KAIZEN JOURNEY AT STRONGPAK

THEME

“Opportunities of Kaizen in Africa, Now and Future”

PRESENTED BY: BONAVENTURE MOONGA
About

INDUSTRY
Manufacturing

CORE BUSINESS
Manufacturer of Polypropylene Woven Sacks
Laminated Block Bottom bags for Cement & Lime

VISION
To be the Pioneer of Excellence in African Continent, inspired by Best in Class People

MISSION
Lift Value through Affordable Packaging
TOP MANAGEMENT COMMITMENT

• Kaizen at Strongpak is a company wide practice which has been imbedded across all departments and we have been practicing it for the past 8 years.
• All Kaizen activities are headed by the Plant Manager who is supported by a full time Kaizen Manager.
• We recognize and appreciate the support and guidance we have been receiving from JICA and Kaizen Institute of Zambia.
STRONGPAK KAIZEN PROJECT TEAM STRUCTURE

Kaizen Steering Chairman

Steering Committee

Sponsor 1

Sponsor 2

Team Leader 1

Team Leader 2

Team Member 1

Team Member 2

Team Member 3

Team Member 4

TOP MANAGEMENT

MANAGER LEVEL

SUPERVISOR LEVEL

SHOP FLOW WORKERS
UBUYANTANSHI WITH KAIZEN PROJECTS

<table>
<thead>
<tr>
<th>PROJECT NO.</th>
<th>PROJECT</th>
<th>TARGETS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>BASE</td>
</tr>
<tr>
<td>BTP001</td>
<td>Wastage Reduction due to Convertex 1 and 2</td>
<td>2.33%</td>
</tr>
<tr>
<td>BTP002</td>
<td>Wastage Reduction due to Convertex 2</td>
<td>3.79%</td>
</tr>
<tr>
<td>BTP003</td>
<td>Wastage Reduction due to Looms U2</td>
<td>2.03%</td>
</tr>
<tr>
<td>BTP004</td>
<td>Wastage Reduction due to Printing U2</td>
<td>1.36%</td>
</tr>
<tr>
<td>BTP005</td>
<td>Wastage Reduction due to Tape Plant 1 and 2</td>
<td>1.36%</td>
</tr>
<tr>
<td>BTP006</td>
<td>OEE Improvement for Convertex 1</td>
<td>67%</td>
</tr>
<tr>
<td>BTP007</td>
<td>OEE Improvement for Convertex 2</td>
<td>60%</td>
</tr>
<tr>
<td>BTP008</td>
<td>OEE Improvement for Printing 2</td>
<td>66%</td>
</tr>
<tr>
<td>BTP009</td>
<td>OEE Improvement for Looms U1</td>
<td>72%</td>
</tr>
<tr>
<td>BTP010</td>
<td>OEE Improvement for Looms U2</td>
<td>68%</td>
</tr>
<tr>
<td>BTP011</td>
<td>Wastage Reduction due to Slitex</td>
<td>8.21%</td>
</tr>
</tbody>
</table>
INTERNAL KAIZEN CONFERENCE
PARETO ANALYSIS FOR DOWNTIME

Major Focus Area

<table>
<thead>
<tr>
<th>Time</th>
<th>Area</th>
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</thead>
<tbody>
<tr>
<td>6172</td>
<td>Shortage of printed rolls</td>
</tr>
<tr>
<td>2241</td>
<td>Drive system not ready</td>
</tr>
<tr>
<td>1474</td>
<td>Product change over</td>
</tr>
<tr>
<td>1331</td>
<td>Quality issue</td>
</tr>
<tr>
<td>1220</td>
<td>Acceleration belt at delivery</td>
</tr>
<tr>
<td>1055</td>
<td>Stock taking</td>
</tr>
<tr>
<td>734</td>
<td>Power failure</td>
</tr>
<tr>
<td>725</td>
<td>Spreader arm got bent</td>
</tr>
<tr>
<td>706</td>
<td>Cover patch timing belt</td>
</tr>
<tr>
<td>655</td>
<td>Impression roller</td>
</tr>
<tr>
<td>603</td>
<td>Jam between cover patch</td>
</tr>
<tr>
<td>601</td>
<td>Unplanned maintenance</td>
</tr>
<tr>
<td>553</td>
<td>Chiller pump problem</td>
</tr>
<tr>
<td>365</td>
<td>Steel band</td>
</tr>
<tr>
<td>150</td>
<td>Water unit</td>
</tr>
<tr>
<td>141</td>
<td>Cleaning</td>
</tr>
<tr>
<td>124</td>
<td>Hole punch</td>
</tr>
<tr>
<td>80</td>
<td>Compressed air problem</td>
</tr>
<tr>
<td>79</td>
<td>Pneumatic cylinder</td>
</tr>
<tr>
<td>65</td>
<td>Teflon tape change</td>
</tr>
<tr>
<td>42</td>
<td>Counter sensor at delivery</td>
</tr>
<tr>
<td>30</td>
<td>Perforation roller</td>
</tr>
<tr>
<td>30</td>
<td>Exclusion</td>
</tr>
<tr>
<td>27</td>
<td>Exclusion</td>
</tr>
</tbody>
</table>

TOTAL TIME

% Cumulative
# WHY – WHY ANALYSIS

## WHY WHY ANALYSIS

<table>
<thead>
<tr>
<th>Location</th>
<th>Printing unit 2</th>
<th>Manager</th>
<th>Supervisor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machine No</td>
<td>Machine 1</td>
<td>Problem Statement</td>
<td>Leader Kandebeka</td>
</tr>
<tr>
<td>Date</td>
<td>26 October 2016</td>
<td>Doctor blade holder</td>
<td></td>
</tr>
</tbody>
</table>

### What is the Final Action
To do a skill index and plan for training of operators

### Status of machine after the action

<table>
<thead>
<tr>
<th>Why</th>
<th>Answer</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Why Doctor blade holder worn out</td>
<td>Wear and tear of blades</td>
<td>1. Follow up of action plan</td>
</tr>
<tr>
<td>2 Why Wear and tear of blades</td>
<td>Wrong adjustment of holders</td>
<td>2. Standard operating procedures</td>
</tr>
<tr>
<td>3 Why Wrong adjustment of holders</td>
<td>Lack of skill</td>
<td>3. Training calendar made and use</td>
</tr>
<tr>
<td>4 Why Lack of skill</td>
<td>Lack of operating procedures</td>
<td></td>
</tr>
</tbody>
</table>

### Countermeasure
Temporary Countermeasure
Develop a OPL
Permanent Countermeasure
Operator training

### Exactly what need to be done

### Checkpoints

### Recurrence Prevention

<table>
<thead>
<tr>
<th>OPL</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

### Authorised Person's Signature

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UBUYANTANSHI With KAIZEN
HIGHLIGHTS OF KAIZEN ACTIVITIES
FRUITS OF 5s
Foreword

This booklet has been done to help operators at the looms to identify and solve challenges constantly being faced.

When used diligently it will help reduce waste!

Contents

- Rough Edges
- Tape folding
- Wrong width
- tape breakages
- rough fabric
- weft gaps
KAIZEN INNOVATION TO REDUCE WASTE

7,000 METRES BOBBINS FINISHING WITHIN 2 DAYS AND CAUSING WASTE DUE TO MANY CHANGEOVERS

33,000 METRES BOBBINS FINISHING AFTER 10 DAYS ON THE MACHINE RESULTING IN LESS CHANGEOVERS
WASTE REDUCTION KAIZEN ACTIVITY

STOPPING THE MACHINE WHEN MAKING A CHANGE OVER HENCE HIGH WASTE

AUTOMATIC ROLL CHANGE RESULTING IN REDUCTION OF WASTE

BEFORE KAIZEN

AFTER KAIZEN
VISUAL INVENTORY MANAGEMENT

SPARES WERE PLACED IN SACKS, DIFFICULT TO IDENTIFY

PLACE FOR EVERYTHING AND EVERYTHING IN ITS PLACE
MAKING A PRODUCT FROM WASTE

SLITEX MACHINE WASTE

FROM TEAM INNOVATION
A NEW PRODUCT WAS
LAUNCHED IN STRONGPAK
TEAM INVERTED A MECHANIZED LUBRICATION SYSTEM

BEFORE

AFTER

Lubrication container

Lubrication switch

Lubrication pipe
BEFORE AND AFTER PHOTOS

BEFORE

AFTER
RESULTS OF KAIZEN ACTIVITIES
TRENDS FOR WASTE REDUCTION PROJECTS BEFORE AND AFTER KAIZEN

BTP 001 = 55% IMPROVEMENT
BTP 002 = 46% IMPROVEMENT
BTP 003 = 24% IMPROVEMENT
BTP 004 = 76% IMPROVEMENT
BTP 005 = 48% IMPROVEMENT
BTP 011 = 58% IMPROVEMENT

Wastage in %

Baseline | Target | Actual

BTP001: 2.33% | 1.04% | 1.17%
BTP002: 3.79% | 1.89% | 1.01%
BTP003: 2.03% | 1.54% | 0.68%
BTP004: 1.36% | 0.68% | 0.71%
BTP005: 1.36% | 0.68% | 0.68%
BTP011: 8.21% | 4.11% | 3.48%
TRENDS FOR OEE PROJECTS BEFORE AND AFTER KAIZEN

BTP 006 = 25% IMPROVEMENT
BTP 007 = 28% IMPROVEMENT
BTP 008 = 26% IMPROVEMENT
BTP 009 = 1.4% REDUCTION
BTP 010 = 13% IMPROVEMENT
JUSTIFICATION FOR DOING KAIZEN AT STRONGPAK

- INCREASED PRODUCTION LEVELS
- REDUCTION IN WASTE
- INCREASED EQUIPMENT AVAILABILITY
- REDUCTION IN CUSTOMER COMPLAINTS
MANAGEMENTS' ATTENTION TO THE KAIZEN ACTIVITY

BICYCLE TO EACH MEMBER PLUS $ 50

SEWING MACHINE PLUS $ 50 EACH MEMBER

$350 AWARD TO EACH MEMBER OF 6 TEAMS

32 INCH TV PLUS $ 70 EACH MEMBER
CONCLUSION

- Kaizen is a philosophy and methodology for promoting quality and productivity improvement
- If applied consistently and determination your organisation can achieve huge benefits
- Kaizen has a lot of benefits both to the organisation and to the employee.
- As Strongpak kaizen is our way of doing things and we have integrated it in all our operations.
RECOMMENDATION

• For kaizen to succeed in an organisation it requires the involvement and support of top management.
• In determining which projects you must embark on as an organisation consider the challenges you are facing.
• Setting the project targets consider the cost benefit analysis
• The size of each team should not be relatively small to ensure that the team leader is able to account for each of them
• The members of the team must be drawn across departments to be inclusive
• Employees need to be motivated for them to participate positively in kaizen activities
• Periodical reviews are vital in ensuring that you can assess each team.
• Each and every project should have a time frame.
• External support from Kaizen expert like KIZ and JICA should be considered because these organization are pillars in Kaizen.
2018 ZAMBIA KAIZEN GOLD WINNERS
• IF YOU FAIL TO ACHIEVE YOUR DREAM CHANGE YOUR WAYS NOT YOUR PRINCIPLES, REMEMBER TREES CHANGE THEIR LEAVES NOT ROOTS...

UBUYANTANSHI With KAIZEN