PARTNERS IN HIGH QUALITY AND RELIABILITY

CENTRIFUGAL PUMPS IN THE PRODUCTION OF FROZEN BAKERY PRODUCTS

Allweiler® centrifugal pumps keep Coppenrath & Wiese, Europe's largest manufacturer of frozen bakery products, on the cutting-edge of production technology.

German confectionery maker Coppenrath & Wiese is the largest manufacturer of frozen bakery products in Europe. Thanks to the company's outstanding quality and an advanced production site in Mettingen, they are also the undisputed market leader in Germany.

Few people in Europe have not reached into their freezer for one of Coppenrath & Wiese's premium quality oven-fresh rolls, fine cream tortes, baked cakes, or fruit flans.

Entrance to the Coppenrath & Wiese visitors' center in Mettingen

THE CHALLENGE

Committed to their slogan – Coppenrath & Wiese Where else can you get quality like this? – the company has earned a reputation in the field of frozen desserts that has been solidly anchored in the consciousness of consumers for more than 40 years. But a slogan alone is not enough to satisfy customers if not simultaneously associated with reliably high quality products. That is why the company insists not only on high quality, fresh ingredients and skilled, talented employees but advanced production processes as well.

Coppenrath & Wiese relies on its machinery vendors to keep the company at the cutting-edge of production technology. With a daily production volume of 3.3 million rolls as well as more than 200,000 various tortes, failure of even one component can lead to significant financial losses. For this reason, the company's expectations for high-quality production systems are just as high as the expectations of consumers for outstanding products.

At the Mettingen plant in northwestern Germany, Coppenrath & Wiese bakes in tunnel ovens measuring 3 m x 50 m that are heated largely by thermal oil.

While reliable performance of thermal oil pumps was the company's top priority, Coppenrath & Wiese also needed pumps that could meet the baking industy's stringent requirements for quality and safety. Finally, the company was looking for a partner with skilled service and support capabilities, to continuously monitor the entire system, as well as provide annual maintenance and repairs as needed.

THE SOLUTION

Coppenrath & Wiese selected Allweiler® centrifugal thermal oil pumps for the company's baking line, as a partner that could deliver exactly what they needed. Based in Radolfzell in southern Germany, Allweiler® is a subsidiary of Colfax Fluid Handling, a business of Colfax Corporation® (CFX:NYE). For decades, Allweiler has been an internationally leading manufacturer of reliable hot-liquid pumps, which is the core requirement for an optimal baking process.

COLFAX® Fluid Handling

RELIABILITY BUILT RIGHT INTO PRODUCTION

With a variety of processes and production steps, Coppenrath & Wiese needed several different temperatures, so they divided the heating system into three connected heating loops. These loops use two different pump types of various sizes that are specially constructed for pumping heat carrier liquids at temperatures as high as 400 °C.

The heat transfer oil is first heated to 290 °C in a central boiler. This primary loop is the ideal use for a single-flow volute centrifugal pump of the CTWH series from Allweiler's ALLHEAT® product family. With a mechanical seal that is lubricated by the pumped liquid, the pump can be used to circulate heat-transfer oils at temperatures as high as 400 °C in heat transfer plants and is characterized by extremely low efficiency losses.

As soon as the required temperature is achieved in the heating kettle, the oil is pumped to the ovens in a secondary loop. The secondary loop also uses pumps of the CTWH series, but in a smaller size.

The third and most important heating loop for good baking results connects directly to this loop. This tertiary loop utilizes mixers to properly regulate temperature as well as circulate the hot oil through the heat exchangers in the walls of the oven, resulting in uniform heating of the oven itself.

Production at Coppenrath & Wiese

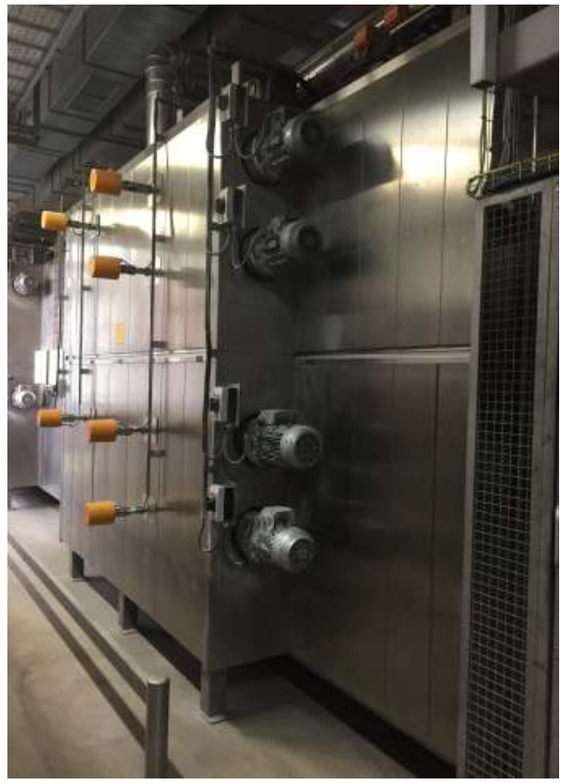
POWER AND INDUSTRY 2017 SUCCESS STORY

OPERATIONAL SAFETY WITHOUT LEAKS A FUNDAMENTAL REQUIREMENT

Due to the strict requirements of the food industry, a complete absence of leaks is essential in these production steps, necessitating the use of the CMIT series of the ALLMAG® product family from Allweiler®. These are magnetically-coupled single-stage volute centrifugal pumps with a hermetically sealed design that prevents all leaks. Their patented design principle also provides exceptionally high operational safety and reliability.

This is very important because if the fully automated process was interrupted by the failure of even one pump, the temperature in the stations would drop within a few minutes. Such a disturbance to the continuous and complex process would result in quality inconsistencies, forcing the company to destroy the products and suffer a significant loss.

But the Allweiler® pumps selected by Coppenrath & Wiese have fully met the company's expectations for safety and quality in the plant's production system. "Since their installation sixteen years ago, these pumps have been running with no disturbances and have proven to be highly reliable components," according to Andreas Beckmann, director of the engineering department.



Oven with pumps of the CTWH series on the baking line

COMMITTED TO FUTURE PERFORMANCE

In order to ensure that this high level of operational safety continues into the future, Coppenrath & Wiese is supported by Allweiler's PumpService program of technical expertise. Service firm Andreas Dickten Montageservice provides continuous monitoring of the entire system as well as skilled support during yearly service and repair measures.

Of course, Allweiler® minimizes the amount of time that Andreas Dickten must spend on service-related issues through the design of its pumps, bringing tangible benefits to the customer. In particular, the CMIT pumps used in the tertiary loop are characterized by unparalleled durability in continuous operation because the magnetic coupling eliminates all of parts that wear found in conventional designs.

Considering the fact that Coppenrath & Wiese must stop its production lines for maintenance and service, this built-in durability has a direct positive effect on the company's bottom line. The discontinuation of some seasonal products necessitates the temporary stopping of a production line. But Coppenrath & Wiese can plan for these window of time with a high degree of accuracy, virtually eliminating unanticipated downtime during the high season that would affect the company financially.

COLFAX Fluid Handling

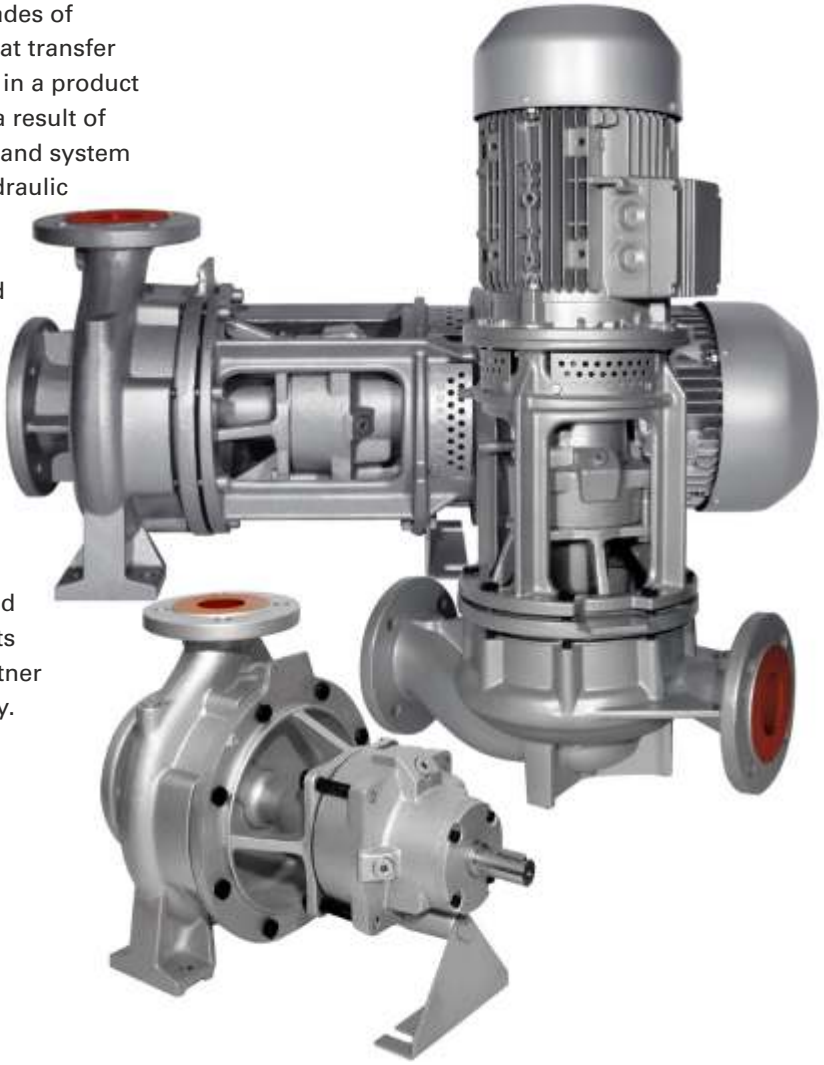
REDEFINING WHAT'S POSSIBLE

THE RESULT

Coppenrath & Wiese continues to count on Allweiler® as a long-term partner for successful production in its baking facilities. As a leading manufacturer of thermal oil pumps, Allweiler® brings this valued customer decades of experience and know-how in the field of heat transfer applications. Every new project culminates in a product that meets individualized requirements as a result of intensive collaboration between engineers and system operators. A variety of sizes for optimal hydraulic dimensioning in various configurations are available according to the needs of the application. Pumps with separately coupled motors and foot attachment on a base plate or directly coupled in block or inline versions with both vertical and horizontal installation options provide flexibility and ensure that the customer will have maximum operational efficiency and reliability for the entire system.

Coppenrath & Wiese will continue to expand in the future and Allweiler® will remain by its side as a long-term, expert and reliable partner for heat-transfer pumps in the food industry.

Allweiler® ALLHEAT® GP-Block-Inline



Power & Industry Products & Services

COLFAX® Fluid Handling

ALLWEILER® HOUTTUIN™ IMO® WARREN® ZENITH®

REDEFINING WHAT'S POSSIBLE