

Supplier Development: Total Productive Maintenance (TPM)

Company: Auto Industrial

Location: Kempton Park, Gauteng

Industry:

Automotive: Machining of chassis components

Key tools used:

- 5S Workplace Organisation
- Overall Equipment Efficiency (OEE)
- One Point Lesson (OPL)
- Single Minute Exchange of Die (SMED)
- Autonomous Maintenance Step 0-3 (AM)
- Planned Maintenance Step 1 (PM)
- Focused Improvement 7 Steps (FI)
- Visual Management
- Standardised Work

The AIDC enhances the TPM programme at companies by utilising international experts that are accredited by the Japan Institute of Plant Maintenance (JIPM). These experts provide shop floor practical training on the implementation of the TPM methodologies.

"TPM Programme has been successful, informative and the company has learnt a lot"

General Manager: Geoff Hesse

Key Challenges Faced

The Auto Industrial Machining site consists of 2 plants focusing on the manufacture of wheel hubs, brake disks, steering knuckles, wheel carrier and brake drums. Considering that the processes are machine intensive, a system geared to reduce losses caused by machinery became an imperative in addressing challenges such as the firefighting mode of the maintenance department and changing the mindset regarding equipment efficiency and maintenance.

Programme Journey

Auto Industrial Machining's management committed to the implementation of TPM in both manufacturing plants. A TPM steering committee was appointed and a TPM pillar was allocated to each committee member to ensure successful activation. A management model line was selected in each of the plants for TPM preparation.

An in-house TPM Facilitators training was conducted by the AIDC. The training focussed on 5S, Autonomous Maintenance, Focused Improvement and Planned Maintenance, but also covered all other Pillars required for TPM deployment. After the training the team members started with Step 0 of AM, the "know your machine" step, where they learnt every single component of the machine and the safety procedures that needed to be completed on the machine.

Step 1 of AM followed where basic cleaning was done and the team restored the machine to its original basic condition. While populating the data for standards to be developed, the team had to clean, inspect, tighten, lubricate and observe the different tools used for the AM Step1 methodology.

Parallel to this, Kaizens and One Point Lessons (OPLs) were initiated. Management encouraged employees to contribute as many kaizens as possible, to use activity boards rigorously and to utilise problem solving tools in order to identify the root causes of problems.

Going forward Auto Industrial Machining will develop a technical training centre and evaluate the skill-level of employees, with the aim of upskilling and encouraging long term learning of all employees. The company has adopted TPM as an operational strategy in order to attain its goals by creating a culture aimed at achieving zero losses.



➤ Shop floor training taking place.

Summary of Benefits

- ✓ OEE monitoring system implemented on pilot lines
- ✓ Plant one pilot line OEE 10% improvement from 32% to 42% on average per month
- ✓ Plant one pilot line production output increased by 31% per month on average
- ✓ Visual management system implemented (AM and 5s Activity boards)
- ✓ 8 Managers trained on TPM facilitators course
- ✓ 9 shop floor employees trained on