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Think about the man

Our lead story this issue (page 14) covers the lean journey of Edwards, Shoreham-on-Sea. The company has long applied modern machining technology, lean tools and a design-for-manufacture approach. However, even such a company can benefit from a rigorous analysis of what it does and where the problems – for that read waste – are.

One particular aspect of the story centres on labour efficiency combined with automated machine tools. Now, you might say there surely can't be much with automated equipment. Well there is, and it is the labour element that is critical when competing with lower cost countries.

In the Edwards case, machining now responds to kan-ban pull from the assembly shop married to zero set-up in its machining cells. This has eliminated much push-schedule-related scurrying. But there was still waste; people hanging round automated machine tools, waiting on them, if you will.

To help counter this, the company wanted to rationalise tool replacement to particular times in the day so operators didn't have to keep an eye on the machines and change tools on demand. As it happens, a feature in the Makino HMCs' CNCs – minutes of tool life remaining/tool – was the answer. As long as enough life is left to get to the next scheduled change, the tool is left in the machine. Other machines, including new ones, do not have this feature, only a blanket percentage for all tools (which is no good), and which then required a special solution.

> The labour content associated with automated machine tools is not itself automatically at the lowest level

Another, even more simple change was made to the standard red/amber/green light system. Edwards wanted these lights to reflect particular situations which then prompt appropriate action in aid of efficient labour usage and in maintaining production flow. For example, a signal to highlight that the machine had completed one pallet and so required unloading. Typically, machine tools don't signal jut one complete pallet, they signal two via a red light – machine stopped. That's too late. More imaginative use of lights could signal many different things through varying combinations, but the facility needs to be there to allow users to select condition versus light signal, of course. It is not.

In making machines automatic, machine tool makers mustn't forget about the man and what might boost his efficiency and smooth work flow through simple messaging or provision of information. And nor should those having automated machines think they have reduced associated labour as far as is possible.□