

April 11, 2014

## **ID7 Count Pac Scale Process for Automated Part Delivery and Data Collection**

One of our excellent customers here in the Upstate of South Carolina manufactures roller bearing assemblies. The plant recently embarked on a new program to identify opportunities to remove labor from their manufacturing process.

Roller bearing assemblies go through several manufacturing processes which involve “tubs” of product traveling from one department to the next. Standards for Automotive Traceability require that plant facilities be able to provide a history of where and when a part was produced. This typically involves a travel card which stays with each tub of products. The travel card gets updated with written information indicating when and where a part completes each phase of the manufacturing process. The updated information on the card includes Department, Operator, Machine and Time and Date information. At completion the card information specific to the Part Number and Lot Number is keyed into a database, which enables the plant to provide the required Traceability.

In addition to the traceability requirement, the Production by Department must be quantified. After each of the major processes, (Stamping, Heat Treating, Grind etc) the part tubs are queued into a Counting Station, where the quantity of parts is processed by the department. An operator pulls each tub onto a scale, pulls a sample of parts, places them on the counting scale and establishes the number of parts in the tub. The operator then updates the Travel Card with Part Number, Lot #, Department and Quantity. This quantity information is also keyed into a computer at the end of the process which the companies’ business information system with production information, providing department managers with key information related to Production by Department. This is a very labor intensive process which delays the delivery of products through the facility, and adds labor to the process.

The customer wanted to capture this information automatically. Chris Stansberry of Everest Scale, Inc. was able to accomplish this with standard equipment from Mettler Toledo.

Working with the customer, it was determined that the APW, (average piece weight) of the bearing assemblies was pretty consistent. This enabled the customer to utilize a file APW. Everest Scale, Inc. took the standard ID7 Count Pac, 4 I/O assembly (22001088) and CB Base and installed the unit at the end of three production lines. The line delivers the parts after a departments process via a vibration table which drops the parts into a tub on the scale.

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The ID7 Custom Label ABCD keys, were edited for A Part Number, B Lot #, C Machine #, D Operator. The process requires the operator to take the Barcoded Travel Card and scan each of these required fields into the ID 7 using a Symbol LS3408 Scanner. The Symbol Scanner is easily configured into the ID7 via one of the serial ports. The scanned information is displayed on the ID7. The Count Pac looks up the Part Number and retrieves the APW, as well as the Fill Quantity required for the Tubs. When the operator hits enter, the vibration table is turned on via the I/O. Parts are delivered into the tub until the setpoint quantity is attained. By hitting the Print button on the ID7 the required production information is sent from the ID7 to the company Server. By using the custom print template on the ID7 the required fields, Part Number, Lot #, Machine #, Operator, Quantity, Time/Date are sent in the specific format required. All of the Part Number, APW, Fill Quantity Data is managed and backed up onto a Laptop via the Count Tool software utility, which is no charge when you purchase Count Pac.

Chris also utilized a Devicemaster Serial Hub from Control. This device converts multiple serial communication lines, from the three ID7's, into a single Ethernet port, enabling easy data collection of information via the Local Area Network.

By incorporating the ID7's into the product line the customer was able to accomplish the following:

- Eliminate the manual counting process in order to quantify production by department.
- Insure consistent parts in each of the delivered tubs. This is a safety issue on lifting as well as a production delivery issue.
- Eliminate the manual data entry on the travel card related to production and traceability.
- Insure Data integrity, by scanning in pertinent information as opposed to keying it in.

This allowed our customer to reduce the labor component of the process, which enables the plant to be more productive and more competitive in the global market.

For more information on the application of the equipment in this process, call Chris Stansberry @ Everest Scale, Inc. (864)242-5885. Email: [cs@everestscale.com](mailto:cs@everestscale.com)

