

Steam network monitoring by means of pressure sensor

Steam boiler plant Textile branch Army Logistics Centre Thun

The Logistics Centre of the Swiss Army in Thun operates one of the largest laundry centres in Switzerland. The steam for the textile branch is generated via a steam-steam heat exchanger. The energy for this comes from the Thun waste incineration plant (KVA).

Due to vibrations, the pressure switch for monitoring the steam network was repeatedly triggered. This led to the shutdown and standstill of the system. A pressure sensor with an evaluation device was installed instead of the pressure switch. The pressure sensor can debounce the pressure fluctuations caused by vibrations and thus prevent the constant shutdown of the system without reducing the Safety Integrity Level (SIL).



Figure 1: New pressure sensor next to manometerng

With the newly installed HMI, the current status of the system is visible at a glance. Attention was paid to the greatest possible flexibility without restricting safety and functionality. In addition, the control behaviour of the steam converter, as well as that of the field devices, can be set, controlled and monitored.

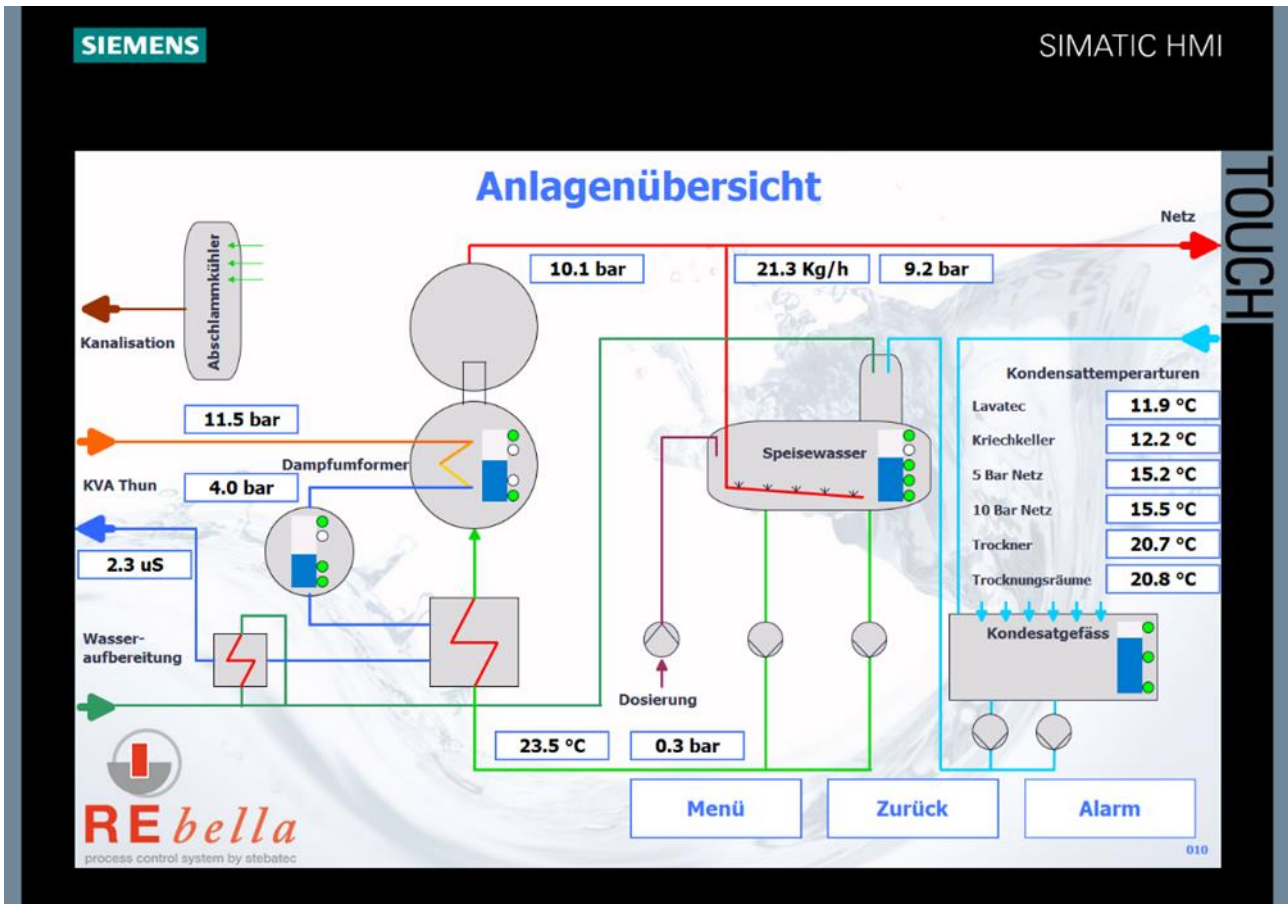


Figure 2: Overview picture HMI

The control programme was also migrated from STEP7 5.6 to the latest version STEP7 V16 using TIA Portal, which enables complete access to the digital automation.

The successful safety acceptance in cooperation with the SVTI (Swiss Association for Technical Inspections) rounded off the successful project completion and also contributed to the full satisfaction of the customer.