**SYSTEMATIC HANDLING ANALYSIS (SHA) -- Capsule Summary**

**PHASES**

I  EXTERNAL INTEGRATION
II OVERALL HANDLING PLAN
III DETAILED HANDLING PLANS
IV INSTALLATION

**PROCEDURE**

MATERIALS HANDLING ANALYSIS = 1. MATERIALS  2. MOVES  3. METHODS

**CONVENTIONS**

- Operation: Forming or Treating Equipment & Space
- Transportation: Transport-related Equipment & Space
- Handling: Handling Areas -- Pick-Up & Set-Down
- Storage: Storage Equipment and Space
- Delay: Set-down or Hold Areas
- Inspection: Inspect, Test, Check Equipment & Space

- Classification: Evaluate
- Visualization: Visualize
- Analysis: Analyze
- Set Plans: Set Plans
- Evaluate: Evaluate
- Detail & Install: Detail & Install

**FULL SYSTEMATIC-HANDLING-ANALYSIS PATTERN**

- Vowel Letter: A, B, C, D, E, I, O, U
- Number: 1, 2, 3, 4, 5, 6
- Lines: No. of Lines

<table>
<thead>
<tr>
<th>Vowel Letter</th>
<th>No.</th>
<th>Intensity Rating of Material Moves</th>
<th>Color Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4</td>
<td>Abnormally High Intensity of Moves</td>
<td>Red**</td>
</tr>
<tr>
<td>E</td>
<td>3</td>
<td>Especially High Intensity of Moves</td>
<td>Orange Yellow**</td>
</tr>
<tr>
<td>I</td>
<td>2</td>
<td>Important Intensity</td>
<td>Green**</td>
</tr>
<tr>
<td>O</td>
<td>1</td>
<td>Ordinary Intensity</td>
<td>Blue**</td>
</tr>
<tr>
<td>U</td>
<td>0</td>
<td>Unimportant Moves of Negligible Intensity</td>
<td>Uncolored**</td>
</tr>
</tbody>
</table>

- Process Chart Symbols & Action
- Symbols Extended to Identify Equipment & Space
- Color Ident.
- Black & White**
- Formulas and Explanations
- Eval. Description

- Intensity (I) = nP/t
  - Designated by width of flow line
- Distance (D)
  - Designated by length of flow line
- Transport Work (TW)
  - Designated by area of flow line

- Example:
  - TW = I x D = nP/t X D

- M-H Systems:
  - D-Direct
  - C-Central
  - K-Channel

- © 2002. RICHARD MUTHER & ASSOCIATES
- RMA - 1254K