

Aussie Cup Champions of 2015 on a Roll!

B&D Doors & Openers in Clontarf, Queensland, have erased the memories of being runners up in last year's **Aussie Cup Team Competition** at CTPM's Annual Forum by winning the coveted trophy and taking the cup home to Queensland.

Held in Wollongong on August 20th 2015, CTPM's Annual Forum was focused on TPM & Lean / CI in Action, with many great local and international speakers sharing their experiences on leading site's to Operational Excellence. But much of the hype was about the Aussie Cup Team Competition fiercely contested between the team from the Clontarf site and a team from Goodman Fielder Dairy in Palmerston North, New Zealand.

In recognition of their great efforts, the Site Leadership Teams of the respective sites, chose the teams to apply for and complete a submission to be a finalist in the Aussie Cup Team Competition for 2015. With successful applications, both finalists presented an overview of their improvement activity, sustainable achievements and most importantly their learnings.

At B&D Doors & Openers, the finalist team was a Cross-functional Micro Focused Equipment & Process Improvement Team, known as **"Night Rollers – The Sequel"**. During their 12 week improvement cycle on site, the team had been given the unusual mandate of reducing the manual handling risks associated with the "Roll Up" Stage of the Series 2 Industrial Door manufacturing process.

Figure 1: The team receiving the 2015 Aussie Cup



L to R: Vince Agostino and Ross Kennedy from CTPM presenting the cup to Corey Barnes (Team Leader), Fou Musu, Darlene Moore, Mathew Hill and Trevor Edwards.

The current method of production was for the door curtain to be attached to the pre-prepared axel at the end of the production line, and as the name implies the curtain is rolled up onto the axel, secured, then wrapped for despatch.

The issue with this stage is that the protective wrapping material is stored under the production line. To obtain the cardboard half tubes used to protect the doors, the operator has to duck under the production conveyor system and retrieve the cardboard and then turn and twist to insert the cardboard between the clear wrap and the door.

Figure 2: Original configuration of Roll Up



Note: Refer to the cardboard tube about to be added to the door under the clear wrap

During the first three meetings several ideas were developed and discarded until in desperation, Darlene asked the ridiculous question **"Why can't we roll the door up the other way?"** After several minutes of general amusement, the team started to consider the idea in detail. They realised all the risk factors associated with putting the cardboard tubes on the door would be significantly reduced as the operators could add the cardboard tubes from their normal operating position.

The next question was if the control logic could be changed to allow for this? In short the answer was 'YES', and as luck would have it, the programming expert was on site that very week. A quick risk assessment was undertaken for the proposed change and within a day the Roll Up had been placed in its new position and ready for production to continue, refer to Figure 3.

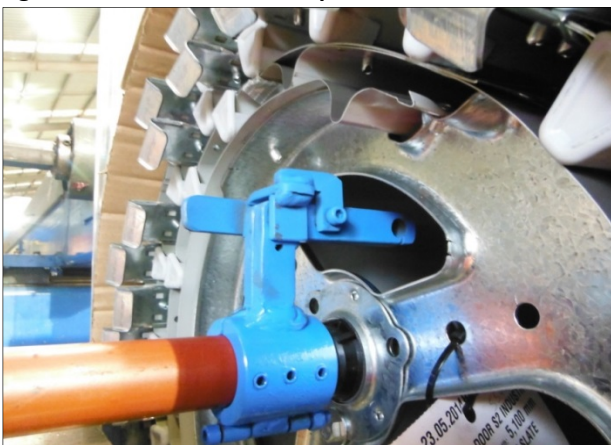
Figure 3: New position for Roll Up



From a manual handling perspective, the process was now much safer and all the operators were much happier. However, there was one unforeseen consequence, by winding the door in reverse the springs on the axel had to be compressed before the door would start turning, this increased the time taken for Roll Up.

At this point Trevor came up with the idea of making a clamp that could be attached to the axel and engage the axel as soon as Roll Up commenced. By the following week the prototype had been developed and was in operation.

Figure 4: Trevor's Axel Clamp



The reversing of Roll Up and use of the Axel Clamp was so successful it **reduced the time taken for Roll Up by 25%**.

By the Mid-way Presentation the team had achieved their mandate and eliminated the bottle neck in the process. The Site Leadership Team decided against disbanding the team, instead asked them to identify opportunities to increase the manufacturing rate of Series 2 doors by 60%.

Focused on their new objective, the team went straight to work and analysed the Series 2 Line data that had been broken down into each step of the production process. They were able to identify

the new bottle neck for the Line, which was where the sheets were pressed and joined together. This process occurred concurrently and was controlled by the rate the sheets were pressed.

The team brainstormed methods of decoupling the process and developed a method to do this by installing a trial “accumulator” bench after the Press, refer to Figure 5. The method was trialled and proved successful, indicating a significantly improved production rate could be achieved.

Figure 5: Trial Accumulator Bench after the Press



The results achieved by the team far exceeded the original mandate, not only have the **risks associated with the Roll Up process been reduced, but the team has proven a concept that would allow a significant improvement in the production rate.**

The great results and the many lessons learnt along the way proved a team that was fit to be a finalist at CTPM's Annual Forum. Their competition for the Aussie Cup from Goodman Fielder Dairy were certainly up for the fight, and the closely contested battle proved both teams to be winners.

In the end there could only be one winner, and CTPM congratulates “Night Rollers – The Sequel” Team from B&D Clontarf on winning the 2015 Aussie Cup Team Competition. We commend them on their determination for excellence throughout their improvement journey, and look forward to seeing another B&D team at next year's forum to defend the cup!

For further information please contact:



Bill Hopton
Managing CI Specialist
Phone: 0418 663 563
Head Office: +61 2 4226 6184
Website: www.ctpm.org.au