

CURRICULUM VITAE



Personal Details

Full Name: Mandeep Kaur d/o Ranjit Singh

Date of Birth: 24th January 1982

Marital Status: Married

Language Known: English, Malay, Hindi and Punjabi Language

Height: 5'7"

Weight: 55kg

Hometown Address: No.534, Jalan S2 D19, Acacia, Seremban 2, 70300
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Personal Interests: Reading, Sports and Traveling.

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Qualification/Education

- ✓ Undergraduate Studies [2000-2005]: **Bachelor of Engineering (Hons.) in Chemical Engineering**, University Teknologi Malaysia, Johor
- ✓ Graduated with 2nd Class Upper CGPA (3.20)

Professional Experience

- ✓ University Teknologi Malaysia Internship at JBA Seremban, Malaysia [2004]
- ✓ **Process Engineer** for NPI team for D-Pak & CBSM packages in ON Semiconductor Malaysia (Site 1) [2005]
- ✓ **Process Engineer** for PPD Power IC for Front End Processes (Die Preparation, Die Bond & Wire Bond) & Back End Process (Molding, Trim & Form) in ON Semiconductor Malaysia (Site 1) [2006 – 2007]
- ✓ **Process Engineer** for CBSM for Front End Processes (Die Bond & Clip Bond) & Back End Processes (Molding, Trim & Form) in ON Semiconductor Malaysia (Site 1) [2007 – 2008]
- ✓ **Process Engineer** for Epitaxial & Diffusion (experience with Initial Oxide, Oxide Anneal, P Zener & N Zener furnace processes) in ON Semiconductor Malaysia Wafer Fabrication (Site 2) [2008 – Present]

Major Achievements

- ✓ Executed Trench 2 S08FL qualification.
- ✓ Accomplished DMAIC Yellow Belt through Mold Void Reduction Project in Power IC department in ON Semiconductor (Assembly Site).
- ✓ Accomplished DMAIC Green Belt Assessment.
- ✓ Direct involvement in Quality Auditing of partner supplier to improve Molding Process Quality in CBSM Department.
- ✓ Improvement in process quality by implementing incoming wafer back inspection for defects that causes chip die during saw process in CBSM Departments.
- ✓ Successfully collaborated with Software Development team in implementing Pattern Recognition Software (PR) to improve soldering quality detection to avoid escapees which can lead to die misplacement and other assembly failures in CBSM Department.

- ✓ Qualified Green Mold Compound as in parallel with company's strategy to meet quality requirements as well as cost savings for CBSM packages.
- ✓ Improvement in Trim and form process inspection quality & time by designing a new inspection jig for CBSM Department.
- ✓ Qualified Small Signal Initial oxide furnace to support ramp project by enhancing initial oxide capacity.
- ✓ Involved in furnace requalification due to relocations in the Wafer Fab Diffusion.
- ✓ Increased number of boats used in the Initial Oxide furnaces to support ramp up project by maximizing the capacity on existing tools.
- ✓ Qualified new SEMY PID Furnaces from ZR Site (DHTRX3) for P Zener Diffusion processes.
- ✓ Qualified Internal Injector System for Steam Oxidation recipes in Initial Oxide furnaces to eliminate hydrogen aborts due to external torch system as well as reduce maintenance cost.
- ✓ Reduce Diffusion Scrap per 10k by 20% (6.5 scrap per 10k).
- ✓ Reduce Diffusion Aborts by 20% (10 cases a quarter).
- ✓ Epitaxial process capacity Improvement (1000 wafer per week).
- ✓ Supported the qualification of DHTRJ2 for N-zener boron redist drive-in process.
- ✓ Qualified total of 5 new furnaces (SEMY PID & TMX) for Universal Oxidation process to support ramp up and ZR transfer project.
- ✓ Succeeded in troubleshooting the SEMY PID bad overshoot & oscillation in the temperature plot for a newly transferred furnace from ZR.
- ✓ Created General stages for the existing and new SANYO prod flows to support the PROMIS work.
- ✓ Qualified SANYO & TSPD recipes for Initial Oxide & Pre-Implant Oxide process.

Attributes and Skills Profile

- ✓ Six years experience in semiconductor fabrication & manufacturing environment as a highly organized Process Engineer in ON Semiconductor Malaysia.
- ✓ Experienced in leading & implementing a variety of quality improvement & capacity ramp-up projects, including those that contribute value in parallel with ON's operations and business goals.
- ✓ Succeeded in maintaining good working environment among staffs and upper line.
- ✓ Experienced in writing and delivering presentations for various meetings & projects with management level.
- ✓ First-hand experience on semiconductor assembly processes, i.e. saw, die bond, clip bond, wire bond, molding & trim and form, wafer fabrication processes such as epitaxial and diffusion processes as well as implementation, data collection, data analysis and audits.
- ✓ Able to adapt to new working environment quickly and work on manufacturing as well as other related problems.
- ✓ Thrive on contributing to teamwork, leading cross-functional project team and work individually in order to solve issue and improvement projects.

Detailed Skills, Training and Certifications

1. Basic Silicon Technology Training
2. FMEA and Control Plan
3. Statistical Process Control (SPC)
4. Measurement System Analysis (MSA)
5. Poka Yoke Problem Solving Skills
6. Technical Writing and Presentation
7. Six Sigma (Green Belt)
8. Understanding Labour Law
9. ASQ Certified Six Sigma Green Belt & Black Belt Training

10. From Good to Great Empowerment of the Black Belt team
11. Principles of Leadership
- 12.7 Old & New QC tools
13. Effective Sampling Methods for Quality
14. Change Agent
15. Advanced Transfer Molding Technology for Encapsulation of Semiconductor Devices by Laures International
16. Effective Process Capability Studies towards Six Sigma Quality

Software Skills

1. Microsoft Office (Words, Excel & Powerpoint) – Very efficient
2. Basic AutoCad
3. JMP Application for Data Analysis – Very efficient
4. Brio Query for Data Retrieval – Very efficient
5. Semy, Thermco & Sezcon for Diffusion Equipment – Very Efficient

References

- ✓ **Mr. Wan Azizul Wan Awang**, Diffusion/Epi/Implant Section Head,
Engineering Department,
ON Semiconductors Malaysia (ISMF)
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