

47.5 per cent average increase in factory productivity – survey results

By Sean O'Sullivan, managing director, Empower Business Consultancy



This article profiles survey results from 21 engineers and manufacturers who have invested in PCs on their factory floor and time tracking and labour management software.

The 2009 June end survey of 21 engineers and manufacturers who invested in time tracking software concluded:

- The average increase in factory productivity was 47.5 per cent
- The median manufacturer's increase in factory productivity was 35 per cent
- The lowest manufacturer's increase in factory productivity was 15 per cent
- The highest manufacturer's increase in factory productivity was 160 per cent.

The 47.5 per cent average increase in factory productivity was weighted upwards significantly by the following four manufacturers, namely; Homeplus Southland – 160 per cent, Classique Furniture – 103 per cent, Lochiel Engineering – 70 per cent, and Rose and Heather Furniture – 60 per cent.

The median manufacturer achieved a 35 per cent increase in factory productivity within six months of using the time tracking software.

The survey showed the man-

ufacturer with the lowest increased factory productivity – at 15 per cent – reduced staff by four whilst maintaining output, saving \$140,000 per year in wage cost.

The survey showed the manufacturer making the highest gain increased factory productivity by 160 per cent. In year one nine staff were reduced to five whilst factory output was maintained. In year two the five staff then achieved twice the factory output that the original nine staff was achieving previously. This increase in factory productivity increased annual profit by four fold.

The key reasons for the significant increases in factory productivity include:

- Staff seeing budgeted time before the start of each job and seeing their actual time on completion of each job. This ensured staff focused on meeting or beating the times and most staff actually worked to beat the times
- Good staff consistently beating the budgeted times by substantial margins which confirmed to management their commitment and value to the business
- Competitive nature of staff. Peter wanting to show other staff that his times are consistently the best in the factory
- Staff had to log onto all forms of downtime jobs. Downtime was tracked and reported, enabling downtime to be substantially reduced
- When staff was not logged onto a manufacturing job or downtime job this was reported as unaccounted time. Management could ensure that unaccounted time is reduced to a target maximum ten minutes per day, so staff



then worked the remainder of the day and all remaining time was accountable to manufacturing jobs or downtime jobs

- Production management's ability to see jobs and times live. Where issues occurred management could act straight away
- There is no hiding from the system. All staff are totally accountable for all time daily and weekly including
 - Time on manufacturing jobs ___ hours
 - Time on down-time jobs ___ hours
 - Time unaccounted ___ hours
 - Total time 40 hours

- Related to production management's ability to see jobs and times live, above, the following actual times were reported against budgeted times for the following to confirm staff and factory productivity
 - Time on manufacturing jobs ___ hours
 - Time on downtime jobs ___ hours
 - Time unaccounted ___ hours
 - Total time 40 hours
- Production management no longer have to accept poor excuses from staff for significant overruns in time on jobs. Production management can use the data in the system to advise Paul that the

job can be completed in four hours because, for example, four hours is only the current average of times on that job or similar jobs. Or production management advise Paul that Peter consistently completes the same job in three hours which is an hour less than budget – so the four hour budget is realistic and very achievable

- Far better assignment of jobs to staff and production planning. This resulted from production management always having live up to the minute reporting of all jobs currently in the factory and those scheduled to immediately go into production.

The 47.5 per cent average increase in factory productivity surveyed across 21 engineers and manufacturers was significant considering a 30 per cent increase in factory productivity is estimated to double most engineers' and manufacturers' annual profit.

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Letter to the editor

Dear Sir,

Kevin Kevaney's article on "hot water" (*Engineering News* Vol. 40, #7) comments that there is no "technological improvement in how we manage hot water on tap, in a century" is not entirely accurate. German company, Clage has been producing 'point of use' water heaters for 50 years. These heaters give the consumer complete control of how much power and water they use.

- Heaters range from 3kW to 27kW and different models will supply a single basin to an ensuite, or kitchen. Savings are made by:
- No power used until tap is turned on
 - Heating water only to required temperature – about 36 degrees Celsius for a basin, 40 degrees Celsius for a shower, and 45-55 degrees Celsius for a kitchen
 - Hot water cylinders must

heat to 65 degrees Celsius to reduce risk of Legionnaires disease – well in excess of usable temperatures

- No waiting for hot water to arrive from a central location – 10m of pipe is about three litres of wasted water, plus heat loss in pipes.

The share of electricity generated from renewable energy sources (water, wind, geothermal, tidal?) is already strong and growing. Unlike fossil fuels (gas), which will become more expensive and unavailable, electricity can continue to be generated in the future. Hot water from electronic instantaneous water heaters near the outlet where it is needed is the concept for tomorrow. The days of storing hot water at 65 degrees Celsius and mixing it with cold to make it usable are long gone. Today water is heated precisely to the temperature needed adjacent to the outlet. Decentralised water

heating is the solution to 21st century hot water supply. Full details can be seen at www.clage.com and www.instanthotwater.co.nz.

Yours sincerely,
Derek Paterson,
Shipwright Agencies Ltd

Scott Machinery at SouthMACH 09

In our June issue we mistakenly ran an image from SouthMACH 07 which should have been an image of Scott Machinery's stand at this year's show. The error was accidental but nonetheless we'd like to apologise to Christian Scott and Scott Machinery for the oversight. On the right is a picture from SouthMACH09 showing Joe Raver from Scotchman Industries USA, demonstrating the new quick change punching turret and notching station features that are on the new 5014TM Scotchman hydraulic punch and shearing machine. While errors occur very rarely in *New Zealand Engineering News*, it still registers with us that we have let our contributors or advertisers down.

Best wishes,
Steve Best (editor)

