Pleasant Company
Assembly Material Management

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Overview

- Existing Situation & Goals
- Tasks Performed
- Design Considerations
- Areas Addressed
- 3 Designs
- Comparisons / Recommendation
- Questions
Existing Situation

- Raw good shelves not conducive to easy resupply
- Shelves are not located in an ideal ergonomic position
Our Goals

- Design a better system to present raw materials to workers on the assembly line
- Focus on raw materials that are common to several product lines
- Utilize worker input to finalize design specifications
Tasks Performed

- Observed and Worked on the Assembly Line
- Observed How Others Were doing Similar Operations – Best Practices
- Evaluated the entire line and decided which parts of the system we wanted to focus on
- Listed requirements and constraints
Formulated initial designs from these

Detailed the drawings and made macro sketches of the line to show how the carts would be aligned

Solicited input from management and workers

Finalized designs using Pleasant Company input and relevant ergonomic principles
Design Considerations

- Resupply from behind the line
- Carts need to be narrower than existing but large enough to hold a reasonable amount of raw material
- Shelves as close to the operator as possible without interfering with product on the line
- Focus on large volume product lines
Areas Addressed

Existing designs
- table/shelf at beginning of line
- tilt table

Proposed solutions
- table/shelf at beginning of line
- non-tilting tilt table
- flat cart
Table/Shelf

- Table height lowered 1.5”
- Shelf height reduced by 2” to 9” above table surface
- Shelf depth extended by 2” to 13”
Non-Tilting Tilt Table

- 20” deep horizontal raw material buffer
- 60° angled section with 5” lip
- 21” width to accommodate 2 stacks of lids or 3 of hard cover books
Flat Cart

- 21” x 24” usable area
- Low 47” total height
- Highly flexible/simple design
Comparisons

- Flat and Non-Tilting Tilt Table cost about the same
- Ergonomic differences negligible (operator preference deciding factor)
- Flat cart has lower total height
- Tilt Table uses existing materials
Recommendation

- Modify one tilt table and purchase one flat cart
- Try both at each position
- Seek operator input for their preference
Any questions?