GF Piping Systems

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COOL-FIT 2.0

Perfect printing

Label printing plant: “D.E.S.”, Landau (Palatinate region), Germany

Reliable cooling ensures high production quality and employee satisfaction.

Reliable cooling ensures the highest quality

The special printing plant D.E.S. – The label specialist in the German town of Landau (Palatinate region) produces high-quality labels for wine bottles, spirits, and cosmetics - a total of 110 million units per year. The offset and digital printing machines in the 2000-square-meter production hall require a room climate that is as stable as possible, regardless of the time of year. Tolerance range: +/- 2.5 degrees Celsius. This is the only way to guarantee top quality printing. COOL-FIT 2.0 provides this reliability as part of the cooling solution while helping the company reduce energy costs.

Project background

Following a change of ownership, the printing plant expanded its production capacity from one to three machines. The reliable air conditioning of the production hall is decisive for high print quality: If the printing rollers heat up excessively, the ink liquefies too much and runs. If the air humidity is too high, the printing paper quenches and warps. Production at the company takes place around the clock, five to six days a week, depending on capacity utilization. Therefore, the new cooling solution had to be installed as quickly as possible.

Selected technical solution

On a 150-square-meter gallery, the heating and air-conditioning company Lehnerts & Müller (Wittlich) installed four cooling units, which cool water to five degrees using air cooling. The water is distributed via a ring pipe on the ceiling of the production hall to two circulating air coolers and to the machines working with plate heat exchangers. For the main distribution pipe COOL-FIT 2.0 was chosen with a diameter of d63 mm and a total length of around 250 m. This solution provides a year-round room temperature of 26 degrees Celsius (+/- 2.5 degrees Celsius) and a constant humidity in the range of 40 to 50 %. In addition, manually operated ball valves type 546 with insulation and flexible hoses were used for connection to the machines, which allow quick installation during ongoing operations.

Improvements achieved

The customers' desire for safety was met by the corrosion-free, steam and humidity-resistant solution as well as 30% improved energy efficiency. The cooling solution is visually well integrated into the production premises and complies with the desire of D.E.S. for a visually attractive system.

The ball valves type 546 in use in the printing house.

The connection to the circulating air coolers with COOL-FIT 2.0.

Customer benefits

- **Reliable room cooling allows high product quality and employee satisfaction**
- **Fast installation to ensure the start of production without unnecessary delays**
- **Clean installation and permanently visually appealing solution**

Your contact
Georg Fischer GmbH
73095 Albershausen

Telefon: +49 (0) 7161 302 0
info.de.ps@georgfischer.com
www.gfps.com/de

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