

Case Study: High-Tech Pump Technology in the Cellar Proves Fruitful



Application: Food Processing

The Kelterei Walther at Bruchköbel has invested around 700,000 Euro in enlarging and modernizing its cellars for the production of apple juice, fruit juices and cider.

The modernization mainly concerned the bottling line, which was provided with a new tunnel pasteurizer complete with cooler.

To equip and supply the system with fresh water and circulating water at varying temperatures for pasteurization, cooling and energy exchange, centrifugal pumps were installed by ITT Lowara of Großostheim. These ensure high availability and cost-efficiency of the entire system.

The tunnel pasteuriser saves time and energy

The term pasteurization refers to the rapid heating of substances to 60-90°C to kill microorganisms. This process is used in the food industry to preserve foods and beverages in glass jars, cans or bottles. To process high volumes, pasteurizers are used which perform the operation automatically and safely by spraying the containers with hot water. Depending on requirements, pasteurizers of different types and sizes are used.

Pumps always operating

Energy saving is important. But one thing is really imperative, especially for pumps installed in a plant with complicated engineering processes: they must work, work and work. From the user's point of view, and for the entire production process, it is essential for the pumps to work at all times; this is where the investment really brings returns. Critical operating conditions can be prevented only through the excellent design of the entire pumping system and the use of high quality components.

Pump specialist ITT Lowara, and the system manufacturer, ESV Spennes of Brüggem, both considered these factors at the time of planning the pumps. By using data on the usage and processes, an optimum configuration of the pasteurizer pumps was proposed.

The pasteurizer was equipped with six Lowara stainless steel centrifugal pumps with variable speed controllers, with an individual power of 1.5 kW, model SHS4 80-160/15/P. Each high-performance pump was designed for a flow rate of 60 m³/h and is suitable for the food sector. This allowed them to satisfy all the firm's needs related to the process and to the system.

The Kelterei Walther is very satisfied with the new system, which combines technology with safe processing. In comparison with the chamber pasteurizer used previously, heat losses and long delays in juice pasteurization have been reduced to a minimum. The result is a substantial improvement in product quality, thanks to high-tech applications in the cellar.

More information about the involved products:

[SH](#)

Centrifugal pumps manufactured in AISI 316 stainless steel in compliance with EN 733 – DIN 24255