

EXTRACT
from original 48pg booklet

**10 YEARS OF
CONTINUOUS
IMPROVEMENT AT**

Coopers

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Executive Brief

Dr Tim Cooper Managing Director



A way of life for operations at Coopers! In this executive brief we take a close look at how Managing Director, Dr Tim Cooper believes 10 years of Continuous Improvement has assisted Coopers Brewery Operations to where it is today. We look back on some achievements and the exciting times ahead.

Dr Tim Cooper is a fifth generation Cooper, with the unusual combination of qualifications in brewing and medicine. He entered the family company as Technical Manager, and in 1993 became Operations Manager, responsible for brewing, packaging and engineering. He completed his MBA and took on the responsibility as Project Director of the design and construction of the new brewery at Regency Park. Tim is now Managing Director of Coopers Brewery, and sustains the workload of MD duties whilst still keeping a keen eye on the brewing side of the business as Chief Brewer.

Employee Engagement

The entire philosophy of continuous improvement is one of teamwork and the importance on getting people and equipment working as one. Therefore it is no surprise that the engagement of people throughout the operations at Coopers is a necessity to achieve the great results we see today. The benefits of having different levels of operations working together as a team to find the solution to a problem is crucial.

As Dr Tim explained, the ability for engagement to create ownership amongst the employees through tasks as simple as clean and tidy work areas or as complicated as tackling highly technical problems is a testament to the process. It is the employee engagement that enabled Coopers to first focus on their most critical and vital area of operations, Packaging, with great success. The significant steps taken towards an improved workplace was based on the teams ability to identify problems and solve them to help increase productivity, decrease downtime and enhance changeovers.

Although over the 10 years productivity has increased from 33 million litres of beer in 2003 to 70 million litres of beer in 2013, the most impressive result was maintaining the high level of Overall Equipment Effectiveness. Enabling Coopers to handle the increase in beer product complexity, to keep operating costs down and to deal with the increase in production running only one shift up until 2011. This all from the simple tool of engaging the people to take ownership and responsibility of their work and area to make their working place better.

Coopers success and growth has required capital investment, but if not done in conjunction with the engagement of the employees giving ownership of the new machine then no benefit will ever come from it. Improvement activities on new equipment gave employees the chance to learn, interact, understand the machine, and enhance their work place before it is even installed so that acceptance is achieved.

Skill Development

Another aspect of the Continuous Improvement process is the ability of employees to develop and enhance their individual skills to gain a further knowledge of their work and understand the opportunities that may exist for improvement. Dr Tim acknowledged that the new found ability for departments to interact and communicate made life between the process and packaging areas as well as engineers and leadership better.

The Continuous Improvement process lent its hand to creating a greater acceptance and understanding of Coopers recently introduced guiding principles of Passion, Service, Consistency, Responsibility and Respect. At the operations level the improvement team structure worked in a synergistic way to promote the guiding principles of Coopers and underpin the value of the principles throughout the entire operations division.

In his own words Dr Tim stated “you can always learn something from the process. Something is always unfolded, made clear, and an opportunity found.” An example of this learning was seen from the improvement process undertaken by a team focused on improving Changeovers on the Homebrew Line. They identified the need for minimum production quantities on the line to be established which later became a standard across the site that ensured all production runs were cost effective.

Culture of Excellence

The third aspect of Coopers great success from the Continuous Improvement process is their reputation for achieving excellence. The Coopers name and brand comes with the highest regard and therefore the importance of consistently producing products of high quality. The culture that the improvement process has created not only supports this reputation of excellence but continues to push it to the next level.

Coopers operations deal with the variability of their raw organic material such as hops and malt in the fermentation stage of brewing. To create the product we all love, this degree of difficulty is certainly a reason for continual focus on to ensure consistency from one batch to the next is maintained.

The signature of Coopers brew generates a sense of camaraderie between the members of the brewery, which shows the strength of culture. The intangible results from continual improvement provides the motivation for people to be empowered to put forward suggestions and make the necessary changes and improvement to achieve excellence.



Continuous Improvement

Nick Sterenberg Operations Manager



Nick Sterenberg started at Coopers in 1993 after many years of experience in the Brewing Industry of United Kingdom and Australia. Working through a number of managing roles during his time at Coopers in the Brewing, Technical, and Human Resources departments, Nick now is in the role of Operations Manager and has been there since 2005. His commitment to the cause of Continuous Improvement is one of the reasons that Coopers after 10 years are still focused and heading down the pathway to excellence.

Starting off down the Continuous Improvement pathway Nick believes that there needed to be a motivation to change amongst the management of Coopers and employees. You need to be dissatisfied with your current situation and have an attitude which Nick described as slightly schizophrenic to be able to see problem after problem whilst recognising and celebrating the achievements. Having an eye continually on the future was a key to ensuring that continuous improvement would sustain.

To begin with, it was important to have a view of what is important to the business and using the theory of constraints it was the Packaging hall of the site that became the main focus of what was to be worked on. Having identified the bottle neck and critical area, there was the need to optimise its affect on the business by getting it working at its maximum efficiency. Focusing efforts of the program on the main constraint of the business helps to generate substantial gains which encourage belief and participation in the continuous improvement process.

Nick says, that the harder they work the quality of the problems get better. At the beginning problems were simple but now those simple problems are rarely seen with more technical and statistical problems taking charge. Continuous Improvement is the way Coopers does business, they can't add a new piece of equipment without conducting a New Equipment Management improvement team, but it is important to continue to improve.

Understanding your industry is key to applying the right tools to your journey. In the beer industry efficiency is key and not minimising finished goods, we can learn from others but adapt those learnings to suit our own industry. Once the right tool has been applied we must remember to set standards and police them through management taking responsibility to ensure sustainability.

Ultimately to be successful in your continuous improvement journey you must have a dissatisfaction with your current state, have an understanding of your business constraints, learn and train in the many tools of improvement, and finally apply those tools accordingly. Implementing Area Based Teams to engage and build team rapport, and Cross-functional Teams to generate quality and output improvement targets, will guarantee success like that achieved by Coopers.

Improvement Activity - TPM³ (TPM & Lean)

Macro Focused Equipment & Process Improvement (FE&PI)

Objective:

The objective of the Macro FE&PI activity is to establish a Baseline or “stake-in-the-ground” for the Defined Production Area (DPA) by documenting current performance, and to gain an understanding of all the equipment and process losses within the DPA, highlighting personnel frustrations along the way. The team identifies possible cost-effective solutions and implements them so as to achieve an increase in performance of the DPA. Most improvement journeys begin with this type of activity to provide a foundation of loss analysis which allows the Leadership Team the opportunity to create future improvement teams to achieve further Cross-functional Team improvements.

Cross-functional Team: Dirty Dozen - 1 (Cycle 17 - 2009)

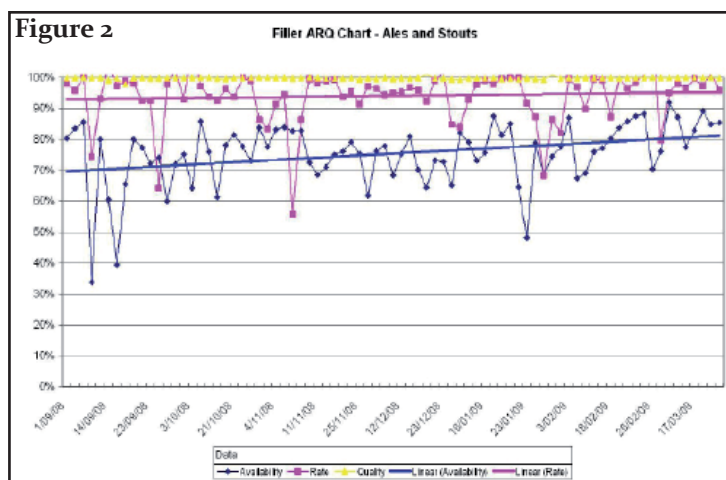
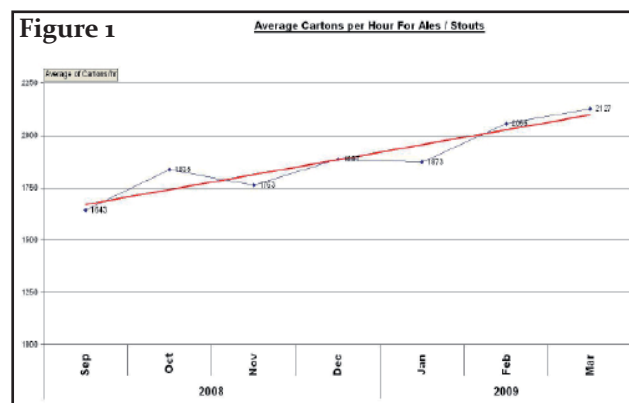
The end of March 2009 saw Coopers Brewery complete its seventeenth cycle of its TPM & Lean (TPM³) Journey with great success.



A part of Cooper's TPM³ Master Plan is to undertake a Macro Focused Equipment & Process Improvement Team on their Bottling Line at the start of each year while continuing Area Based Team activity. This gives the Site Leadership Team an updated Overall Equipment Effectiveness (OEE) Improvement Matrix outlining in detail the current performance (where all the losses are coming from) and the Cross-functional Team and Area Based Team activities required to achieve their agreed Vision for performance. This information is also used during the quarterly Pre-cycle Strategy planning sessions to map each cycle's improvement activities. Coopers Brewery has also been upgrading their Bottling Line equipment over the past 3 years, thus changing the characteristics of the line.

The Macro Focused Equipment & Process Improvement team, the infamous “Dirty Dozen-1”, has been very successful by achieving its challenging mandate of developing the OEE Improvement Matrix and improving Ale / Stouts OEE from 68% to 77% and carton per hour rate from 1873 to 2127 (see Figure 1 below) within the 12 weeks, which is a fantastic 13% improvement.

The Bottling Line has also seen good gains in Availability and Performance Rate as displayed in the Figure 2 below.



What’s made this team’s result even more pleasing for the Coopers Site Leadership Team, is that the majority of the cycle was undertaken while the Bottling Line was running on a double shift with resources fairly stretched.

Team Member Profile:



Renato Matto (7 Years - Packaging Operator)

Along with the “Dirty Dozen-1” team in 2009, Renato has been part of numerous improvement teams throughout his time at Coopers. “In my eyes the whole TPM process is an opportunity to have your opinions heard without any regret,” explains Renato. “I believe that having an agenda and framework around improvement allows our teams to concentrate and really focus on the job at hand, which ultimately improved the workplace for all.”

Further Team’s to have undertaken Macro FE&PI:

Cycle	Team Name	Area of Focus	Date
Cycle 1	The Go Go’s	Homebrew Line	Sept 2003
Cycle 3	The BottleO’s	Bottling Line	May 2004
Cycle 5	Andy Capp	Homebrew Line	March 2005
Cycle 6	Malteasers	Malt extract	Sept 2005
Cycle 6	BottleO’s Unplugged	Bottling Line	Sept 2005
Cycle 8	The Boxers	Warehouse/Supply Chain	June 2006
Cycle 11	The Rackoons	Keg Line	June 2007
Cycle 13	Bottle Magic	Bottling Line	Jan 2008
Cycle 17	Dirty dozen -1	Bottling Line	Jan 2009
Cycle 17	Water Rats	Water Usage	Jan 2009
Cycle 23	Double Trouble	Bottling Line	Sept 2010
Cycle 23	NPD	New Product Development	Sept 2010
Cycle 26	State Limit 110	Homebrew Line	Sept 2011
Cycle 30	Box & Dice	Bottling Line	Jan 2013

Micro Focused Process Improvement (FPI)

Objective:

The objective of the Micro FPI activity is to help teams identify and map a section of the dominant value streams within the business. The Micro FPI process establishes the measure of Lead Time as the 'driver', reduces the complexity through product rationalisation, process simplification etc, stabilises the flow (which may include addressing the production planning and scheduling issues), and reduces waste within the dominant Value Stream. Along with reducing the frustrations amongst the personnel, this improvement process creates the capability for the Value Stream to support an OEE improvement (increased throughput) within the plant.

Cross-functional Team: F.I.F.O (Cycle 22 - 2010)

The F.I.F.O Team was established to develop "First In First Out" (FIFO) System for all Packaging Raw materials. These would include:

- Cartons - Bottling and Homebrew Line
- Labels - Bottling and Homebrew Line
- Glue - Hotmelt for the Bottling and Homebrew Line, and Cold Glue for the Bottling Line
- Cluster - Clusters and Baskets for the Bottling Line
- Bottles, Crowns, Cans and Can ends – Bottling line
- Cans and Can Ends – Homebrew Line
- Stretch wrap – Bottling line
- CHEP Pallet Storage
- Return of Beverage Pallets
- Return of Packaging materials

When developing the FIFO System and storage for the above items, the team were also having to keep in mind during its design the future introduction of Automated Guided Vehicles (AGV's).

Analysing the current situation the team found numerous problems with Bottle Carton Storage including:

- No dedicated area for each SKU;
- No system of storing pallets in date order;
- Difficult to conduct stocktake; and
- Currently unsafe storage practices (as seen from the below photo),

As well as issues with the Rack Storage including:

- Rear rack unable to access without moving front row (No forklift access to rear of rack);
- Poor Label Identification (Not Forklift Friendly); and
- Poor utilisation of racking space.



During the improvement process the team conducted observations and considered many capital improvements. They identified the key measures for stock that needed to be considered before deciding on which capital improvement best suited Coopers needs. Stock measures included:

- Stock Rotation (Age of Stock);
- Cost of Stock;
- Stock Loss (Waste);
- Stock Levels (Stock Outs); and
- Stock Holding over Minimum Stock Level.

Original stock holding was based on the variability of planning and production process, supplier reliability, and existing racking and storage areas. The team reviewed all stock levels to take into account improvements in the areas.

Generating a First In First Out compliant system the team agreed that the Racking needed was an all existing double racking access from both sides, with the new racking design being gravity feed. Blocked stacking was to be introduced for high volume beer cartons (Pale and Sparkling), Glass / Beverage cans safety stock, Empty pallets, and Home Brew Cans, Drums, Pallecons, and Pails.



To complement the new gravity feed racking the team also emphasised the importance of raw material ownership. The packaging department was to take ownership of raw materials and the storage area by nominating the location for incoming materials, carrying out weekly house keeping of storage areas, and ensure correct materials are sent to the packaging lines and follow FIFO. It was also recognised that the Packaging Purchasing Officer required assistance with regular stocktakes.

On completion of the cycle the team recommended the purchase of New Racking to allow all nominated materials to be stored in racks and FIFO, to include ownership of packaging materials into Packaging Supervision job roles, and to visit Lindemans Winery to study AGV application.

Team Member Profile:



Rob Small (19 Years - Material Planner)

For Rob, the improvement process is a logical way to solve a problem to ensure that issues are not lost and forgotten along the way. “The “F.I.F.O” Team introduction of the Gravity Racks and our achievements of continual stock rotation and easier deliveries for the site is one aspect of the improvement process that I am most proud of,” Rob happily explains. “Having the weekly meetings provide teams and personnel the time to take a different look at the problems whilst at the same time, understanding the big picture.” “Above all, I believe that the process was a bit of fun!” he adds with a grin.

Work Area Management (WAM)

Objective:

The objective of Work Area Management is to introduce formal improvement activities involving everyone within the Defined Production Area by establishing Area Based Teams of 4-8 personnel with a designated working Team Leader across all shifts with clear responsibilities and boundaries for agreed Improvement Areas. Specifically the WAM team will improve safety, productivity and morale by establishing “a place for everything and everything in its place” within the Defined Production Area. It also aims to standardise practices, to support a more consistent approach to achieving the production plan across all shifts, with the support of self-assessments to develop the discipline to maintain these standards. Once completed the activity will improve communications and standard practices between shifts, as well as create time and reduce the frustrations of all Area Based Team members so that there will be a desire (pull) to support on-going improvement activities.

Area Based Team: Brewhouse (Cycle 28 - 2012)

Initially the whole Process Department was going to be included, but after breaking the areas down into smaller focus groups, it was decided that trying to address all the areas would be too much. So the team focused on the Dry Goods area (5 floors including the ground floor), and the Brewhouse Area (top and bottom floors), with the remaining areas to be addressed in Cycle 29.

The team followed the WAM 10 part process:

1. Confirm Mandate & Boundaries;
2. Form Team & Scope Activities;
3. Clear-Up of Area (this includes tagging the removal of unwanted items);
4. Identify Requirements for Area;
5. Identify Place for Everything in Area;
6. Obtain Approval to Proceed (from all shifts and Management @ Mid Point Presentation);
7. Establish Place for Everything;
8. Set Standards & Procedures;
9. Self-Assess Achievements & Team Skills; and
10. Communicate Results & Share Learning (Final Presentation).

Due to the small number of operators working in the area on each shift, it was decided to have a cross-shift WAM Team, rather than a separate team for each shift. As such the meetings were conducted on a Tuesday to accommodate the Operators on shift (Mondays were already very busy with other TPM³ team meetings and activities) as a result of this, the team members changed regularly, with all Brewhouse Operators attending at one time or another.

Figure 1

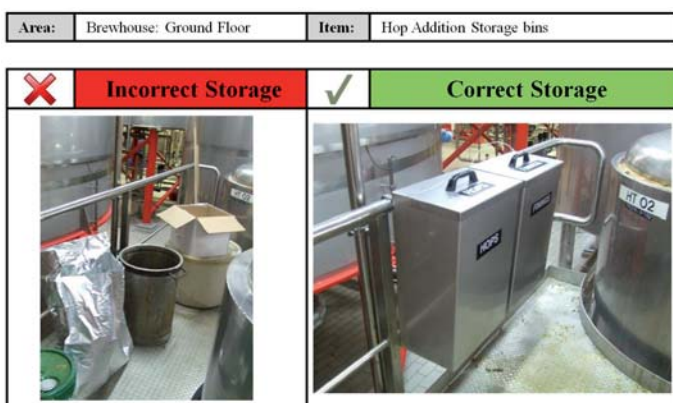


Figure 2



To ensure the improvements would sustain, the team focused on setting up good standards, procedures, checklists and monitoring systems (Part 8). Where;

- Standards - Show what you expect to see;
- Procedures - Explain what to do, when to do it, who and how to do it;
- Checklists - Show a record that the activity has been completed; and
- Monitoring System - Checks that everyone is maintaining the standards and following the procedures.

An example of a team improvement can be seen in Figure 1. The team also came up with the idea of centrally locating all the WAM Standards and Procedures on each floor of the Dry Goods area to help ensure that there is: “A place for everything & everything is in its place” (Refer to Figure 2).

Also, the team incorporated any work area cleaning activities that were on existing Preventive Maintenance / Cleaning tasks into the new procedures, therefore reducing the paperwork and administration of PM's, and eliminating the need for the scheduling of these tasks every week by the Brewing Manager. The design of the initial WAM Checklist clearly identifies what should be checked or cleaned taking into account the 3 shift pattern.

Steve Schmitz (Process Maintenance Team Leader) also attended the team meetings when maintenance type issues and improvements were required. The team thanked Steve and his team for their support, as well as Ralph Ruggiero for his support on team improvements.

Team Member Profile:



Pele Matto (27 Years - Brewhouse Operator)

Richard Arbon (18 Years - Brewhouse Operator)

These two Brewhouse operators have many years of experience on their side, and they have found that the improvement process has given them the chance to help make the work area better. “Seeing the end result to the new ideas and solutions the team has at the beginning of the process is rewarding,” says Pele proudly. “The visual changes have also had a big impact on the workers and the company. Everything has its place and we no longer have to search for certain tools or equipment.” “I have gained new problem solving skills and a better understanding of the workplace,” says Richard. “I have enjoyed the recognition from management and knowing that the team solutions are followed through to the end,” adds Pele. “We have benefited from both learning off others and sharing our own experiences amongst our co-workers along the way,” explains Richard.

Further Team's to have undertaken WAM:

Cycle	Team Name	Area of Focus	Date
Cycle 2	The Flintstones	Homebrew Area	Feb 2004
Cycle 5	The Scrubbers	Bottling Line Packer & Keg Robot area	March 2005
Cycle 7	The Slackers	Bottling Line	Feb 2006
Cycle 10	Slim Dusters	Drygoods area	Feb 2007
Cycle 11		Brewhouse	June 2007
Cycle 19	Chemical Cocktails	Hazardous Chemicals	July 2009
Cycle 28		Brewhouse & Drygoods	April 2012
Cycle 30		Brewhouse services area	Jan 2013
Cycle 30	Twilight Zone	Warehouse – Repacks	Jan 2013

Operator Equipment Management (OEM)

Objective:

Operator Equipment Management is broken up into 4 Stages involving 7 Steps which typically span 2-3 years of Operator and Maintainer development relying on weekly half-hour lessons / planning sessions supported by activity time (the doing) in the workplace. The objective is to support the Defined Production Area in improving OEE along with the agreed holistic goal aligned performance measures, by:

- Restoring equipment to its “ideal” state through establishing Basic Equipment Conditions;
- Reducing accelerated or early deterioration through daily checks and proper operation;
- Identifying and initiating the improvement of any Design Weaknesses;
- Establishing the necessary conditions and systems to allow equipment to be properly maintained; and
- Developing self-managed world class operators competent in Frontline Safety & Environment, Frontline Quality, Frontline Equipment Care, Frontline Energy Management, Achieving the Production Plan, and Formal Continuous Improvement.

Combined with opportunity for personnel to care for their own equipment and workplace, to establish new ways of thinking within a positive environment where production and maintenance work in harmony, Operator Equipment Management creates a workplace that is failure-free, trouble-free and safe.

Stage 1 Step 1 - Identify & Rectify Equipment Defects

In Stage 1 Step 1 of Operator Equipment Management teams continue on with Work Area Management activities and introduce Clean for Inspections (typically 1-2 hours per week per shift) so as to identify and rectify equipment defects.

Area Based Team: DFC (Cycle 10 - 2007)

The DFC team mandate was to work towards Basic Equipment Conditions through regular Clean for Inspections activities by working through the 10 parts of Operator Equipment Management Step 1 (OEM-1); create or enhance standards and checklists to ensure that WAM & OEM-1 improvements are sustained; ensure visual controls are established to communicate your standards and checklists to make any deviation from standard easy to see; achieve a OEM-1 Self-Assessment Rating of at least 80%; and complete within 12 weeks.

In preparation for their initial Clean for Inspection the team broke up their area into Improvement Focus Areas, which were divided amongst the team. Franco took on the De-palletiser, Craig / Andrew Mc the In-Feed Conveyor, Jovan / Wendy the RFC, Robyn V the Can Filler, and Massimo the Out-Feed Conveyors. The Leadership Team and Operators all participate in the initial Clean for Inspection event as seen from the Before and After photos below.



During the event the team completed the 4 Lists of OEM to ensure that no stone was left unturned and missed along the way.

OEM Defect List

Date: 16/02/07

Equipment: Depalletiser, Depal to Filler, Rinser Filler Crowmer, Filler outfeed conveyor & Can Filler (incl Air conveyor)

Team: OEM1 & Leadership Team

No.	Defect Tag No.	Machine/Area	Description	Comments	A	B	C
1	NA	Depal - Pallet Conveyors	Key moving out of idler sprocket - Grab screws loose	Completed.			
2		Conveyor Drip Trays	Falls & drains need to be correctly set to drain ALL water from the trays, preventing pools & drips growth.			019080	
3		Bottle Filler - Centre column	Need to make up & install a catch tray to prevent excessive grease falling onto the floor during cleaning.			019081	
4		Crowmer - Top of machine	ASIC tube will need adjusting as there is too much grease coming onto the V belt.			019082	
5		Crowmer K Box	Redesign needed to prevent grease from being held up in the structure. Also need a way to clean this area easily.			019083	
6		Crowmer Belt conveyor covers	Need a simpler & quicker way of removing covers for cleaning purposes.			019085	
7		Conveyor between Depal & air conveyor - Chain late line	When everything is turned off this set of conveyors remain on.	The whole tube system needs upgrading needs to be put onto the 019084		015043	Item No 41
8		Can Filler Seamer	Air lines & Electrical cabling lying loose under Can Filler			019086	
9		Depal - Pallet conveyor stop Station at Northern end loose	Only held down by two bolts, control station moves back & forth - Requires extra bolting			019087	

OEM Sources of Contamination List

Date: 16/02/07

Equipment: Depalletiser, Depal to Filler, Rinser Filler Crowmer, Filler outfeed conveyor & Can Filler (incl Air conveyor)

Team: OEM-1 & Leadership Team

No.	Type of Contaminant	Description of Source of Contamination	Comments	Date Actioned
1	Broken Glass - ALL AREAS	Broken bottles on whole line		
2	Plastic Wrapping - DEPAL & CONVEYORS INTO FILLERS	Comes from wraps on Pallets with new glass		
3	Pooling water - CAN FILLER	Water used for cleaning	On can Seamer - No place for water to escape.	
4	Pieces of Material - DEPAL & CONVEYORS INTO FILLERS	Comes from layer boards on Pallets with new glass		
5	Crown paint fluff - CROWN CONVEYOR	Paint from crowns		
6	Mould & Slime under Filler table - FILLER	Beer & bacterial growth	Difficult to access & clean frequently	
7	Gum under Can Filler - CAN FILLER	Washed under machine during cleaning.		
8	Pallet wheel on Depal conveyors	Comes from Pallets with new glass		

OEM Difficult to Access Area List

Date: 16/02/07

Equipment: Depalletiser, Depal to Filler, Rinser Filler Crowmer, Filler outfeed conveyor & Can Filler (incl Air conveyor)

Team: OEM-1 & Leadership Team

No.	Description	Comments	Date Actioned
1	Space between air conveyors & Bottle conveyors, hard to access.		
2	K-Box area hard to Access to clean on the Eastern side.		
2	Crown conveyor hard to access towards Filler end.	Minimum requirement is a 5 metre lift.	
4	Depalletiser - Pallet conveyors, difficult to clean under the Drive area		
5	Depalletiser - Pallet conveyors	Look at modifying guards so the centre plates can be removed for easier cleaning	
6	Depalletiser to Filler Singulator conveyors require extra platforms.	Look at a quote & put into next Financial Budget	

OEM Key Questions List

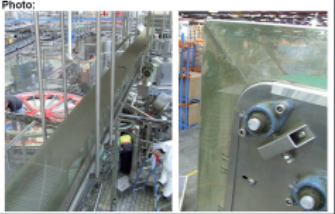

Date: 16/02/07

Equipment: Depalletiser, Depal to Filler, Rinser Filler Crowmer, Filler outfeed conveyor & Can Filler (incl Air conveyor)

Team: OEM-1 & Leadership Team

No.	Question	Answer	OPL #
1	How does glass get onto the Air conveyors - Robin V		
2	Are there filters on the Air conveyors, if so how often are they cleaned? - Robin V		
3	Is there mist on the Can Filler, if so how can we treat or rectify this - Robin V		

The defects identified brought about many improvements as seen in the example improvement sheet below. But in order to stay on top of the defects and to ensure they were not re-occurring, a time table and checklist to conduct regular Clean for Inspections was introduced.

Team Name: DFC		Location: Bottling Hall		Initiated Date: Feb 2007	
Team Type: OEM-1		Item: Crowmer Conveyor - Quick Release clamps		Completed Date: May 2007	
Initiator: Robin V					
1. Problem (Plan)					
Crown Dust accumulating in conveyor chutes. Access to clean them is made difficult by the design of the covers					
2. Current Situation (Plan)		3. Proposed Change / Approved Improvement (Do)			
Photo:		Sketch / Photo:			
					
Improvement Target: Minimize the build up of crown dust in conveyor chutes					
4. Results: (Check)		5. Future Actions: (Act)			
Quick clamps installed to aid removal. Which makes cleaning easier		Display sheet on Noticeboard so as to share our learning			

Equipment / Machine: Rinser Filler Crowmer

Item	Clean / Inspect Activity	Daily		Weekly		Monthly	
		# People	Time (min)	# People	Time (min)	# People	Time (min)
1	Safety Door Switches check (2 Doors)					1	5
2	Form & Clean Rinser Whistle still COLD & CIP cups are in position			1	45		
3	Crown spray to be cleaned of slim & scaling	1	2				
4	Crown Carapace (Shut), turning device to be cleaned of crown dust build up	1	5				
5	Star wheels & guides cleaned (removing glass & beer)	1	2				
6	Drip Trays Hosed Off	1	5				
7	Drip Trays Foamed and Brushed			1	20		
8	Yeast build up on rails			1	15		
9	Floor Foamed			1	30		
Totals			14		110		5

By the end of the Operator Equipment Management activity the team had gained some great results and most importantly learnt to involve trades and schedule more time for Clean for Inspections (with the plan to have no production on the Clean for Inspection day), and to display the Team Noticeboard in the Work Area.

Team Member Profile:



Wendy Pengilly (10 Years - Packaging Operator)

Being a part of many OEM improvement teams along the years, Wendy has witnessed the many improvement ideas unfold, and gained a great awareness for equipment management through regular Clean for Inspections. "On a personal level, my understanding of the equipment in my work area has greatly improved and has brought about a passion to care for the equipment," explains Wendy.

Life of a TPM³ Co-ordinator

Gilbert Bruton **MAINPAC & TPM³ Co-ordinator**



An ever present and dedicated servant to the Improvement Journey of Coopers Brewery, Gilbert understands the importance of the journey towards the sites success. Starting off as an apprentice fitter and turner, Gilbert has obtained over 35 years of experience in the brewing industry with breweries in Zimbabwe, South Africa, New Zealand and finally Australia. Initially as a contract fitter with Coopers in 1999, Gilbert moved through various roles before becoming the central figure of the sites improvement journey with the title role of TPM³ Co-ordinator.

In his eyes Continuous Improvement is exactly that..... Continuous! There is no end to the journey, simply milestones that you pass along the way. We don't ever give up and as Gilbert's analogy reminds us we need to be just like a frog holding the birds throat. You need to be prepared and not scared to start the journey and although it will be difficult at times, you need to learn to crawl before you walk.

In CTPM, Coopers have found a coach to support them throughout the improvement journey and their holistic approach is effective, simple and easy to follow. Having something for everyone ensures buy-in and engagement of the personnel but the implementation is certainly not easy. The journey will see plenty of pain and gains but you need to push through the pain, celebrate the gains and continue on.

The support from Leadership is crucial. It's the leaders of the company that maintain and support the process and at Coopers, Nick Sterenberg along with the Site Leadership Team have been a constant pillar of strength. Their interaction and involvement in the TPM Teams helps to show the personnel their commitment to the process and the attendance of Managing Director Dr Tim Cooper at Team Final Presentations portrays a seriousness from Coopers to follow the journey.

For Gilbert, the most satisfaction he receives from the journey is the development of his colleagues and their constant appreciation of the training. "Seeing the personnel onsite excel and gain a greater understanding for not only their workplace but the improvement process has been rewarding" explains Gilbert. His own development thanks to the support and great help from CTPM Navigator Larry Mazza has been compounded by his recent trip to go and see the beginning of Lean & TPM in Japan. A reward for his hard work, "the trip enhanced my learnings, reinforced my belief in CTPM's methodology and showed me that at Coopers we still have a long way to go".

The Road Ahead

Having come so far, it is important to stop and reflect on where Coopers were at the start of the Continuous Improvement journey and how things have changed. By looking forward you need to also look back and appreciate your success.

A by-product of the journey is personnel who are smarter, more engaged and in general better than in the past. As you move people to be involved and owning the problems of their workplace, area and line, although initially negative, it creates individuals who are passionate and care for their work. They recognise the importance of improvement and although at times the journey may bring about some heated discussions and upset individuals, they wouldn't be upset if they didn't care.

Coopers will keep on going down this pathway. Moving forward Coopers looks to:

- Continue the improvement philosophy throughout the Warehouse and Distribution Areas by picking the right tool to help make it beneficial, whilst maintaining and sustaining the Packaging Area improvements.
- Move into the next level of Six Sigma with smart process people to learn from managers. Cross-functional Teams breaking down the barriers and showing each other who they really are and the great resource they can be.
- Generate a greater emphasis on Production Planning and the importance to get it right in order to optimise production by reducing changeover times or eliminating the need for changeovers.

At the end of the day Coopers Brewery is World Class, but to stay there and keep in front of the pack we need to keep putting in the effort on those most critical assets of the business which are the people.





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