

## Tempel Steel

### Business Profile

Tempel is a manufacturer of motor and transformer laminations used by a broad range of OEM and aftermarket manufacturers. Tempel manufactures laminations used in a wide range of automotive products, including actuators, alternators, electric power steering, fuel pumps, hybrid drive motors, ignition cores, seat adjusters, starters, generators and window lifts.

### Key Outcomes

Tempel was able to increase shop floor accuracy and mobility.

### Industry

Steel Laminates

### TrueFit Solution

Developed a wireless barcode solution to reduce data entry and ensure shop floor accuracy.

## TrueFit Solutions Helps Tempel Steel Access Critical Business Information Regardless of Location

Tempel Steel Company is the world's largest producer of magnetic steel laminations for the electronic and electrical industries to use in motors, ballasts and transformers. The company also produces electrical and cold-rolled motor lamination steel that it sells to manufacturers, subcontractors and other customers that use it to produce their own laminations. Headquartered in Chicago, the company has manufacturing plants in Chicago and Libertyville, Illinois, in the United States, as well as in Mexico and Canada. The company was founded in 1945 and currently employs more than 1,500 people.

### Business Situation

Tempel's Canadian facility had a need for accurate, easily accessible, just-in-time information regarding the processing and movement of materials. The company had just purchased a new ERP system, VISUAL Manufacturing™, from Infor Global Solutions, and had some unique challenges to solve for materials management. One large challenge was the company's primary material –coiled steel – was impossible to transport to a data entry station for scanning. There was also a need for custom interfaces and reports to support their own business processes. Tempel needed a solution that was accurate, easy to use and portable, and called upon TrueFit to develop it.

### Solution

After evaluating the situation, TrueFit determined that a bar-coding solution was needed to ensure accuracy on the shop floor and reduce data entry time. Because of the materials challenge, a mobile solution was selected. This solution also provided the benefit of instant transaction validation, a great value to the organization, because if the improper steel is cut or stamped for a project, the bottom line is directly impacted. Being able to validate the material against the operation on the shop floor in real time greatly reduces the chance for this error.

Similarly, checking open customer orders and delivery schedules against materials while loading shipments helps Tempel maintain proper controls. Integration with the new ERP system was key to providing the value of this solution, both by directly recording transactions from the shop floor with no additional data entry and also by validating operations to avoid costly errors. Shipping, receiving, warehouse transfers and material issues were some of the ERP transactions automated.

Finally, along with Tempel's unique business rules, the need for a simple user interface, device flexibility, ERP database integration and real time transactions drove the technical design of the application.



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TrueFit's solution utilized Symbol Pocket PC wireless devices to automate a variety of shop floor and materials management transactions. A multi-tiered approach, with two different user interface options on top of a business logic layer, was implemented.

The Pocket PC interface layer is a thin application designed specifically for the Symbol device. This allowed for a richer user interface and barcode scanning solution, but was somewhat device dependent. The Microsoft .NET Compact Framework was used to develop this interface.

The browser-based interface layer allowed for extensive device compatibility, but limited the richness of the interface and the scanner integration. This piece was built with ASP .NET.

Both interfaces utilize the same business logic tier of the application, which was implemented with Web services. This layer provides the business rules and the ERP integration for the solution. Development and testing of this layer was able to be performed independently of the completion of the other layers.

The multi-tier design provided a basis for rapid development and testing of the various pieces of the application. After the design was cast, each piece was written concurrently and the application was completed with minimal integration difficulties.

## Benefits

Tempel's organization received the following benefits:

- **Mobility** - Shop floor managers can access relevant data on the shop floor, allowing them to instantly make critical business decisions.
- **Improved Accuracy** - With the use of scan codes and scanning, the accuracy of inventory and materials management, as well as work orders and customer orders has greatly improved.
- **Flexibility** - Shop floor managers can access other devices from where they stand, like printers, making information gathering and decision making fast and easy.
- **Ease of Use** - The simplified user interface for the shop manager exactly matches the company's business flow, making it intuitive and easy-to-use.

## About TrueFit

TrueFit combines inspiration and collaboration to create technology solutions that truly fit a company's needs and enable that organization to work better, faster and smarter. Our technology solutions are business solutions that empower individuals and organizations to be more flexible, agile and responsive. TrueFit partners with companies and organizations in manufacturing, distribution, health care, financial services, professional services, and a host of other industries and professions. Founded in 1997, TrueFit is headquartered in Pittsburgh, PA. For more information, visit [www.truefitsolutions.com](http://www.truefitsolutions.com).

