Ergo Cup Helpful Hints

• Presentation/Video
• Preparations
• Pre-Conference
• Conference
Presentation/Video

What did I learn?

- Videos need to be in early
- Description/story
- Identify problem(s)
- Number of employees affected
- Display process/evolution of ideas
- Judging Criteria
“Before” Situation: Photo Storyboard &/or Process Map

• Drawers were heavy and difficult to slide open and closed
• 140 lb push/pull (on bottom drawer)
• Storage rack did not provide good visibility to staged discs.
• Ergonomic issues reaching center of disks to attach lifting fixtures
• Grease contamination from drawer slides got onto parts and people
• Multiple pinch points
Example:

“After” or “Solution”: Photo Storyboard and/or Process Map

- New shelving system utilizes lightweight arms that allow for easy handling
- Arms pivot outwards for access
- 18 lb push/pull fully loaded
Example:

“After” or “Solution”: Photo Storyboard and/or Process Map

Easy access to center for attaching lifting fixtures
Judging Criteria #1: Innovation

- Custom in-house engineered design
- Easily modified, scaled, and leveraged to other applications
- Such a successful solution, we made 2 more!
  - 7 arm model for our engine repair station
  - 3 arm model for fixture storage at grinder (pictured below)
- Durham hosts many visitors, media, and customers. Everyone stops to check this out! WOW factor! Leveraging to revenue sharing partner
Judging Criteria #2: **Study & Experimentation**

- Evolution of the Project … Continued
6. Double pole, pivot design was born
Judging Criteria #3: Simplicity

• Simplicity of solution:
  • No more need for pull stick
  • No more round part on a square drawer
  • Fits the size of the arm to the size of the part
  • Since load is distributed on 2 pivot poles, no concerns for tip over when more than one arm is extended
  • Eliminated pinch points and moving parts (drawer slides, retaining bars to prevent multiple drawers being extended)
  • Lower maintenance costs - bearing replacement will be much easier and cheaper, if ever needed
Judging Criteria #4: Ergonomic Risk

- Ergo Job Analysis:
  - 140 lbs of push/pull force
  - 18 lbs of push/pull force
Cost Avoidance – Racks needed to be replaced. Couldn’t continue forward with current rack given ergonomic risk and operational impact.

We are strategically moving to this design when replacing racks or buying new

### Area of Facility

<table>
<thead>
<tr>
<th>Area of Facility</th>
<th>Traditional</th>
<th>Swing Arm</th>
<th>Cost Avoidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>GE90 LPT (x2)</td>
<td>$24,672</td>
<td>$7,062</td>
<td>$35,220</td>
</tr>
<tr>
<td>Repair Station (x2)</td>
<td>$29,606</td>
<td>$8,474</td>
<td>$42,264</td>
</tr>
<tr>
<td>Campbell Fixture Storage</td>
<td>$18,500</td>
<td>$5,296</td>
<td>$13,204</td>
</tr>
</tbody>
</table>

Cost Avoidance...so far...

| Cost Avoidance...so far... | $90,688     |

Judging Criteria #5: Business Impact
Preparations

- How many employees should go
- Pitch/talking points
- 10 x 10 booth layout
- Simplified posters/brochures
- Models
- Theme?
- Give-aways
- Identify tools/ IT/ packing needs/ MMH

What did I learn?
Pre-Conference

• Find out where the loading dock is
• Set-up 11 am – 5 pm
• Have assigned tasks
• Welcome reception at 7 pm (don’t forget your tickets!)
• Scout around
• Pick your excellence award

VOTE #123 FOR INNOVATION
Conference

What did I learn?

- Judges do identify themselves
- Be prepared for clarifying questions
- Try to keep pitches quick
- Send some people out with brochures