

Maintaining order on the shop-floor

Keeping a tight rein on the flow of work through the shop-floor can be a major challenge for any manufacturing company, but life can be made much easier with an efficient shop-floor data collection system, as Rent-I.T's marketing manager, Martin Bailey explains to EMP

"Where's my goods?" This is a question that, if the items in question are not on last night's despatch list, may strike dread into the hearts of many. What generally follows is an intense search into the abyss that is the production route to find the goods in question. More importantly, there is no information on how long each process takes and therefore costs in terms of manpower and/or production time. For many

companies, a works order disappears the minute it leaves the office until it shows up as despatched, only pinpointed in-between when an expedition party is sent out to locate its whereabouts on the shop-floor. Planning of future production times is often performed on a 'best guess' approach rather than based on previously logged times.

► Capture that data

There are three end results that should be achievable with any shop-floor data capture system: for the sales department to immediately be able to see the location of an order, whether it is waiting for stock, in production or out having a subcontract process applied to it; to be able to apply a time/cost ratio to each process and to take this to the next stage so that accurately forecasting of the cost and lead-times of items based on this information can take place.

Most companies will already have some form of manual data capture in the form of a time sheet. Traditionally these are updated infrequently - perhaps at the end of each day or even each week. These are open to error (or abuse) and are always playing catch-up with reality. Accurate lead-times cannot be quoted and there is no guarantee



that timings and subsequent costs are accurate either.

What can be done to assist in improving the identification and location of orders as they progress through what might be any number of routes through your manufacturing process? The answer is shop-floor data capture, which is the generic term given to any method of electronically logging a process that occurs along the works order's route. From a software perspective it will either be a specific application or embedded as part of an MRP II (Manufacturing Resource Planning) application. How this logging is achieved varies, but the method will depend on the level of information required at any given point.

The capturing of data can be done in several ways, which will differ depending on the product being manufactured. The simplest way is manually entering data into a screen at each stage, although this is prone to error and misuse. At the high end of the scale there are RFID chips, which can immediately locate any item within your building, however for many this will be overkill.

The quickest and most accurate method is barcode scanning. Barcodes are printed on each works order, and each operator has their own barcoded badge or card. The logging process consists of users picking up the scanner, scanning their badge and then scanning the works order. On the screen, the appropriate operation is selected and this can be done using a touchscreen PC for simplicity. This then tells the system that operator X has started operation Y on works order number Z. Once the operation is completed the process is repeated.

► Providing a solution

One such system is 123mrp.NET, available from Rent-I.T, which is a complete production management system that includes the ability to integrate with barcode readers and generate the necessary barcodes on paperwork. It also includes the barcode fonts, which are often an additional purchase with other systems.

An important factor to consider is whether the intended system captures data live or relies on batch updates. Batch processing occurs when a handheld terminal is taken back to the PC for validation, which means that this is not done in real-time. The problem with batch updating is that it is open to abuse which may not be discovered until the information is validated. 123mrp.NET avoids this by both validating and updating information in real-time. As soon as the operator updates a works order status, this information is validated and updated, making it immediately available to all other staff with access to the system.

123mrp.NET offers two level of data capture - simple and advanced. The simple event-driven data capture system only logs when an operation has been completed, with backflushing of labour or planned times for preceding operations. For example, predetermined times will be stored for each operation - if an operator has intentionally skipped a process and books off the next one, then the stored time for the previous operation will be used and the operation marked as complete. The more advanced option requires the operator to log on and off of each process, but also allows for non-productive codes to be set up, such as machine cleaning and maintenance work which provides a much greater level of information back for analysis and can help considerably in identifying problems on the shop-floor.

The cost of implementing such a system varies wildly. Some standalone shop-floor data capture systems can sell for upwards of £10,000. 123mrp.NET, however, provides both a complete MRP and shop-floor data capture system for a fixed low monthly rental starting at £150 per month. Initial training costs are also kept low, with just five days covering user, implementation and administration training for the entire system. Rent-I.T offers prospective users the opportunity to attend a free evaluation workshop at various locations around the country, and details can be found on the company's website. Hardware costs are also nominal, with barcode scanners costing around £100. Most computer retailers can provide these, along with touchscreen PCs for the shop-floor.

► Rent IT Systems
www.empmag.co.uk/rentitsys

ENQUIRY 406