

## **Automated pressing of boiler chassis doubles rate of production**

### **Automation from AP&T increases rate of production for Ideal Boilers**

**Ideal Boilers in Hull, UK started manufacturing boilers back in 1906. Since autumn 2018, the boiler chassis for the domestic range of boilers have been manufactured in a fully automated and highly efficient process designed by AP&T.**

Over 400,000 boilers leave the factory in Hull every year for households and commercial properties all over the UK. In order to meet the growing demand for the company's products, Ideal Boilers decided in 2016 to investigate the possibilities for increased automation and streamlined production. The company wanted to find a partner which could take on full responsibility and supply a turnkey solution for fully automated manufacturing of boiler enclosure parts — which are the parts that surround the boiler itself. After a careful selection process, Ideal Boilers chose AP&T to be its partner in spring 2017.

#### **Doubled rate of production**

“With the customer's two new link-motion mechanical presses as the starting point, we designed a fully automated tandem line with short set-up times and the possibility for fast tool changes. The rate of production has at least doubled compared to previously when the parts were handled manually. Since it needs to be possible for up to ten different products to be manufactured in the line during the course of a work day — some formed in both presses, others only in one — achieving an optimized and flexible process was challenging,” says AP&T Account Manager Christian Wright.

#### **Front/back transfer**

AP&T's front/back transfer plays a major role in the line, which went into production in November 2018. It is a stable and flexible solution which takes care of high-speed feeding into and out of the press, as well as enables fast tool changes. All of the automation in the line is synchronized to ensure an efficient flow. Filling, emptying and changing transfer beams is fully automated. Two robots stack the formed parts.

#### **Advanced stacking**

“Many of the parts have a complex shape when pressing is complete. This means that stacking must be done with a great deal of precision and without affecting the rate of production,” says AP&T Technical Sales Manager Roger Frölander.

The entire process is controlled and monitored by AP&T's control system with the user-friendly LOGOS interface.

In addition to the two-press line, the deal also included automation of an existing mechanical press, which was equipped, among other things, with AP&T's destacker, monobar and systems for line integration and safety.

“In the project, we were also responsible for purchasing and installing die splitters, which facilitate safe tool handling,” says Roger Frölander.

## Availability agreement

Ideal Boilers is very pleased with the new equipment and has also decided to sign an availability agreement. This means that AP&T will ensure all of the machines are maintained and serviced in accordance with a set schedule to achieve maximum reliability and availability.

“Due to the complexity of this project, we required a partner that was able to thoroughly understand and recognize the challenges we faced and work with us to deliver the best solution. AP&T not only fulfilled this requirement but has exceeded it. The professionalism, technical expertise and support shown by AP&T from the onset of the project have been second to none. I would have no hesitation to choose AP&T again for any future projects,” says Ideal Boilers Engineering Innovation Manager Joanne Lilley.

“By truly listening to what our customers need and thoroughly addressing those needs, we have been able to deliver a turnkey solution that will demonstrate its value for a long time to come. We at AP&T are proud of being able to help develop and improve Ideal Boilers' production for future needs,” says Christian Wright.

## Facts

- Ideal Boilers is a leading British boiler manufacturer. The company was founded in 1906.
- AP&T was given full responsibility to produce a fully automatic tandem/transfer line with two link-motion mechanical presses, and to automate the process in a mechanical press. Both of the production units are used to form boiler chassis parts for Ideal Boilers' products.
- Among other things, the equipment includes two AP&T front/back transfers, a number of SpeedFeeders, two industrial robots, control system and LOGOS HMI. AP&T was responsible for all of the programming, integration and synchronization of the included units.
- The deal also includes an availability agreement for service and maintenance.

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Captions:



1. IMG\_9222\_CC.jpg. Overview image.

Ideal Boilers' new production line for manufacturing boiler chassis; automated by AP&T.



2. IMG\_9232\_CC.jpg. Shows front/back transfer.

AP&T's front/back transfer is a stable and flexible solution which takes care of high-speed feeding into and out of the press, as well as enables fast tool changes.