MIREL ȘERBAN

SENIOR SYSTEMS & PROCESS ENGINEERING MANAGER | PRODUCTION TECHNOLOGY LEAD

Location: Arad, Romania
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Portfolio: www.arsoft.ro

Professional Summary: Results-driven Engineering Leader & Systems Engineer with nearly 30 years of hands-on expertise in automotive manufacturing, industrial process engineering, and technical team leadership. Recognized for country-level management of production technologies, standardization of equipment specifications, and optimization of complex automated assembly lines. Proven track record in continuous improvement (Six Sigma Green Belt), cycle time reduction, and hardware-software integration across multi-plant environments.

CORE COMPETENCIES & EXPERTISE

PROCESS & PRODUCTION ENGINEERING

Manufacturing method development, line design & layout, cycle time optimization, PFMEA, APQP, workstation ergonomics, process standardization.

ENGINEERING TEAM LEADERSHIP

Country-level engineering management, cross-functional coordination, technical staff training, vendor management, CAPEX/OPEX implementation.

INDUSTRIAL AUTOMATION & SCREWING

Advanced torque & screwing systems (Desoutter, Ingersoll Rand), Komax testing systems (CS WIN nx), Equipment integration and development, CNC CAD/CAM.

QUALITY & CONTINUOUS IMPROVEMENT

Certified Six Sigma Green Belt, root-cause analysis (8D/5Why), OEE optimization, yield improvement, breakdown reduction, preventive maintenance.

PROFESSIONAL EXPERIENCE

Team Leader Production Technology Romania – **LEONI Wiring Systems Romania**
Feb 2023 – Present

- **Country-Level Leadership:** Coordinated national technical operations, overseeing the evaluation, deployment, and maintenance of manufacturing methods and production equipment across all Romanian plants.

- **Process Standardization:** Standardized technical requirements and specifications for new production lines, machinery procurement, and specialized industrial tooling.
- **Team Management & Mentoring:** Led and coached multidisciplinary engineering teams, aligning plant-level technical capabilities with global automotive quality and delivery expectations.
- **Operational Excellence:** Partnered with plant managers and quality leaders to resolve critical line bottlenecks, achieving measurable OEE improvements and reduced production scrap.

Production Technology Expert – **LEONI Wiring Systems Arad**
Jan 2022 – Feb 2023

- **Advanced Technical Authority:** Provided high-level technical direction for complex production equipment, automated assembly modules, and specialized testing hardware.
- **New Line Launches:** Spearheaded technical integration for new product launches, defining workstation layouts, tooling parameters, and quality inspection protocols.
- **Troubleshooting & Support:** Directed root-cause analysis for persistent equipment failures, minimizing unplanned downtime across high-volume automotive production lines.

Production Technology Engineer – **LEONI Wiring Systems Arad**
Mar 2012 – Jan 2022

- **Process Engineering & Integration:** Designed, implemented, and optimized manufacturing methods and specialized automated equipment for automotive wiring harness assembly.
- **Tooling & Screwing Automation:** Programmed, calibrated, and integrated high-precision screwing and testing controllers (Ingersoll Rand, Desoutter, Komax).
- **Six Sigma Initiatives:** Led continuous improvement projects utilizing Six Sigma methodology to lower scrap rates, streamline operator movement, and enhance safety standards.

Systems Integration & Automation Consultant – **Independent Practice**
2024 – Present

- **Hardware-Software Integration:** Architecting tailored software applications and custom digital interfaces for automated industrial machinery and quality monitoring systems.
- **Technical Advisory:** Providing specialized engineering consulting for local manufacturing companies seeking digital workflow optimization and automated process control.

CNC Programmer & CAD/CAM Engineer – **S.C. ASTRA Călători S.A. Arad**
Sep 2008 – Mar 2012

- **CAD/CAM Development:** Developed technological processes and CAM software programs for multi-axis CNC machines utilized in railway vehicle fabrication.
- **Process Optimization:** Optimized machining parameters and toolpath strategies, reducing cycle times and tool wear on heavy steel and aluminum components.

Head of Tram Depot / Technical Shift Leader – **S.C. CTP S.A. Arad**
Apr 2004 – Sep 2008

- **Depot Operations Management:** Managed daily technical operations, maintenance schedules, and staff assignments for the public tram fleet depot (Head of Depot: 2006–2008).
- **Shift Supervision:** Led technical maintenance crews during daily shifts, ensuring rapid breakdown response and fleet availability compliance (Shift Leader: 2004–2006).

Maintenance & Electrical Technician – **S.C. CTP S.A. & S.C. ARIS S.A. Arad**
Jan 1996 – Apr 2004

- Assembled control panels and electrical installations; executed preventative maintenance and electrical diagnostics on heavy industrial machinery and traction systems.

SPECIALIZED CERTIFICATIONS & PROFESSIONAL COURSES

CERTIFICATION / COURSE	ISSUING BODY / CENTER	KEY COMPETENCIES COVERED
Six Sigma Green Belt	LEONI Wiring Systems (2014–2015)	DMAIC methodology, statistical process control, root cause analysis, scrap reduction.
Advanced Screwing Applications	Desoutter Competence Center (2024–2026)	Industrial screwing tooling, system integration, automated error proofing.
Specialist Screwing & Testing	KOMAX Testing GmbH (2023)	CS WIN nx 8.2 setup, Ingersoll Rand controllers (IC12 to QCD), error handling.
Expert Screwing Process	DWT GmbH / Ingersoll Rand (2023)	Programming ICS & QSD, CSWin applications, joint quality inspection protocols.
Screwing Joint Control	Fuchs Drehmoment Consulting (2013–2014)	Torque-angle curves, joint analysis, clamp force optimization in manufacturing.

EDUCATION & TECHNICAL QUALIFICATIONS

B.Sc. in Systems Engineering "Aurel Vlaicu" University of Arad (2005 – 2009) Major: Automation & Applied Informatics	**Electrotechnics Foreman School** Electrical & Electronics Foreman School, Arad (2001 – 2005) Major: Electrical Systems & Diagnostics

TECHNICAL TOOLS & LANGUAGES

AutoCAD
Industrial Fastening Systems
Ingersoll Rand Controllers
Desoutter Controllers
CNC Programming
Web Design and Tools
PC Software Development
Hardware-Software Integration
Automation and electrical system integration
Six Sigma Green Belt

Romanian (Native)
English (Advanced / Professional)

ADDITIONAL SKILLS

Soft Skills & Organization:

- Microsoft Office advanced user
- Ability to work under sustained intellectual effort;
- Strong team spirit, negotiation skills, and excellent staff coordination capabilities;
- Creative and rapid strategic decision-making; highly intuitive and solution-oriented mindset.

Auto & Hobbies:

- Mobility: Driving license available; Willing to travel.
- Hobbies: Custom software development for automated equipment, Web design, Web-based platform programming, music, and traveling.