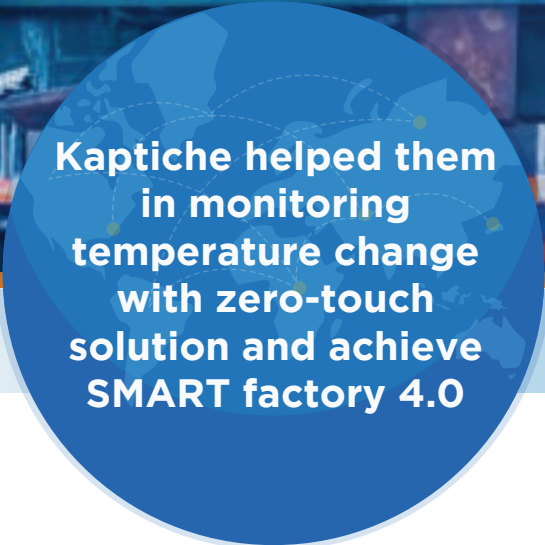




Case Study

# Threshold-Based Notifications

[www.kaptiche.com](http://www.kaptiche.com)



**Kaptiche helped them  
in monitoring  
temperature change  
with zero-touch  
solution and achieve  
SMART factory 4.0**

### **About the Client:**

A cookware and bakeware manufacturing company specialized in producing cast-iron baking pans. The company had more than 15 plants across the country with the capability of making around 3,00,000 cooking utensils.

### **Business Challenge:**

Being a reputed organization in global markets, the core operations are processes of heating and forging metals. In Forging & Heating process, the temperature should be maintained and continuously monitored throughout the entire production process. Even a little excess of temperature change in degree could change the constant temperature and results in producing defective metal in production at the end.

The company had problems in observing & monitoring the temperature level during the production process. The manual labors initially used to record the changes in temperature level being with the help of HMI dashboards. The workers also required to validate the stipulated temperature with actual temperature level manually.

The production floor used to have different temperature thresholds at different phases. Generally, the temperature thresholds varied from 900 degrees to 1500 degrees during various stages such as Cast-iron heating process, forging billets, heat treating & cooling the final products. The major problem faced by them is manual errors occurred during

temperature recordings done by manual operation. Due to manual intervention, the company struggled to find out the responsible shift worker for failure and also to calculate how much work they contributed towards successive productions.

Due to temperature changes in the forging process results in overheating the cast-iron and rust spots in the pan, then the products finally moved as defective at the production end.

### **Kaptiche's Solution:**

Kaptiche - an intelligent process automation system helped them by monitoring the entire production floor and automatically sends a notification or alert to the respective floor operators if any breach or changes in the temperature threshold value. Kaptiche team organized video cameras at every machine positions like heating, forging process to capture the exact threshold temperatures displayed on their HMI machines.

Kaptiche accurately extracted the actual temperature readings from the camera's recordings and automatically validated the actual temperature versus stipulated temperature. By chance, if any temperature crosses below or above than the fixed degree point, then kaptiche - AI based intelligence will automatically trigger a threshold alert to the floor operator through SMS or E-mail notifications with the recorded data, by informing the breach within few seconds.

Kaptiche proved them with real-time temperature threshold values and ensured them to manufacture the products without any defects in it. Kaptiche helped them to deliver their standard quality towards continuous production during high market demands. Kaptiche made their monitoring activities as smooth and precise towards the decision-making process. The production plant is now more confident in their production line that they can able to produce products at high demand time periods

### **Business benefits:**

→ Company become a proud member of the industry advanced SMART factory 4.0 movement

- Company now has complete control over the production processes at each stage.
- Kaptiche enabled IM - Intelligent Manufacturing at a very minimal change in the process
- The entire manufacturing is now data-driven with Statistical Process Control
- Kaptiche fits in with the existing MES (Manufacturing Execution System) and ERP (Enterprise Resource Planning) without replacing any process/tags/masters
- Kaptiche Zero-touch policy enabled IIoT (Industrial Internet of Things) without any correction in the production machinery PLC ladder logic
- The earlier trouble of data manipulation has been resolved, falsified data is eliminated, and now they can able to view their accurate information at any time.
- Product defectives are reduced, and low-quality products usually caused them thousands of dollars of loss, is now deceased. With right production plans in a well-monitored system, the standard quality has been delivered.
- Kaptiche - Automatic notification & alert feature helped the production engineers quickly to notice the issue and make the right decisions on it.
- Kaptiche with intelligent process automation provides a complete realistic dashboard with graphical representation helped them to view their metric values in a statistical manner.

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