

# Kalai Selvan

Bangalore | India

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Quality specialist with 11 years' experience in automotive and rail manufacturing, focused on global supplier development, RCA, and APQP/PPAP. Drove a 45% defect reduction, earned IRIS Silver certification, and led zero-defect programs across three continents. Certified in IATF 16949, VDA 6.3, Lean Six Sigma, and Torque Tightening. Skilled in GD&T, FMEA, and team mentoring, with a strong track record optimizing supplier compliance for Alstom and Draexlmaier.

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## Skills

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Root Cause Analysis (RCA), 5Why, DMAIC, 8D/G8D Problem Solving | Lean Six Sigma (VSM, Kaizen), First Article Inspection (FAI), Control Plans (CP) | APQP, PPAP, FMEA, SPC, MSA | GD&T, Drawing Interpretation | Torque Tightening Expertise | Process & Internal Auditing (ISO 9001, IATF 16949, VDA, IPC 610/620) | IRIS & EN Standards Compliance (EN 45545, EN 50343, EN 50264/50306) | Global Supplier Development & NPD and Launch Management | Power BI – Dashboarding & Data Analytics | Complaint Management Tools (SQP, QSYS)

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## Work Experience

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### Alstom | Coimbatore, India | Quality Engineer

Feb 2020 - Nov 2025

- Managed end-to-end product management for key Metro and Locomotive components—including wiring harnesses, high/low voltage systems, traction converters, driver desks, power modules, and switchgear assemblies—delivering technical and functional expertise throughout the lifecycle.
- Led supplier development initiatives, securing 100% APQP compliance and reducing development lead time by 20% through streamlined PPAP approvals for 10+ new components.
- Spearheaded critical 8D investigations and implemented preventive actions, cutting product failures by 45% across global operations in India and Thailand.
- Achieved IRIS Silver site certification by driving zero-defect programs, optimizing processes to deliver 30% cycle time reduction, and effectively presenting KPIs to senior leadership.
- Standardized torque tightening controls and resolved key safety crises at Alstom's Bangkok Depot, improving bogie assembly reliability.
- Conducted over 15 VDA 6.3 and production readiness audits at Tier-1 suppliers, closing 50+ non-conformities and ensuring full compliance and production readiness.
- Developed and validated 35+ inspection gauges/fixtures for sheet metal and harness components, resulting in 40% fewer measurement errors and full GD&T compliance.
- Applied Value Stream Mapping (VSM) and Kaizen techniques to eliminate non-value-added steps, streamlining supplier processes and reducing lead time by 15%.
- Directed APQP activities—including FMEA, Control Plans, and Process Flows—securing 100% PPAP approvals for three new product launches ahead of schedule.
- Facilitated cross-site collaboration with engineering and sourcing teams, reducing design-related defects during NPD by 45% and aligning quality standards.
- Conducted capacity and risk analysis for critical suppliers, proactively averting production bottlenecks and ensuring scalability for high-volume projects.
- Trained and mentored five engineers in 8D and RCA methodologies, boosting issue resolution speed by 30% and fostering a proactive, problem-solving culture.

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### Draexlmaier Manufacturing India Pvt Ltd | Chennai, India | Supplier Quality Lead

Oct 2014 - Feb 2020

- Led prototype-to-ramp-up for three new assemblies, achieving zero supplier defects by coordinating cross-functional teams for BMW projects.
- Audited global suppliers with VDA 6.3 protocols, resolving 50+ non-conformities via digital quality portals and ensuring 100% part validation.

- Implemented targeted inspection strategies for wiring harnesses and interior components, boosting First-Pass Yield by 25% through precise gauge calibration and GD&T-aligned checks.
- Developed and rolled out staff training plans in PFMEA and control plans, reducing rework by 18% on BMW G12 door panel lines.
- Standardized torque assembly procedures and conducted 4M variation analyses to enhance process consistency and product reliability.
- Directed the seamless migration of BMW 7-series interior door panel production from Germany to India, ensuring full operational continuity and adherence to all quality and regulatory standards.

## Education

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**Sastra University**, Thanjavur, Tamil Nadu | **B.Tech | Electrical & Electronics Engineering** | 2010 - 2014 | **CGPA - 6.0/10**

## Certifications

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- Certified Lean Six Sigma - Black belt
- Certified IATF 16949:2016 Internal auditor.
- Certified VDA 6.3 Process auditor.
- Level 3 qualification in PFMEA, Control plan & 8D problem solving.
- Special process Expert (Level I) in Torque Tightening

## Accomplishments

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- Awarded Alstom's Best Humanitarian of 2024 for designing and leading a CSR initiative that provided education and guidance to over 250 rural children.
- Resolved a mission-critical torque crisis for Bangkok Monorail, standardizing torque procedures and deploying real-time SPC, achieving 98% reduction in joint failures and zero safety incidents across 100 trains.
- Secured a top global APSYS audit rating (3.3) for ALSTOM Coimbatore, driving best-in-class quality and operational excellence.