

Total Productive Maintenance (TPM)

"I hadn't really intended to introduce [Total Productive Maintenance](#) (TPM), in fact I didn't even know that's what it was at that time, it simply happened as a by-product of another project" recounts Paul Wilson, Managing Director of Aster Training about his early days working as a Production Manager in the north east of England for an electronics company in the 1980's.

"I had been given the project of implementing one man/two machines into a unionised facility across a 24/7 shift operation."

My focus had been largely taken up with negotiations with the trade unions to try and improve our productivity as a business. Like most companies at that time we were starting to compete with lower cost geographies and we needed as many advantages as possible.

We looked first to reduce our fixed & variable costs, and then looked at ways of improving output per operator and then finally how to improve the up-time of aging assembly equipment which needed both electronic and mechanical skills to maintain.

One of the ideas that came out of our discussions was the introduction of what we called 'Technical Operators'- machine operators who were fully trained and capable of carrying out the first line maintenance and change over procedures which had previously been carried out by skilled maintenance technicians.

Six months later after an initial training period supervised by our Senior Maintenance Technician, we had our first team of qualified Technical Operators. Within a short space of time the results were there for all to see.

Jobs that had traditionally been done by skilled technicians were routinely being done by machine operators. These included tasks such as lubrication, basic machine programming, machine set up and change-over. One of the major benefits we derived came from the fact that machines were being attended to on the majority of occasions straight away rather than having to wait for the next available maintenance technician to address the problem.

Both operators and maintenance guys perceived benefits:-

- The operators no longer had to wait for maintenance technicians for trivial little problems.

The maintenance guys were no longer required to complete tasks that they considered boring and mundane.

We worked hard at alleviating any fear the maintenance technicians might have had that their jobs were under threat and this soon evaporated once we were challenging them with more interesting projects.

At that time we had no appreciation of industry standard measures such as OEE but it turned out later we had improved our performance from about 35% to in excess of 75% in as little as 12 months.

Of course the story does not end here; we were starting out on our journey towards autonomous maintenance.

- Our maintenance technicians relieved to be rid of their mundane tasks were now given specific projects working with the production staff to cut out some of the 6 big losses.
- The machine set up routines were looked at, new purpose-made jigs were constructed to allow production to carry out change overs without the need for all of the 'tweaks' and 'alignment' that had previously plagued this process.
- The major parts of the machines prone to wear and tear were put onto a predictive maintenance schedule and their spares managed on a min/max routine. In fact, we were even able to sell back some spares to the machine manufacturers which had been previously been bought as an 'insurance policy'.
- The cleanliness and reliability of machines improved significantly as operators took on a series of daily, weekly and monthly 'fitness checks'. We encouraged the operators to feel ownership of their machines and to treat them as their own, something that would have been an alien concept only six months before.

Looking back now these were very exciting times, we didn't at the time understand we were introducing a TPM culture and we learnt by making mistakes as we went along, but what a learning ground, I wouldn't have swapped it for the world".

For further information contact:-

Paul Wilson

Managing Director

Aster Training a [corporate training company](http://www.aster-training.co.uk)

www.aster-training.co.uk