



JOB DESCRIPTION

Position: Manufacturing Engineering Controls Specialist	Revision Date: May 2022
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Reports to: Manufacturing Engineering Supervisor	Department: Manufacturing Engineering
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Purpose and Scope: Manufacturing Engineers conduct studies, develop and supervise programs to achieve efficient industrial production and to enhance productivity based on the best use of machinery, materials, technology, and procedures.

Core Competencies

<ul style="list-style-type: none"> Leadership Communication Strategic 	<ul style="list-style-type: none"> Analytical Thinking Electro-Mechanical Project Management
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Responsibilities

Key Responsibilities

Program Launch and Support

- Develop new process conditions or processing methods for new products including submitting RFQs to suppliers to determine if solution is feasible considering the annual production volume requirements, appropriate ROI, quality and reliability of production process. Select suppliers based on quality, price and lead time. Summarize these details in a proposal for review by the team
- Creating, updating PFMEA and PFD to reflect new process as well as address production and quality concerns with adherence to current standards and lessons learned
- Work with QA, Engineering, Sales and Tooling to ensure customer satisfaction including identifying, troubleshooting and developing solutions to improve upon existing processes to address safety concerns, environmental impacts, quality concerns, improve production uptime and reduce scrap.
- Participate in and lead Continuous Improvement activities to reduce costs on existing processes
- Ensure safety, health and environmental issues, and the company interests are appropriately addressed

Industrial Controls

- Act as lead controls designer for the facility including network system architecture design (involving collaboration with IT, and Maintenance), training and developing the controls skills of others
- Design robotic workcell controls systems to implement quoted process including robot to moulding machine interfacing, safety guard controls, auxiliary automation (e.g. conveyors, vision systems), EOAT, and control cabinets. Build BOM, order materials and generate electrical schematic drawings. Assemble, wire, program (PLC/Robot) and test controls systems. Maintain communication between trades and program management on progress and propose solutions to get back on schedule if necessary.
- Monitor and maintain vision systems including running challenge parts, adjustments to robot positions and adjusting vision inspection tools to ensure correct sorting of good and defective parts. Provide suggestions for improvements and implement to address issues such as false rejects, or identifying a trend of increasing occurrence of specific failure modes that can be attributed to issues upstream.
- Develop, deploy and support SCADA system for multi-workcell monitoring and real time alerts for use with Continuous Improvement with the goal of reducing downtime, scrap, quality issues and cost. Further to this, providing improved traceability of historical process conditions.
- Develop work instruction and train appropriate personnel on the setup, operation, adjustment and maintenance of equipment and controls systems

Approval

Manager/Supervisor:

Date:

Human Resources:

Date:

Job Specifications

Knowledge & Skill

- Mechatronics Engineering degree or 3 year college diploma
- Preferred 5+ years experience in thermoplastic injection moulding
- Proficient in PLC, HMI and robot programming (Siemens TIA Portal experience preferred)
- Good understanding of networking including industrial ethernet, Profinet, IO-Link, and VPN
- Good understanding of APQP Process, PFMEA, PFD/PFC, Control Plan, ISO 14001, Continuous Improvement and Lean Manufacturing
- Thorough understanding of industrial safety standards including machine and robot safeguarding and their associated control systems
- Ability to interpret Engineering drawings and have knowledge of GD&T
- Proficient in word processing, spreadsheet, CAD programs and PLC programming software
- Strong organizational and time management skills
- Contribute to effective root cause analysis and implementation of strong corrective actions
- Ability to understand and describe the entire moulding process in detail

Training and Development Opportunities

Vision Systems
WHMIS – Workplace Hazardous Materials Information System
IQMS