

CASE STUDY

FURNACE AUTOMATION



BACKGROUND

A local metal forging company recently had issues with their operational efficiencies. Their plant operators would fire up their furnaces and then move on to other tasks. Without any indication of when the furnace had reached set temperature, the material would often sit for longer than necessary. This resulted in wasted production time, money, and energy as the furnace would often sit empty for extended periods of time.

CHALLENGE

GTH was approached to design and implement an automated solution for the customer. They wanted a system that would monitor the furnace cycle and soak time and also alert the plant operators once it reached the desired temperature. The GTH Account Manager recommended a solution consisting of the Honeywell ControlEdge HC900, Honeywell UDC controllers, and beacon alarm lights for visual notification.

SOLUTION

A communications card was installed in the UDC temperature controller which sends a signal to the HC900 at each stage of the process. When the furnace reaches the desired temperature, the HC900 turns on a yellow light and activates the soak timer. At the end of the soak, the HC900 triggers the yellow light to blink, which notifies the operators that it is time to load the furnace. Once the furnace is loaded, the operator pushes a second button causing a green light to illuminate. This indicates to all personnel that the parts have been loaded and the cycle has begun.

BENEFITS

The end user was pleased to have an easy-to-use yet automated system. The production operators are now free to perform their daily tasks while they wait for notifications regarding the status of their ovens. In addition to improved operator efficiency, the customer has seen other benefits such as:

- Increased productivity
- Ease of operation
- Energy efficiency
- Automated notifications
- System expandability

