

Mark James Bentz

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Education

Auburn University | Auburn, AL
Bachelor of Mechanical Engineering | December 2020

Experience

Hyundai Mobis | McCalla, AL
Senior Process Engineer | Full Time (January 2021 – Present)

- Experience in the startup phase of a new Manufacturing Plant from Trial phase to Series Production
- Creation of LOB document with the use of MODAPTS | (Cycle Time & Line Balancing)
- Interim supervisor (6 months) for Assembly Team Members | Training & Evaluation on assembly
- Knowledge of Plant Robots and equipment | Experienced Troubleshooting (Automatic Guided Vehicles, Wheel Alignment Machine, Kuka Robot, Servo Press, Atlas Copco Tools, etc.)
- Program Atlas Copco tool controller PLC Logic to improve interlock systems and develop new tightening programs for implementation in assembly process
- Maintaining and updating Failure Analysis and Control Plan | PFMEA & Control Plan
- Modifying Manufacturing Execution System to ensure torque verification and part variant solutions (MES)
- Creation of Work Instructions for Assembly Process of full Front and Rear Chassis Assembly Line
- Purchasing and Approval process for new equipment | SAP & VAATZ
- Design using AutoCAD LT for Plant Layout for Lineside Packaging and Part Feeding Method
- Lead Research and Development meetings for series manufacturing process by implementing and diagnosing manufacturing process effects of Engineering changes | CATIA & OPR3D
- Concept 3D design from prototypes to series assistive assembly devices | CATIA
- Devise maintenance spare parts strategy for plant equipment including calibration plan and mean time between failure analysis with expected repair time
- Design concepts of new plant process and implantation of plant capacity increase with collaboration from other departments
- Regular collaboration with Mercedes-Benz engineers to improve vehicle quality status through stable process control methods (Wheel Alignment, Assembly Process, Part Design)
- Write python automations to gather and report data | Python
- Successfully program tool equipment to reduce failure rate and prevent misuse of tools through clever innovation of Torque curve analysis, Fastener size and condition, Joint and material considerations (Self-tapping/Machine/Thread locker), and multiple tool types (Multi-Spindle, Inline, Right Angle Head, HAD)
- Preparing and Presenting Engineering VDA 6.3 Audit materials to successfully complete requirements for series production
- Preparation of plant Contingency plans to prevent process downtime due to machinery malfunction
- Create Requirements for quote of plant equipment projects, bidding request between contractors, manage budget for project, and send selected contractor purchase orders
- Find Root Cause analysis of production issues through 8D and 5 Why methods
- Interim Engineering Manager duties (2 months)
- Manage Engineering Project Budget for improvement and capacity increases
- Interview Candidates for technical and instructor roles (Maintenance / Engineering)
- Work closely with contractors to complete large projects, while giving direction and clarity to the project and equipment objectives
- Create punch lists to provide contractors clarity to achieve completion of project acceptance
- Schedule contractor work in collaboration with other departments (Logistics, Maintenance, Production)
- Design and 3D Print usable assembly jigs to prevent damage to parts and improve control processes
- Participate in OLT (Off-line Trial) of new equipment and fix issues before implementing in-process
- Proficient with FARO arm CMM dimension measurements and reports, used to determine part quality
- Analyze Press-in force, torque curves, and runout measurements to accurately determine program adjustments and comply with drawing specifications
- Ability to work with colleagues of different cultures (German, Korean, etc.)

NCR Corporation | Global HQ - Atlanta, GA*Co-Op Global Hardware Manufacturing* | Full Time (May 2018 – December 2019)

- Successfully designed new test procedures and prototype test equipment for use in manufacturing plants to improve quality of tests | CAD Design (CREO and Solidworks)
- Used on site design labs to prototype parts | Machining Parts (Drill Press, Dremel, Bandsaw, etc.)
- 3D Printing (Prototyping Test Engineering)
- Simulated FEA analysis to improve 3D print design by reducing thickness and cost of materials
- Electrical Soldering (Using I/O Pins to route to speakers and IR Sensor)
- Cross Functional Team Collaboration (India and Scotland)
- Python (Application Development / Advanced FFT Audio Analysis)
- Built Manufacturing Quality SharePoint Website for Customers

OIT at Auburn University | Auburn, AL*Student OIT Worker* | Part Time (August 2018 – December 2020)

- Inventory and Time Management (Tagging, Installing, Shipping, etc.)
- Imaging (BIOS, Drivers, Deployment Server, etc.)
- Communication and interpersonal skills
- Troubleshooting issues and resolving support tickets
- Transferring data and Wiping Hard Drive Data (DBAN)

Senior Design Project | Auburn, AL*AEGIS Deep Space Satellite* | Advanced Topics Team (May 2020 – December 2020)

- Assisting other teams in advanced research of Orbital Mechanics, Propulsion, and Radiation
- Trade Studies (Thrusters, Air Bearings, Reaction Wheels)
- Collaborated with the University of South Alabama to design a Reaction Wheel Test
- Developed MATLAB code with modified fresnel equations and NASA MICE library ephemeris data to successfully simulate orbit path transfers and heat absorbed through Cubesat surface

Skills

- Computer literacy: Windows-based personal computers, Linux, and Apple Macintosh systems
- Microsoft Office Professional package (Word, Excel, PowerPoint, Outlook, Flow, SharePoint)
- MATLAB, Python, and SQL Server programming language knowledge
- Machine Shop Skills (Lathe, Drills, Sanding, etc.)
- CAD Design (CATIA, OPR3D, CREO, Solidworks, and AutoCAD LT)
- 3D Printing (Prototyping Test Engineering)
- ToolsNet 8 analysis & ToolsTalk Programing Experience
- PLC Programming (Allen Bradley, Siemens)
- FARO Portable CMM Measuring
- SAP

Achievements and Involvements

- AUFSAE Team Member | 2016-2017 Auburn University
- Dean's List | Spring 2017 and Summer 2020 (Auburn University)
- Achievement, Board of Trustees, and H.K. Porter Scholarships (Auburn University)
- Volunteering at Auburn Middle School | Learn Twice Program
- Volunteering at Horizons Georgia Tech | Mystery Reader and Critique Judge
- Rockwell CCP153 (Advanced) | Certificate Alabama RTP