

Getting a Grip on the Competition

A home-grown MRP II system for WIP inventory keeps the Golf Grip Division of Eaton out in front.

Steven Slomka

Over the years, the Golf Grip Division of Eaton Corp., in Laurinburg, North Carolina, has expended a lot of effort to capture a sizeable chunk of the fast-growing global golf grip market. Today, however, "We have many more competitors looking over our shoulder," observes Bob Cresante, sales manager for the Golf Grip Division. To maintain its position, Eaton consciously decided to add value to its products by emphasizing customer service—fast delivery times—and increasing the accuracy of its production processes. To that end, the company has used some fairly sophisticated automatic data capture techniques to implement its strategies. And so far, Eaton has been very pleased with the results.

The Golf Grip Division is a three-shift manufacturing plant, producing thousands of boxes of golf grips daily. To achieve this output level, dozens of presses undergo numerous tooling changes in a 24-hour period. Eaton necessarily stresses manufacturing flexibility—since it fabricates over 1000 models of golf grip products—and focuses significant attention on the master production scheduling process. At this scheduling level, the manufacturer adjusts pro-



The three-shift manufacturing plant produces thousands of boxes of golf grips daily, resulting in numerous tooling changes to dozens of pieces in a 24-hour period.

duction volume and the product mix to optimize work-in-process (WIP) inventory and still ensure timely delivery of the correct product to its customers.

Typically, the master production scheduler needs to know everything that's going on in the plant in order to

create a schedule flexible enough to enable shop floor workers to make adjustments at their own areas. Determined to capture the kind of timely, accurate shop floor data needed to keep things running smoothly, Eaton turned to W. Stewart Thomas, production control manager/master scheduler, to spearhead the project. Mr. Thomas, in turn, worked very closely with Don Santos, Cal Smith, and Jeff Pegler of Eaton's TCC, corporate systems integration/consulting group, to produce a homegrown MRP II system for use on the company's IBM AS/400 midrange computer, using automatic data capture for WIP inventory control and time and attendance employee tracking.

Team Effort

"We wanted to get a better handle on our production recording procedures and be sure our inventory records matched the materials on the shelf at all times," explained Mr. Thomas. "To accomplish this, I needed to get everyone involved." A WIP task force, composed of key marketing, shop floor, and production control people, met monthly to brainstorm ideas, refine system specifications, research products, and ease the implementation process.

			MVM 58-3116-3		
W0352521			Mold: MVM 34 T		
Press: 98D			Station: T		
1 Split & Turn	4 Dirt In Mold	7 Blisters			
2 Light Stock	5 Cut By Trim	8 Other			
3 Under Cure	6 Overload				

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Compound: 3116	ON COMPOUND	Golf Grip Division
Mold: MVM 34 T	EATON	
Press: 98D	W. STEWART THOMAS	
Paint: AQUA	Employee: 9998	Department: 0490
		
	EI99980490	

Pressman	
Roll Paint	
Spray Paint	
Buffer	
Sander	

MVM 58-3116-3

W0352521



The 4- by 6-inch inventory tags stay with the boxes of golf grips as they travel through the plant. Inset: Along with scanning for production data, employees scan their ID badges before setting up for a new production run, implementing a tooling change order, or closing out a work order.

By encouraging the people who use the system to help write the specs, and ultimately assist in debugging, Eaton built a strong support base for the project. Perhaps as a result of this employee involvement, the resulting system relies heavily on individual accountability. A schedule, generated bi-weekly, tells each manufacturing supervisor exactly what products to build during the schedule's duration. Since a single press can produce as many as 20 different models of golf grips with only minor tooling variations, each work area must be able to decide the actual sequence of manufacturing. Press operators take responsibility for tooling changes and personally examine and approve the initial batches of products coming off the machine for quality assurance.

As they engaged in the process of refining their objectives and specifications for the system, the WIP task force re-

searched products, talked to vendors, and visited manufacturing sites in order to have a better understanding of their alternatives. Choices were limited somewhat by their corporate midrange computer, since the AS/400 uses a different character set, EBCDIC instead of

the PC-standard ASCII, and the Eaton task force obviously wanted all system components to speak the same language. The task force ultimately

decided on a combination of Linx Model III remote data entry terminals, Toledo 8571 counting scales, Zebra 140 bar code printers, and T.L. Ashford label preparation software, all interfacing with the AS/400.

Swinging into Production

Eaton had already used the T.L. Ashford software in its PACK Station finished goods shipping application in Laurinburg, so the company decided to rely on it again to create a series of 4- by 6-inch inventory tags. These tags, produced after preliminary setup, stay with the boxes of golf grips as they travel through the plant. The tags include a batch number, the press and mold used, and the station that generated the products, in both human-readable and Code 39 bar code form.

At the beginning of each production run, the system issues a separate new Code 39 bar coded setup card and tool-

ing change order, produced on-demand using Zebra printers, which enables the press operator to convey usage and productivity information to production control. Once the operator is satisfied with the quality of output, he weighs each box of grips. Using a predetermined tare weight and unit weight, the system calculates the number of units produced, then updates the inventory accordingly.

Immediately after affixing the tags, the operator scans them at the workstation using one of 30 Linx Model III data collection terminals. These transmit their data to a master Linx terminal, which is in turn polled by the AS/400 every four minutes for as close to real-time processing as needed.

Along with the production figures, operators scan their employee identification badges, which contain interleaved 2 of 5 bar codes as well as alphanumeric characters, with the Linx terminals before they set up for a new production run, implement a tooling change order, or close out a work order for a batch of golf grips. By scanning the badges, instead of punching a clock, employees are freed from counting golf grips or entering any data manually, thus reducing the chance of error. As they make first batch product inspections, workers are accountable for their findings, a responsibility they built into the system themselves.

"At first, people were reluctant to trust the data being provided by the system," says Alex Walls, cord molding supervisor at Eaton. "They had to get used to an accurate production schedule that helped us produce what the customer demanded. But since our first physical inventory using this system, when we got an actual count that varied only slightly from what the system projected, we're really seeing everyone pulling in the same direction and conscientiously applying the system to improve accuracy.

What's Ahead?

The results of the WIP inventory system are still being determined. The first physical inventory using the new system was completed in half the time of previous efforts—six hours instead of 12—with no additional time needed for keying in transactions. Scrap, obsolete

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inventory, and production costs are all headed downward. Gross production data seems much more realistic than in the past. According to Mr. Thomas, "Before, we didn't always know exactly what was produced. Now we know our exact status. It puts production control into control again."

Finally, this new automated system prepares Eaton for intensified competition in the years ahead. It doesn't necessarily make it the low-cost producer in its market—although with better production and inventory control there's better ROI with less waste—but it may make Eaton the most responsive with best customer service levels.

"When a customer calls with a large OEM order, now we can confidently predict exactly what's in stock, how long it will take to produce the rest of the order, and when the material will be available

APPLICATION PROFILE

Company Name:

Eaton Corp., Golf Grip Div.
Laurinburg, North Carolina

Business: Manufacturer of golf grips

Hardware/Software: Linx Model III terminals;
Zebra 140 bar code printers; T.L. Ashford software; IBM AS/400

Primary Applications: Inventory tracking;
time and attendance

Primary Benefits: Real-time inventory control;
error-free time and attendance

Resources:

IBM
1000 NW 51st St.
Boca Raton, FL 33432
(407) 443-6647

Linx Data Terminals
625 Digital Dr., Ste. 100
Plano, TX 75075
(214) 964-7090

T.L. Ashford & Associates
525 W. Fifth St.
Covington, KY 41011
(800) 541-4893

Zebra Technologies
333 Corporate Woods Pkwy.
Vernon Hills, IL 60061
(708) 634-6700

to promise," says Mr. Cresante. "If the system says we can have it by Monday p.m., we know we'll have it ready. From a customer service viewpoint, this system's been a big help." □

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