11-30-2018

Batch to Single Piece Flow

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Client: Donaldson, Waterloo, Iowa

Problem Statement
• Assess the current T1 Snap product line and propose a move from batch production to single piece flow

Objectives
• Create value stream map for the current and future state production line
• Create a Yamazumi chart
• Update standard work documentation
• Create job safety analysis

Constraints
• 6-9 month ROI
• Short time to implement
• Decrease footprint
• Safety (Zero-harm)

Scope
• Create current and future value stream map
• Suggest changes to the process to create single piece flow
• Time observations to create current and future value stream map
• Update standard work paperwork
• Up to and after the oven process

Methods
• Time studies
• Value stream mapping
• 5S

Proposed Solutions
• Condense current work stations
• Reorganize stations to reduce movement waste
• Potential use of conveyors from one station to another

Major Outcomes
• Final report documenting proposed changes
• Product line is single piece flow
• Decrease cycle times or non-value-added times on value stream map

Benefit to Client
• Higher production rate
• Less movement for line workers by increasing ergonomics
• Reapplication of our outcome to other lines for further increased production rates

Acknowledgements: Authors are grateful to Eric Ward, Allen Anderson and Kevin Hemann for the opportunity to work on this project. Project was co-funded by the differential tuition.