Irwin Kim

Build a better tomorrow by making today your best; forward thinker; learner; mentor

United States | LinkedIn

Lead and contribute within cross-functional, multi-national settings to define strategic goals, develop execution plans, and drive on-time delivery of complex programs. Demonstrate leadership as both an individual contributor and people leader by proactively identifying risks, driving mitigation strategies, and solving technical challenges using strong engineering judgment and analytical tools. Deliver scalable solutions that enabled the successful launch of consumer products and critical equipment supporting both consumer and industrial markets. Focus on continuous improvements.

Experience

Senior Manager Manufacturing Engineering Oct 2021 — Present
Ferrotec *Livermore, CA*
- Leading global manufacturing for NPI and HVM
- Managing, sourcing and developing global supply chain

Manager New Product Introduction Jul 2019 — Oct 2021
Eugenus, Inc.
- NPI and HVM transition of ALD capital equipment to CM in SEA
- Managed and developed supplier chain both in US and Asia
- Continuous improvements

Sr Manufacturing Engineer, NPI Jul 2013 — Jul 2019
Lam Research
- New product pilot manufacturing and transition to high volume production both in US and SEA
- Supplier management, development and sustaining

Managing Principal (Consulting) Oct 2012 — Jul 2013
iSquared Technologies, LLC.
- Provide MEMS/RF package solutions (designing/manufacturing) and associated heat management solution (advanced material);
- Design and manufacture high conductive heat spreaders for Si, GaAs, etc. based RF die and packages with new advanced material;
- Recommend various heat management solution for variety of microelectronics, automotive and military/space devices;
- Workshops and presentation regarding heat management to private/public industries and professional associations;
- Consult, develop and improve solar module fabrication and back-end manufacturing processes including solder screening, PnP, wire bonding, automation and material selection
- Location based service/cloud/apps for networked devices business development

Project Manager Sep 2011 — Sep 2012
NovaTorque, Inc.
Electric vehicle motor development and product introduction

Manager, Process Manufacturing Feb 2010 — Aug 2011
Solyndra
- Plan, direct and coordinate manufacturing/process engineering activities;
- Track and analyze yield to improve overall process output;
- Analyze production activities and material costs to design and develop strategies for improvements in production and quality control;
- Manage process/manufacturing improvements;
- Review design specifications/requirements;
- Manage process profiles and recipes for PV modules assy, furnace, encapsulation equipment;
- Work to improve product yields, quality and throughput;
- Manage staff of engineers to execute production improvement activities to solve technical problems;
- Develop methods and tools to support production;
- Work with and/or lead cross-functional teams to achieve identified goals

Program Manager/Sr. Manufacturing Engineer Jan 2007 — Jan 2009
GTronix, Inc.
- Mix signal fabless analog design/manufacturing/integration to consumer products;
- Intergration of ASP and analog/digital components;
- Designed, planned and implemented module and package manufacturing processes for analog signal processing integrated circuits and modules;
- Managed manufacturability of modular devices from prototype to high volume production in Korea, China and Taiwan;
- Defined, specified and designed test procedures/equipment for audio modules, including tester and jig design
- Managed and assisted contract manufacturers from wafer fabrications to device/module manufacturing, packaging and device/module assembly processes

• Developed and implemented manufacturing specifications; experienced with lean manufacturing, Six Sigma, BKM, BMP
• Responsible for continuous improvement program, design of experiment (DOE) for process optimization and yield improvement for audio sensors by closely working with supply chains and OEMs;
• Supported quality assurance program and implementation; and conducted approved vendor audits for quality assurance and manufacturing capability;
• Collected, managed and analyzed operations data including throughput, yield, SPC, and defect/failure modes to improve manufacturing cycle time, reduce cost and optimize processes;
• Supported ISO other industry standard documentation
• Conducted supply chains and contract manufactures audits
Acquisition by National Semiconductor

Director of Engineering (Consulting) Jan 2007 — Jan 2007
Global Equipment Services
• Consulted in overseeing and training manufacturing and field service engineers to refurbish and maintain semiconductor equipment, but not limited to, CVD, PVD, asher, stripper, etcher (dry), photolithography, furnace equipment from various OEM;
• Managed OEM vendors for material acquisition; interfaced with OEM and vendor engineering and sales in coordinating refurbished product releases;
• Interfaced with new product development team in re-engineering and converting obsolete equipment to new products;
• Managed manufacturing and refurbish cost estimate; determined timeline, processes and tools; developed and recommended cost reduction program
• Managed documentation including ECO, CES, BOM and quality assurance and quality/production control document;
• Managed design group to retrofit legacy semiconductor equipment, including process chamber design, high precision machining components;
• Planned and recommended new manufacturing processes and tools.

Director of Manufacturing Engineering Jan 2003 — Jan 2007
Vision Display Devices, LLC.
• Oversaw production, manufacturing, and testing staff engineers and directly managed daily operations, new design development, implementation, process development and control, continuous improvements and manufacturing of hermetic packages for MEMS and RF used in display, optics, sensors, and communication microdevices and modules;
• Transferred, implemented and managed semiconductor process development and control for manufacturing devices and modules, including photolithography, wet-etching, optical coating (e-beam/sputter), hermetic glass-metal/glass-ceramic/metal-metal sealing, LGA, wire-bonding, integration of CMOS/ MEMS/heat-sinks, sawing to improve yield, reduce operating cost and minimize operating process steps; experienced with manufacturing tools including lean manufacturing, Six Sigma, SPC, BKM, BMP
• Developed proprietary designs for individual packaging (single chip level) and wafer-level-packaging used in MEMS and RF microdevices for yield improvement, ease of manufacturing and cost reduction;
• Developed wafer-level-packaging for MEMS based display products, emphasis on optical properties of compatible glass substrate including optical coatings, mechanical dimension tolerance;
• Developed in-house optical vision test equipment for high volume inspection of optical packages, emphasis on detecting $<50\mu m$ defects
• Extensive experience in 3-D modeling, AutoCad and project management software; statistical analysis and DOE software
• Managed and maintained documentation including ECO, CES, BOM and quality assurance and control document; manufacturing data analysis
• Managed over 30 engineers and operators including career development
• Managed supply chains for materials and manufacturing for hermetic packages for microdevices

Advanced Product Development Engineer Jan 2000 — Jan 2003
ATMI, Inc.
• Managed development and analytical research and processes used in semiconductor processing and equipment
• Supervised and trained manufacturing operators
• Defined, specified and troubleshot components and automation assemblies used in semiconductor abatement and CMP equipment; managed equipment continuous improvement
• Extensive knowledge in ECO, CES, BOM based on Oracle material acquisition database; trained in 3-D modeling software (SolidWorks), AutoCad, project management software;
• Managed vendor quality program including audit, ISO compliance, SEMI, CE, UL standard;
• Conducted DOE to improve yield, efficiency and up-time for point-of-use equipment in semiconductor process including deposition, etching and polishing;
• Responsible for failure analysis of field components;
• Oversaw customer complaints in improving wet scrubber efficiency of hazardous gases and liquids in semiconductor processing and improved process tool uptime; Managed quality programs and design of experiment method, which resulted in improving wet scrubber maintenance period by over three folds and in improving analytic equipment failure from months to years;
• Supported epitaxial wafer processes; various OEM and semiconductor processing wafer fabrication

Various positions Jan 1991 — Jan 2000
Multiple Disciplines
Environmental services management for government and private sectors
- Program Manager, Foss Environmental
- Technical Manager, Laidlaw Environmental (formerly Rollins Environmental)
- Staff Engineer, East Bay Municipal Utility District
- Chemist, Central Contra Costa Sanitary District

Education

University of California, Berkeley Jan 1987 — Jan 1991
BS in Chemical Engineering

Projects

Highlights
• Program management from prototype to high volume production in consumer electronic products, including display, communication and audio microdevices/modules
o Introduced noise canceling audio products from prototype to high volume manufacturing by defining and planning scopes and executing and monitoring progress
o Very familiar with statistical manufacturing practices and FMEA, failure analysis
o Defined and designed device integrating components and test specifications
o Integral part of R&D in Korea, developing metalized glass and glass-fused metal alloy packages – applied and was granted Korean government grant for small business in Korea developing new hermetic packages
o Responsible for planning, defining and implementing new products and manufacturing processes – resulted in quick turnaround from R&D prototype to high volume production, realized significant revenue within 2 years of new metalized glass hermetic packages for display and communication customers
• Process engineering experience – worked in semiconductor and test equipment and process manufacturers with following emphasis
o Semiconductor processes including deposition, plasma etch, wet etch, gas/resin abatement and encapsulation process (hermetic/non-hermetic microdevices and PV modules)
o Designed, implemented and improved various process/manufacturing practices from prototype stage to high volume production for device packaging, PV modules, and display/communication microdevices
• Manufacturing experience – worked in several start-up companies and high volume 24/7 manufacturing facilities
o Define and setup new manufacturing processes and manage manufacturability and yield improvements in US and Asia, including Korea, China and Taiwan
o Manufacturing process transfer
o Multidisciplinary and national management of contract manufactures, OEMs and vendors

Skills

Manufacturing Systems · Management Engineering · Production Management · Plant Management · Failure Analysis · FMEA · Static Analysis · SPC · JMP · Minitab · Microsoft Office · Korean · Solidworks · 5S · DFM · Lean Manufacturing · Semiconductors · Photovoltaics · Yield · Thin Films · SolidWorks · Semiconductor Manufacturing · Design of Experiments · Process Development · Engineering Management · DOE · Agile Project Management · Oracle Agile · MES · Automation · Manufacturing · Continuous Improvement · Manufacturing Engineering · Engineering · Cross-functional Team Leadership · Testing · Semiconductor Industry · Design for Manufacturing · ISO · Product Development · Quality Assurance