

## The New Kids On The Block!



Over the past 11 years at **Coopers Brewery, Regency Park SA**, Improvement Teams have been continually fine tuning the

site's Line 1 Overall Equipment Effectiveness (OEE). As a result the 375ml Ale and Stout products often ran above 80% OEE.

Since the commissioning of Line 2 in late 2013, Line 1 now predominately runs Bright Beer Products. Hence the need for the **"New Kids On The Block"** Cross-functional Improvement Team to improve % OEE and re-tune the line for Bright Beer Products.

The team's mandate for Line 1 was to:

- Identify all Equipment & Process losses and wastes (including all unplanned interventions) for the Bottling Line;
- Improve OEE of all Bright Beer Products to 70%;
- Recommend further loss Cross-functional Team (technical) and Area Based Team (people) improvement initiatives to the Leadership Team; and
- Complete within 12 weeks after Kick-off.

As always the team commenced by **analysing the current situation**, which included, but was not limited to the following activities:

- Operator Survey which gave all Line 1 Operators the opportunity to list all the problems and issues with the line;
- OEE Observations were conducted on different products such as Coopers Clear and Carlsberg, to identify specific losses and problems associated with these and other products; and
- Review of MES data and reports, such as top 5 downtimes and OEE charts.

From this analysis the team prioritised the following key areas of OEE losses and problems to best achieve the mandate:

- Pallet presentation of Clear Glass;
- Fallen bottles between the Pasteuriser to Labeller and Labeller Cluster machine; and
- Performance Rate % for the 4 main Bright Beer Products was on average 59%, predominately caused by minor stoppages and slow running (compared to the ideal rates), refer to Figure 1.

**Figure 1 – Line 1 OEE Comparison to Baseline MES data**

| Date      | By Product | OEE % | Avail. % | Rate % | Quality % |
|-----------|------------|-------|----------|--------|-----------|
| Jan – Apr | Brand A    | 54.3% | 82.3%    | 59.2%  | 99.5%     |
| May – Jul | Brand A    | 66.5% | 84.7%    | 73.6%  | 99.4%     |
| Jan – Apr | Brand B    | 59.6% | 92.7%    | 64.3%  | 99.6%     |
| May – Jul | Brand B    | 61%   | 88.5%    | 68.9%  | 99.6%     |
| Jan – Apr | Brand C    | 39.1% | 82.2%    | 49.6%  | 96.3%     |
| May – Jul | Brand C    | 53.9% | 84.6%    | 63.7%  | 99.8%     |
| Jan – Apr | Brand D    | 52.3% | 83.7%    | 62.9%  | 99.1%     |
| May – Jul | Brand D    | 76.6% | 92.3%    | 76.8%  | 99.6%     |

The team identified 14 improvements to eliminate some of these minor stops and unplanned downtime, of which 60% were completed before the Final Presentation with the remaining improvements actioned at the weekly Packaging / Engineering meetings.

One of the biggest improvements made was reviewing the conveyor line logic between the Pasteuriser, Labeller and Cluster machines. Team member Wayne Hurcombe spent 5 days observing the line and discussing the problems with operators to identify the root cause of why bottles were falling and in turn fixing the problems.

Wayne implemented 3 key improvements to the line logic:

1. Reactivated a limit switch to allow the conveyor leading into the Cluster machine to go into half speed;
2. Slowed down the conveyor speed by 3% between the Innoket Labeller and the Cluster for smoother transition; and
3. Fixed a limit switch not being used on the conveyor line exiting the Pasteuriser, improving conveyor line speed control.

The team **improved the 3 month baseline average % OEE from 51.3% to 64.5%**, an **improvement of 25%** (refer to Figure 1 table).

The team has recommended further Improvement Teams to attain the remaining 4.5% required to achieve 70% OEE, with the first team focusing on improving Total Packaged Oxygen (TPO) on selected Bright Beers.


Well done to the “New Kids On The Block” team for all their efforts and achieving a great result.

For further information please contact:



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**Figure 2 – Line Logic Improvement Sheet**

|   |  |  |                     |                            |  |
|---|--|--|---------------------|----------------------------|--|
| Team Name: New Kids on the Block  |  | Location: Bottling Line 1 – BW250 Clusterpak   |                     | Initiated Date: 23/06/2014 |  |
| Team Type: Macro FE & PI Team   |  | Item: Line logic between Topmatic & BW250 Clusterpak machine   |                     | Completed Date: 14/7/2014  |  |
| Initiator: Team   |  |  |                     |                            |  |
| <b>1. Problem</b> (Plan)  |  |  |                     |                            |  |
| Bottles falling or jamming the infeed of the Clusterpak, causing multiple micro stops.  |  |  |                     |                            |  |
| <b>2. Current Situation</b> (Plan)  |  | <b>3. Improvement</b> (Do)   |                     |                            |  |
|  <p>When the bottles leaving the outfeed of the Topmatic labeller &amp; pass through the Fill Height detector, the odd bottle falls, which in turn causes the jam up on the Clusterpak infeed.</p> |  | <p>The Team requires someone with Conveyor programming skills to spend a full shift, watching &amp; making the necessary changes to prevent this from happening.</p> |                     |                            |  |
| Improvement Target: No fallen bottles.  |  | Cost: Internal Recourse  | Expected Saving:    | 3-5% OEE                   |  |
| <b>4. Results:</b> (Check)  |  | <b>5. Future Actions:</b> (Act)  |                     |                            |  |
| Identified 3 problem areas where bottles had been jamming and fallen & fixed them   |  | Continue to monitor the line logic for other products to identify any other problem  |                     |                            |  |
| Approved by:  |  | Packaging Manager  | Maintenance Manager | Line 1 Team Leader         |  |
| Sign off acceptance of Approved Change  |  | Doug Conner  | David Tanner        | Craig Miller               |  |