



Let's Talk Results

VOICE POWER AT WORK

Crane Plumbing

Crane Plumbing is one of the largest manufacturers and distributors of plumbing fixtures and specialty plumbing products in North America with 20 facilities located throughout the United States and Canada. For over 135 years, Crane Plumbing fixtures have been an integral feature in the finest homes, apartments, hotels, schools, hospitals and commercial buildings.

Crane Plumbing selected Speech Interface Design, Inc. to deploy a quality inspection program for in-process manufactured products.



“The two biggest benefits of using the voice system are improved accuracy and continuous cost-savings . . . Our ROI was 200% in the first year.”

Leland Basham
Plant Manager
Crane Plumbing

In-process Manufacturing Inspection

General Application Summary

THE CHALLENGE: To collect information regarding defective products in order to increase overall manufacturing quality reporting and increase cost savings.

Using voice, the inspectors wear a headset and a small portable data-collection terminal. The inspector “speaks” inspection data into the headset microphone grading the quality of manufactured ceramic products. This data is transmitted over

a wireless network to a database and is immediately available for reporting. The voice system enables inspectors to perform more accurate and complete inspections by allowing them to collect the necessary data hands-free and eyes-free.

“Employees really like working with this system!” reports Leland Basham, Plant Manager.† Additionally, the voice system reduced labor costs by freeing up full-time administrative resources previously required for data entry.



Crane Plumbing

IN-PROCESS MANUFACTURING INSPECTION INSTALLATION

- Talkman T2 Terminals
- In-house Quality database
- 802.11b RF network

ISSUES

- Reduce Labor Costs
- Data collection of defects
- Improve accuracy
- Increase effectiveness of inspection process.

RESULTS

- Increased accuracy up to 99%
- ROI calculated at 200% in the first year
- Employee Training time reduced by over 50%

FUTURE IMPROVEMENTS

- Expansion of voice system into other manufacturing facilities.
- Cross-train additional staff.

“We found the voice system to be a total win-win situation. Speech Interface Design handles everything in a 1st rate manner.”

Leland Basham
Plant Manager
Crane Plumbing

Prior to Voice

Sanitary ceramic products otherwise known as “white ware”, are baked and glazed in a tunnel kiln. When complete, they are sent for final inspection to an inspection and packing area.

These products are large and heavy requiring full concentration, both visually and physically to handle the ware and to evaluate the product condition.

The inspection involves identifying the part, part number, and defect condition. If defective, the inspector identifies the process or department responsible for the flaw.

The original inspection process involved a two-person tally method. As the inspector completed each evaluation, the data was passed to a second administrative person for data entry into the system.

Interruptions in this process caused loss of data, inaccurate reporting, and incorrect inventory counts.

Keypunching of the data also added additional labor cost to the inspection process as well as time delays and human errors.

Project Objectives

To increase the accuracy of inspections and the data reporting process.

To reduce labor costs by eliminating the need for data entry resources.

To enable inspectors to focus solely on the product, providing better overall inspections.

Installation of Voice

Speech Interface Design interviewed inspectors and plant management to gain an overall understanding of Crane’s specific business processes and needs.

The voice dialog was developed in a manner that mirrors the current process, with slight changes to speed voice data-entry. The system was programmed and configured to quickly integrate into the current network structure.

Upon implementation of the new voice system, plant staff was trained to ensure a smooth and quick transition.

**System payback occurred
in less than 6 months!**

Typical Voice Dialog

Talkman: User ID?
Inspector: **3352**
Talkman: Part Number?
Inspector: **4910 ready**
Talkman: Defect?
Inspector: **Grade A**
<next piece>
Talkman: Defect?
Inspector: **Overglaze**
Talkman: Location?
Inspector: **Sprayer 3**
<next piece>
Talkman: Defect?
Inspector: **Same as Last**
<next piece>
Talkman: Defect?
Inspector: **Cracked Rim**
Talkman: Location?
Inspector: **Placer Alpha**
<next piece>
Talkman: Defect?
Inspector: **Grade A**

Results

Reduced Labor Cost:

- Employee training time has decreased by 50% +. Prior to voice, average training time ranged from 2-4 weeks. The current training time is 2-3 days.
- Labor previously used to manually keypunch inspection information can now focus on other administrative tasks.

Increased Accuracy to 99.99%:

- Reduced errors through automated voice entry of data into system, also improving validity of inventory count.

Improved Processes:

- Inspector(s) can focus solely on inspection of the products, increasing the overall quality and accuracy of the inspection.

Real-Time Data:

- Real-time data reporting, allowing management to tweak operational and manufacturing processes as needed.



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Speech Interface Design • 700 River Avenue, Suite 315 • Pittsburgh, PA 15214
t) 412-323-1135 • f) 412-323-1023 • info@speech-interface.com
www.speech-interface.com