Insulet Corporation

Industrial Engineer - Summer Intern

ID: 8543
Contact
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Description
2016 Summer Intern Job Description – Industrial Engineering

Background:
Insulet Corporation is currently investigating creating additional capacity to manufacture their Omnipod and drug delivery pumps. To create this increased capacity a new line is being investigated that will be comprised of 11-13 Island of Automation. The line layout, flow of components to the pieces of kit and Work In Progress (WIP) between the pieces of kit, as well as the Kanban size required for the line needs to be analyzed and optimized.

Project Description:
Utilizing the current process flow maps for the new automated line, a SolidWorks base model and by leveraging Insulet’s internal process and component knowledge base the intern is to develop an optimized line layout, line flow for components to the pieces of kit, flow between the pieces of kit and Kanban to optimize line efficiencies, minimize footprint and minimize workforce.

The Industrial Engineering Intern will:
1. Determine the optimized line layout for the 11-12 Islands of Automation
2. Determine the correct size of Kanban requirements
3. Estimate the throughput OEE2 (Overall Equipment Efficiency) based on pre-determined factors for the entire line and individual pieces of kit
4. Based on sound Industrial Engineering principles estimate workforce requirements to run the line
5. Recommend the optimized Island of Automation direction of assembly (machine Hand), feed system locations and Human Machine Interfaces (HMIs) / touch points between man and machine

Tasks to be completed:
• Develop an understanding of the proposed Process flow maps for the Islands of Automation
• Develop an understanding for the components and transformational sequence for the Omnipod and drug delivery pump
• Using base SolidWorks model, create, with the alignment on internal experts, the optimized line layout maximizing throughput, reducing logistical timing and touches and optimizing footprint
• Create working physical model(s) of the proposed line layout to scale for design reviews
• Multiple design reviews with internal SMEs (Subject Matter Experts) shall be conducted
• Kanban size shall be calculated and square footage estimate delivered for components and WIP
• Industrial design shall consider applicable OSHA (Occupational Safety and Health Agency) and NFPA (National Fire Protection Agency) requirements for safety and ergonomics

Deliverables:
1. Recommended line layout including location of the various Islands of Automation
2. Solid model in SolidWorks of the recommended line layout
3. Kanban Size recommendation for components and WIP
4. Kanban solid model in SolidWorks for the recommended Kanban size
5. Kanban estimation calculations
6. Physical, scaled representations of the island of automation
7. Throughput OEE2 calculations for the line
8. Workforce requirement calculations and reasoning
9. Detailed drawing in SolidWorks for the automated line that can be used with architects and plant designers
10. Written proposal(s) for value added scope, such as: piece of kit direction of assembly, component feed systems both in-feed and out-feed locations etc.

Benefits of Project:
- Insulet: ◦ Obtain a clear understanding of the line layout for automated line
  ◦ Obtain a clear understanding of the square footage required for the automated line
  ◦ Obtain a clear understanding of the Kanban square footage required for the automated line
  ◦ Obtain a clear understanding of the workforce requirements required to run the automated line
- Intern ◦ Clean sheet industrial engineering design
  ◦ Staffing calculation experience
  ◦ SolidWorks modeling experience
  ◦ Ergonomic and safety design exposure and applicable standards experience
  ◦ Design for manufacturing exposure

Posting Date June 24, 2016
Expiration Date July 25, 2016
Location Billerica, Massachusetts
Salary Level paid
Duration Summer
Approximate Hours Per Week 40
Major
Industrial Engineering, Industrial Engineering & Operations Res
Degree Program Bachelors
Class Level Sophomore, Junior, Senior

Looking for immediate hire, if interested please apply online:
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