

Picton Factory Fire: Wake-up Call for Many Sites

“The fire that destroyed a carpet manufacturing factory in Picton’s commercial area on Friday night (20 July 2012) was caused by a mechanical fault.” Kate McIlwain – Illawarra Mercury Monday 23 July 2012.

Interface Asia Pacific chief Rob Coombs sympathised with the 180 strong staff affected by the destruction ...

“The cause of the fire, which started on top of the backline near the embossing roller, was not yet known” Cydonee Mardon – Illawarra Mercury Tuesday 24 July 2012

Figure 1 – Carpet Factory up in Flames



It is all very good having insurance policies to mitigate the impact on the business, but does insurance cover all of the disruptions inflicted upon the organisation and employees after a disaster?

On 2 June 2002, Tip Top Bakery in Fairfield Sydney suffered a similar fate to Interface when it was engulfed in flames. According to the NSW Fire Brigade’s Post Incident Summary Report, the fire commenced at 1.40am and ‘...the cause of the fire was the failure of the three brackets supporting a gas-fired heater that was positioned on top of the muffin-proving oven.’

The impact was reported as Building Loss of \$20m and Business Loss in excess of \$100m which included business interruption; adjustment of bakery schedules; and relocation of staff.

Figure 2 – The after mark of Fire at Tip Top Bakery



According to Ross Kennedy, President of CTPM Australasia, both of these incidents could have been easily prevented had the sites been using TPM as one of their improvement strategies.

Case Study

At 4.28am on Saturday 24 April 2004, the Fire Brigade responded to reports of an explosion at CSR plant at Glebe Island Terminal Rozelle. On arrival, Fire-fighters saw that most of the building’s windows were smashed and a haze of dust or smoke was coming out of the windows.

The cause of the explosion was investigated, and metal grinding inside one of their belt-and-bucket conveyors was identified as the possible ignition source.

As one of its strategies to stop this from happening again, CSR (now Sugar Australia – Glebe) introduced TPM to their sugar storage and packaging site in October 2005. Since then they have had no further incidents or lost time accidents and in July 2011 they achieved Level 3 of the 5 Level Milestone TPM Excellence Award with reported saving of over \$1.2m.

TPM, or Total Productive Maintenance, was developed in Japan during the 1960s and integrated into the Toyota Production System (Lean Production) to ensure superior plant reliability at the lowest cost. TPM also proved to be a cost effective Operational Risk Minimisation strategy as it ensured equipment was always operated correctly and in perfect condition.

Unfortunately too many sites are so focused on other parts of their Lean improvement journeys

involving 5S and Value Stream Mapping that they forget about the critical importance of TPM in reducing operational costs while minimising Operational Risk caused by equipment malfunctions.

TPM is about systematically training operators to identify all the little things not right with their equipment at the earliest possible time. If picked up, Maintenance can address them before they become expensive repairs or lead to operational disasters as seen at Interface and Tip Top Bakery.

Picking up the small problems at the earliest possible time and rapidly correcting them also eliminates possible equipment malfunctions that can lead to environmental breaches like we have seen at some local leading companies over recent years.

TPM is not a quick fix. It can take 3-5 years to fully implement as it is based on developing new skills within your operators and maintainers. The sites that are embracing TPM from a people development perspective are seeing significant savings on their bottom lines.

Many companies world-wide are successfully implementing TPM. Whether they are manufacturing, mining or process industries, TPM is a must for any site that is dependent on the interaction between people and equipment for its success.

Case Study

An excellent example would be **Banpu Public Company** – The Asian Face of Energy with operations in Thailand, Indonesia, China, Mongolia and Australia. With the assistance of CTPM, they started with a pilot site at their Lampang Open Cut Coal Mine in 2002 and achieved World Class status in 2007 resulting in maintenance costs reduced by half and 517 days accident free.

They are now implementing TPM at their 3 mine sites in Indonesia with their Tandung Mayang site recently achieving Level 4 of the 5 Level Milestone TPM Excellence Award with savings to date in excess of \$23m. Operational Risk has also been significantly reduced as seen through the significant reduction in accidents and incidents at the site.

However, some companies still run a workplace where operators operate and maintainers maintain, believing that good traditional maintenance practices is enough. Unfortunately

this is a false sense of security. It is the operators who have the greatest opportunity to identify the small things going wrong with the equipment, provided they are properly trained to do so.

If operators do find a small problem or issue they are often never listened to, or fobbed off by the need to put in a formal work order that may never see the light of day due to the low priority placed on it by maintenance.

Too often in the workplace we hear comments from operators such as “why report it, nothing ever gets done”.

Toyota discovered many years ago that it is the eyes and ears of the operator that, if properly trained, can pick up on the small problems before they turn into big problems.

The key question for site managers is, are they confident that their site has best practice equipment care strategies in place to minimise operational risk.

What is TPM?

TPM is about finding Equipment Problems or Defects at the earliest possible time such as fixing a damaged grease line rather than a failed bearing. However to implement TPM you need to address 3 key challenges:

- How do we train operators to know what to look for as they are at the frontline?
- How do we change the equipment so it is easy for operators to find the equipment problems or defects at the earliest possible time?; and
- How do we create a maintenance support capability that can respond to small problems and issues identified by the operators in order to motivate them to continue to find the equipment defects?

TPM is based on a number of integrated activities focused on getting maintenance and production working in harmony.

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