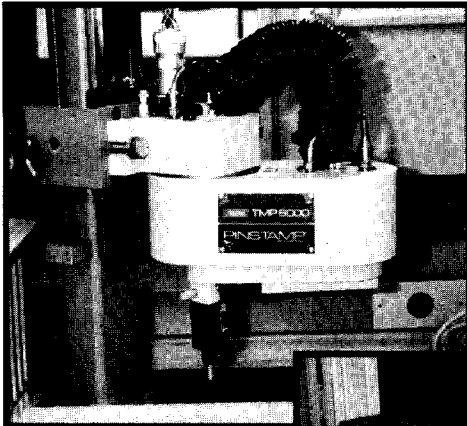


TELESIS
TECHNOLOGIES, INC.Industrial Identification/
Traceability Equipment**Axle Manufacturer Combines TMP6000 and
Bar Code Label Printer with RF Tag System**

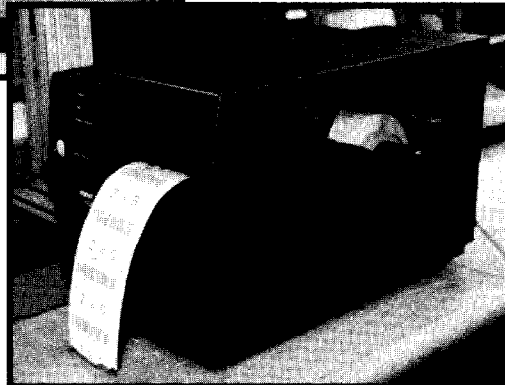
A manufacturer of axles for the automobile industry wanted to integrate permanent marking for long-term product traceability and bar code labels for internal tracking of cast aluminum front axle carriers. It was also important to permanently mark the product code, date, and hour codes on each axle carrier.



The TMP6000 permanently marks 12-character product and date codes on on axle carriers.

A radio frequency (RF) tag, encoded with Binary Code Decimal (BCD) information identifying the product accompanies each pallet containing axle carriers. The Telesis Applications Engineering Team designed the marking system to interface with the RF tag system as well as a bar code label printer.

The TMP6000 Single-Pin Marking System was chosen to meet the customer's marking needs.



The Telesis TMP6000 sends the message to the label printer, which produces two corresponding bar code labels for each axle carrier.

Telesis combined it with an Intermec label printer, and added custom software, enabling the TMP6000 to communicate with the RF tag system and the label printer. The controls for the marking system are housed in an air conditioned NEMA-12 rated console.

How the system works:

The customer's assembly line indexes a pallet containing an axle carrier into the marking station. An RF reader reads the tag attached to the pallet. A BCD signal is sent to the Telesis input/output (I/O) isolation box. The 4-bit signal represents a number from 3 to 9, which corresponds to a 3-character product code. The customer's pneumatic slide indexes the marking head into position. The operator confirms the proper codes by reading the RF tag and checking it against the marking pattern displayed on the monitor, then initiates the print cycle.

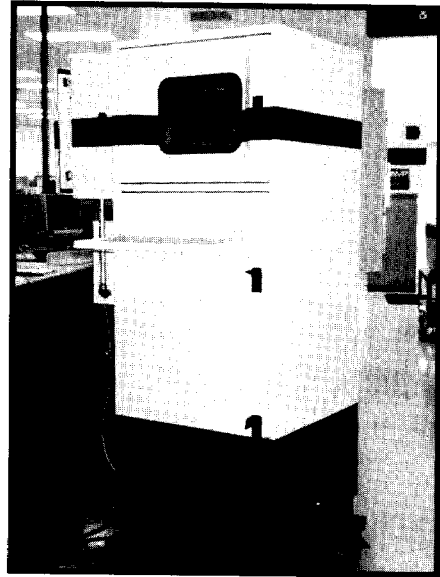
The Telesis system then marks the 12-character message on the part and also sends the message to the label printer. The label printer issues two bar code labels as the mark is placed on the part. The first six characters of the PINSTAMP® mark are product codes and are 5/16" high. The last six characters are date and hour codes, which are 1/4" high. Marking time is approximately 7.3 seconds.

Custom software downloads the information to an ASCII data file. Upon completion, the Telesis system issues a discrete "DONE" signal to the customer's system, which then retracts the marking head and moves the axle carrier to the next assembly station. The operator attaches one of the bar code labels to the part as he or she completes other assembly operations.

The ASCII file is manually down-loaded each month to a floppy disk. This data is used in a spreadsheet program to tabulate monthly production volume and record product identification numbers.

The second bar code label is used to verify that the axle carriers are properly marked. At the end of the assembly line, an operator tears off the second bar code label and scans it along with the label that was previously affixed to axle carrier. The bar code is compared with the RF tag information in the PLC. If the RF and bar code information match, the pallet is released to the next assembly process.

The Telesis system communicates with the customer's RF tracking system and the label printer to ensure that each axle carrier is correctly marked for long-term product traceability and tracking throughout the production cycle.



System controls are housed in an air conditioned NEMA-rated cabinet.