

There is a room in the building that members of staff enter with trepidation; phone calls both in and out are monitored. Communication is best done by means of the back of a fag packet, preferably Woodbines. Yes: you have guessed it is the Maintenance Engineers Workshop.

Ensnconced in there is a knarled or knurled Electromechanicalpneudraulicautojigitplumbheatbuilding Engineer whose diversity of skills is only matched by his total mastery of Industrial English. (If you don't know what Industrial English means every other word begins with "f" with the "f" word having up to 300 meanings.) I have rabbited on about the importance of having skilled technicians in various departments and virtually ignored the key member of staff that keeps the whole thing on the rails. It is possible to have outside contractors deal with your maintenance issues as far as the printing machines and other equipment. There are some very good ones about but most companies need their own in house multi talented engineer who deals with everything from changing a washer in the Ladies to reprogramming the Programmable Logic Controller on that sophisticated dryer.

Such a multiplicity of talents is more and more difficult to find, in fact such people are an endangered species. In a world of plug and play the need for thoroughly practical versatile individuals is supposed to be reducing. In reality this is far from the truth. Just in time delivery, downtime reduction or even elimination, expanding automation etc. mean that effective maintenance is growing in importance.

There are points to ponder.

- 1) How can we get the best from this resource?
- 2) Can we evolve from Maintenance to Process Development?
- 3) Where is the next generation of this exclusive band coming from?

GETTING THE BEST OUT OF PLANNED MAINTENANCE

I wouldn't dare to compare Maintenance personnel with the building trade but there are certain similarities in that they both utilise craft skills and have to deal with unpredictable scenarios. From there on the similarities diverge, the Maintenance team should be thought of as Works Engineers can't disappear when the going gets tough and have to continue to manage the situation in the future. They have to come back the next day! What the maestros of the mole wrench and multi-meter often have difficulty with is developing a Planned Preventative Maintenance Strategy. They can be forced into more crisis management than planned maintenance.

This is where the application of spreadsheets and databases can give them the support they need to manage their workload. Instead of the IT thinking the Works Engineers are grease monkeys and the Works Engineers considering the IT department nerds the two can work together to produce a manageable structure. Of course you can buy an off the shelf package that can be customised. Unfortunately many of them are aimed at large organisations and cost serious money. There are some to fit shallower pockets less than £300.00 can give you a very usable piece of software.

Two of the buzz phrases that these software packages come under are “Lean Manufacturing” and “Total Productive Maintenance.”

For a DIY approach you need to address several key points; they are as follows:

What you are trying to develop is a Planned Maintenance Technique.

The aim is to ELIMINATE DOWNTIME and OPTIMISE MACHINE PERFORMANCE.

The first step is to get all those involved working together. All too often production staff considers that members of the maintenance staff are prima donnas and maintenance staff considers production staff are intent on wrecking the equipment. This may well be the case on both counts but it results in massive down time and slow production rates tied in with inordinate maintenance costs. This is a totally unacceptable situation. Sitting round the table and discussing the aims of Planned Maintenance will bring out the differences in perception and start the process of working together that is crucial for success.

The goal is to achieve the absolute MINIMUM amount of time needed for effective maintenance.



The real losses in production are shown below

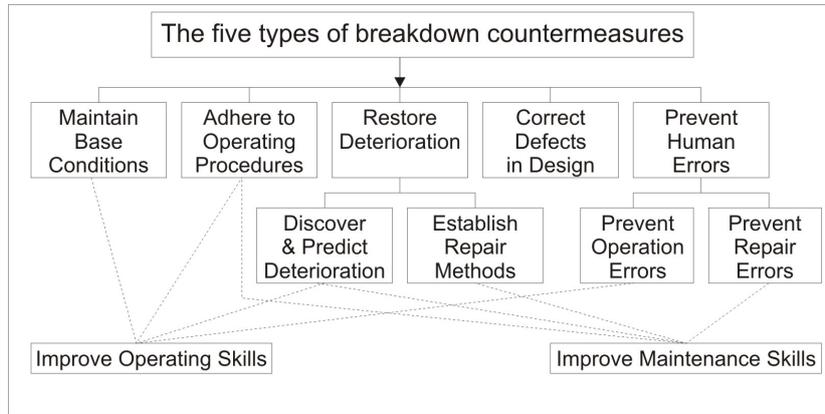
DOWNTIME
1) Breakdowns due to equipment failure
2) Set-up and adjustment

SPEED LOSSES
3) Idling and minor stoppings
4) Reduced speed

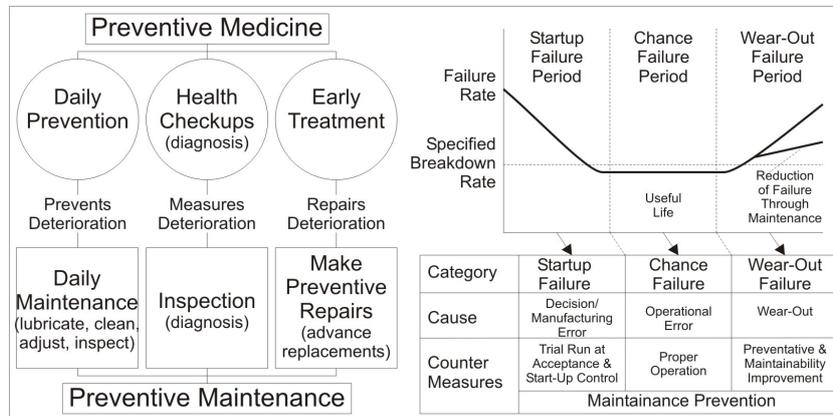
DEFECTS
5) Scrap and quality defects
6) Reduced yield



This is how you deal with the problem areas



Ongoing strategy



World Class why not?



These graphics are a guide to the philosophy that needs to be adopted in a well-run production facility. The decision you first have to make is do we want to do it? Then what are the increased profits that can be obtained? You will almost certainly underestimate these. If you are to move your business forward or in some cases simply survive you must have a robust strategy for Planned Maintenance. Yes of course there will be resistance at first but the advantages for all will soon become apparent.

MAINTENANCE TO PROCESS DEVELOPMENT

Once you have stabilised the situation with regard to downtime reduction and production optimisation then the real opportunity is presented to develop a culture of continuous improvement. In this situation production staff will be able to discuss with engineering areas where small modifications can make significant improvements. It may be jiggling or storage or improving squeegee stability with metal supports. A whole host of small changes that will move the process forward. Ongoing lubrication by machine operators and changes in print characteristics of a machine when reported sooner rather than later can avoid performance reductions or complete machine failures. We have to get away from the historic reliance on aged badly maintained equipment that somehow keeps going. The MD wouldn't drive round in a knackered twenty-year-old car. Why should production rely on such equipment that will surely under perform and fail with numbing regularity?

SON OF SUPERENG

These words are playing havoc with my spellchecker! Finding the person to follow on from your mature Works Engineer can no longer be to steal somebody from another company. The person you seek will need to have a grounding in either Mechanical or Electrical engineering, not just a degree, practical experience and if they have no knowledge of our industry then they will need at least 6 months preferably 18 months working with the incumbent before his retirement. In the unlikely case of finding somebody with industry experience he/she needs 3 months overlap. The alternative is to take on a young person and have them work alongside your skilled practitioner for 3 years, at the same time as studying the relevant qualifications at your local college.

Don't just associate maintenance with failure and breakdown. Maintenance is not just keeping it going it is a viable business development tool; use it. You never know you may see the members of your maintenance team smiling! Oops there goes another flying pig.