

THIMOTHY AYYAMPERUMAL

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Career objective

Skillfully understanding the complex technical requirements, cost & timeline and cognitively resolving RD details with multiple stakeholders by establishing the smooth process for successful deliveries and constantly updating my skills in advance contemporary technologies.

I have 10.5 years of hands-on International experience in Automotive Electro-Mechanical Product Life Cycle like RD Design, Product & Process Validation, Plant & Production Quality, Warranty for various active/passive & dynamic automotive Chassis electronics components. I have closely worked with R&D centers around the globe, Plants & closely coordinated with suppliers & OEMs.

I am certified with Six Sigma - Green Belt. I completed 17+ successful Cost saving projects with cumulative savings of USD 312,894/annually and mentored 12 members of my team for Six Sigma - Green Belt certifications. I also developed a strong and motivated workforce and enhanced them to be part of the organizational scope.

Professional Summary

R&D Product & Process Validation Engineer, Valeo Japan – Tsukuba Techno Center (Oct-2019 ~ till now)

- Product Integration Validation (V-Process) HW/SW and Mechanical integration.
- Design Validation (DV) and Product & Process Validation PV of all P1 /P0 projects
- Cost and timeline Planning [Man, Machine, Material] & arranging internal, external and overseas test facilities and requirements like chambers, jigs and test softwares.
- Automotive component functional, durability, all Environmental validation expert in both Software, Hardware & ME.
- Collecting functional test requirements, test report and DFMEA/DRBFM (xFMEA) to OEM. Risk assessment before validation test & DR preparations
- Creating and Managing test plan (Internal and External) / schedule / test report and automate the test requirements as per specification and approval
- Virtual Hardware In Loop (HIL) and Physical roads/course tests
- software flashing/reflashing and using CAN Analyzer/CANoe, LIN Analyser, Keysight, data loggers
- ElectroMagnetic Compatibility (EMC) and ElectroStatic Discharge (ESD) of Electrical circuit & product sealing validation and interference of Radio Waves and Wireless devices compatibility like Bluetooth, voice control.
- LIN validation of Master, Slave & Dominant & Recessive outputs and LIN & CAN protocol verification and HEX data check
- Create, monitor and follow up on customer and internal issues in TMT & JIRA tickets.
- Capability of problem solving and issue tracking and data analysis. Failure analysis experience with Analysis tools (FTA, QFD, 5why, DRBFM, FMEA, design of experiments, etc.)
- Communication to our customer and Valeo network (e-mail, conference calls)/Customer/Suppliers
- Working closely with plants in Japan, Thailand, Tunisia & RD centers in Japan, France, India, Romania on product issues and deliveries.
- Planning, Training and guiding the team in Shenzhen, China.

Senior Product Engineering Leader - Advanced Electronic Parking Brake

Nissan Motor Corporation (through TCS-Japan), Kanagawa – Japan. (Aug-2017 ~ Oct-2019)

- RFI & RFQ study and gathering deep technical details
- Product specification and NES & NDS for Validation test requirements as per Nissan standards with vendors & sourcing team and Supplier coordination (ADVICS, TRW, CBI and Continental).
- Advanced Engineering of High Clamping MoC, e-Drum and EPB front with suppliers

- Weekly discussion with the suppliers for the product development status, planning and progression and plant visits [Proto type & Mass production]
- Planning man hrs, development budget, timeline and the required informations for suppliers & contracts
- Full Product Development of EPB (Types - Cable puller, MoC (normal & High clamping) and e-Drum) & Foundation brake systems, EBOM, PBOM & SBOM, Production release, volume calculation, Cost Management, Mastercheck, Planning & Production DWG, CAD (UG NX & SPACE VISION), strength and durability study, benchmarking and Part commonization.
- Designing in CAD, validating, documenting and packaging Electronic PB caliper & Motors for new product developments for Nissan platforms and proto production build & planning.
- Product life cycle of Chassis systems from planning to concept and pilot (Proto) to SOP.
- Good technical understanding of system and vehicle performance and gathering requirements for design and implementing test and deployment.
- Maintaining and managing the CAD data, Part and SW reusability and cost optimisation.
- Automotive SW Verification of functional requirements, Validation and Vehicle Diagnostic services in system level testing, Bench test and Vehicle level testing, Reprogramming.
- Non-Standalone Architectures (NSA) & Standalone Architectures (SA) testing & verifications.
- dSpace, software flashing and using CAN Analyzer/CANoe and tuning and creating MATLAB models and turning the parameters
- Studying and creating functional & product test requirements to Supplier, test report verification and DFMEA & xFMEA.
- Good knowledge of Communication protocols such as CAN, LIN & network layers
- Hands on experience in on-board diagnostics DTC, DID verification using Hex codes and libraries, Vehicle safety standard ISO26262, Automotive SW Verification of functional requirements
- Extensive experience in PLM, JIRA, GATES to raise and monitor the issues.
- Software Release, sequencing, validation, flashing and running changes.
- CFT, CVE and DGM senior management Design Reviews and approvals.
- Managed the team various global RD centers in Japan & India

Chassis Plant Vehicle Team member (Solihull, Halewood, Castle Bromwich)

Jaguar Land Rover (through TCS), Bangalore - India and the UK (Jun-2012 ~ Aug-2017)

- Have good knowledge on Automotive chassis components and functional parameters of Premium luxury SUV platforms (D7u, D7a, & T5) & towing, Compact SUVs (D8) and Sedans (D6, D7a)
- hands on experience market failures of Chassis components by collecting market data & using problem solving tools such as PAWS, iQM, Topix, VFDB, EPQR, Qbay, GCM, WERS (EBOM, PBOM & SBOM) to find Root Cause Analysis (RCA) of the failures globally.
- I closely worked with Vehicle Functional Engineers to further investigate and find early containment to resolve or rectify the issues by coordinating with suppliers, dealers, PD and plant team to control warranty cost of T5, D6, D8, D7u & D7a Platform.
- Field issues study and counter-measures for Brake noise, leak and judder study, PTR (Production Trial Run) activities & handing over projects to the launch team.
- Executed application project from RFQ to SOP and Post production. Design Validation, component testing and vehicle level testing (Proto, production, lab and vehicle testing)
- Experience on Technical review with suppliers, CFT and senior management during complete Product Life Cycle RFQ –SOP milestones, REACH, Legal compliances and certifications
- Responsible for New Product improvement Proposal, NPD plan, Costing, Budget Preparation, benchmarking with Global competitor products
- Problem solving methodologies, process improvement techniques, engineering change management, VA/VE and Engineering Change management to save cost and time.
- Exposure to reverse engineering and product measurements, part approval and release & assembly feasibility check in the production line and monitor the samples in the Market.
- Part Development, sourcing localization and capacity study, good Knowledge in rubber, plastic metal design considerations.

Chassis Electro-Mechanical Development, Warranty data Leader & SVO (Gaydon, Whitely, Bangalore)

- I worked closely with the PVT team in all three plants in the UK and process standardization.
- I was fully responsible for chassis Systems such as Electro-Mechanical components of Brakes, Steering, Tires, Suspension (SSA & SST).
- Worked on the Advance Chassis Components such as ABS Motor & Pump, WSS, EPB-MoC & Cable puller, EPAS, EAS Suspension system, Dynamic ARC System, Electronic ARC system, Passive and Active Dampers (MagnaRide), Stability Control Module, CHCM, CHCMB, TPMS etc., and EE systems
- Support function to Manufacturing engineering for assembly line preparation and product Reliability team for testing, technical discussion with vendor & sourcing team, Supplier coordination
- Product Validation test done through climatic chamber, Engineering testing, Pilot line assembly study, Launch and program Handovers, Preparing Product description data sheet for production, building samples.
- Worked closely with BWI, Hitachi, AMK suppliers for active and passive dampers of D8 vehicles and AMK supplier for EAS compressor of D7u vehicles. Conducted Line Trails in the production line, in-house assembly inspections, Production Trail inspections, Supplier inspection and assembly measurements. RCA studied using 8D, Form4, 5Why and Ishikawa methodologies to find RCA.
- Acquired problem solving and good analytical skills through complex real time problems
- Worked with global counterparts in three different plants on problem solving and change management for the global markets.
- Design & validation of Electronic Air Suspension and feasibility study with surrounding components, bound, rebound and fully bound condition
- Hands on experience in NPD, Development/Localization of sourcing and capacity study, BOM creation, costing & budget preparation. Prototype build and tool study
- Built the team in India & constantly improving them.

REVATHI Equipment Limited (Implant training), Coimbatore (1 month)

- Worked with the plant engineering team and got to know the workflow of an organization from advanced engineering to manufacturing and from finance to marketing.
- Studied various Mines, type of ores, Hardness of rocks, Factory specifications, Factory representations, PD, Costing, Purchasing, Out-sourcing, In-house manufacturing, In-house Assembly, suppliers, vendor management, Finance and Marketing.
- Clearly Understood the inter-linked processes followed within each functional department.
- DFMEA approach followed to find a solution of the Component failed in the field by continuously inspecting, verifying and validating the failure and successful implementation of a new design change to resolve the issue in the field with optimal financial constraints.
- This work, I later carried out as my final year industrial project.

STRENGTHS

- Expertise in People Management
- Good in Project Planning time and cost & Execution on time,
- Good in Engineering & Business thinking
- Good exposure in selection of Lab equipments for Test & Validation
- Good exposure in setting up the processes
- Expertise in Electrical and Mechanical systems

Certificates

- Six Sigma – Green Belt
- Process Improvement Champion
- Matlab Basics [Simulink, Stateflow]

COURSES & TRAINING

- Unigraphics NX 11.0 Training
- New Product methodologies Training – June 2012
- Catia V5 training – Sept 2012
- German language courses -- Jan-16 to Mar-16
- Japanese language course -- On going
- **Driving License - Japan, India**

AREAS OF INTEREST

Automotive active & dynamic Systems, OTA, IoT

Academic Performance

Course	Institution	University/Board	Performance
M.Tech (Auto Electronics)	Birla Institute of Technologies & Science Pilani	BITS, Pilani	78.8%
B.Engg (MECH)	Thiagarajar college of Engineering, Madurai	Anna University	73.3%
HSC	S.H.N. Edward Higher Sec School, Sattur	State board	90.02%
SSLC	St. Theresa's High School, Sattur	State board	90.20%

Academic Project

1. **Designing an Advanced quick electrical system to diagnose the basic functions of an Automotive part using in Product & Process Validation**
2. **Modeling and Problem Identification of Blast Hole Drilling Rigs
(C-650 DS NALCO)**
3. **Design and Analysis of Modified Motorcycle in Automotive Styling
(A Cross-over of a two wheeler and a four wheeler)**

ACCOLADES

- Attended more than 14 NCC Camps across India
- Silver Medal in Inter- Group Rifle Shooting in NCC in 2009
- Participated in RDC-2010 in New Delhi
- Participated and Won First prize in All India Cancer Awareness Program in 2010 in New Delhi
- Special Achievement Award for attending First RDC cadet in Thiagarajar College of Engineering in 2010
- Best Outgoing Student - NCC in Thiagarajar College of Engineering in 2012

Personal particulars

Date of birth : 02-06-1991
Nationality : Indian
Visa Validity & Status : 24/Feb/2026 (Highly Skilled Professional (i) (b))
Father's name : AYYAMPERUMAL. A
Languages known : Tamil, English (Read, Write, Speak)
Kannada, Hindi (Speak, Limited Working proficiency)
German, Japanese (Elementary level - Speak, Write)

I hereby declare that the above mentioned information is true to the best of my knowledge and belief.

[THIMOTHY AYYAMPERUMAL]