Leading Automotive Manufacturer Commissions Paint Shop Oven Systems
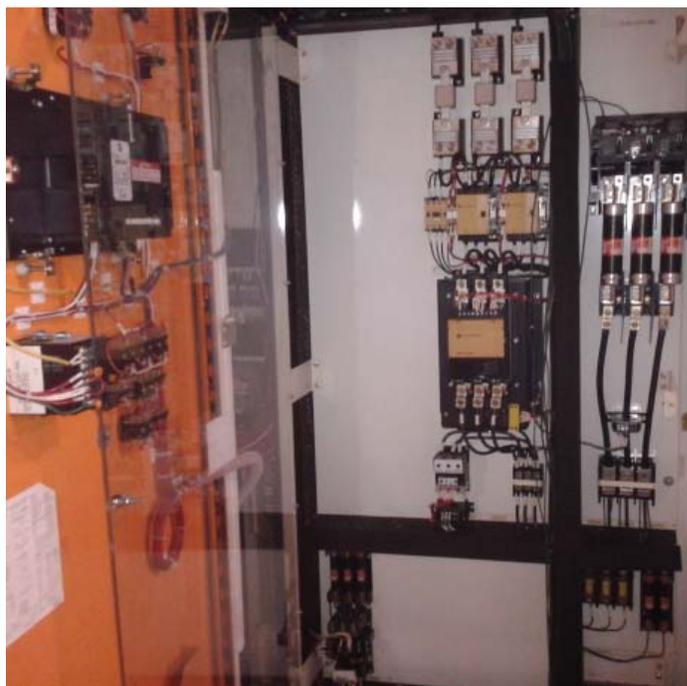
Main Objective:

The Customer requested Outbound Technologies, Inc. to perform the electrical hardwire design engineering, AutoCAD detailing, controls O&M manual engineering, lock-out placard and TMS engineering, HMI software design engineering, PLC software design engineering, and capital material consisting of: (8) Oven Systems. The oven systems included both new and reworked Master Control Panels and Zone Panels containing a ControlLogix PLCs, remote I/O connected by either Ethernet or DH+, and VFD's factory acceptance test (FAT), and commissioning for the Oven Systems at a Metro Detroit automotive painting facility.

Customer Results:

OTI worked in conjunction with the customer to load all software on the shop floor and check-out the electrical hardwire system. OTI's engineer performed a FAT (Factory Acceptance Test) on the Oven systems to ensure the electrical hardware and software operated as intended.

Overview:

- ❖ Prior to commencing on the software design, OTI's engineer developed and reviewed the system sequence of operations with the customer and end-user. This document outlined the automatic and manual functions of the Ovens, as well as detailing the faults contained within the system and the HMI screens and data logging to be performed by the operator interface.

- ❖ The Oven would be required to maintain specific temperature ranges across all of the Oven zone and be interlocked with the conveyor systems. Due to customer requirements, existing equipment was reused where possible and had to communicate with new systems.

- ❖ In total the Oven Systems included 8 PLC's, 67 Panels, 60 VFD's and 8 HMI's. In excess of 10,000 man-hours were required to complete.

Every owner, manager, and key decision maker is an engineer. They have all been through the ranks and learned this business before they were given the responsibility to manage it. Diversity is also a key to our success. From a technical standpoint specific areas of expertise include: High Temperature applications, Automotive Paint Finishing, Pharmaceutical Automation, Web Handling Applications, Custom Software Solutions, and Safety. As a Systems Integrator, we are a 50/50 split between Continuous Process and Discrete Automation expertise.

Outbound Technologies Inc.

30026 Research Drive, New Hudson, MI 48165, USA

Tel: (248)-735-5000 Fax: (248)-735-5001

www.outboundtech.com

Email: MI@outboundtech.com

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