as per established procedures.

Highlights:

- Achieved **Spontaneous Recognition Award** for Tavera BS-4 Program 2011-12, J300 Program 2009, M300 Program 2009
- Attained **Leadership Award** for Value Engineering from President and MD (VAVE Entrant Award) in Nov'08

PREVIOUS EXPERIENCE

Mar'05-Oct'05 with Super Industries Pvt. Ltd., Vadodara as Junior Engineer – Production

Jan'05-Mar'05 with Suzlon Energy India Ltd., Bhuj as Junior Engineer – Quality

Jul'04-Jan'05 with General Motors India, Halol as Trainee Engineer

June'14-Oct'14 with Henkel Adhesives India, Pune as Acoustic Expert

PAPER PRESENTATIONS

- Presented technical papers on:
 - Automotive Exhaust Muffler Design, Development and Study on Attenuating Whistling Noise at the Symposium on International Automotive Technology, ARAI in Jan'13 (SAE Paper 2013-26-0099)
 - Performance Cascading from Vehicle Level NVH to component or subsystem (Exhaust & Air Intake System) at SIAT in Jan'17

TRAININGS / CERTIFICATIONS

- **Automotive Project Management Professional (PMP) Arience Technology Aug'2019**
- **Training on Classical VAVE /Value methodology by Bolton Consulting USA, Aug'2015**
- Advanced Driving Safety Training, IDIADA, 2013
- **DFSS Six Sigma Green Belt Certified**
- Proficiency Improvement Program on Automotive Noise, Vibration & Harshness, ARAI, 2011
- Certificate in Basics of Noise & Vibration, NV Dynamics, 2011
- **Red X Approach to Statistical Engineering Problem Solving, GMU, Oct'08**
- Advanced Concepts of GD&T, GMI, Oct'08
- Application of GD&T, GMI, Oct 2008
- ISO 14001:2004 & ISO 9001:2000, QMS Certified Auditor, TUV, 2007
- DFMEA/FMEA and APQP Process Knowledge