



Starzinger trusts in zenon for drinks filling.

Starzinger GmbH based in Frankenmarkt, Upper Austria, is the third largest producer of alcohol-free drinks in Austria. In addition to filling its own products, the company fills approximately 250 products from around 100 other international companies. In order to maintain an overview with this amount of diversity, the drinks group uses the expertise of Preishuber GmbH and zenon from COPA-DATA.

Since its formation in 1906, Starzinger GmbH has gradually made a name for itself on the Austrian and international drinks markets. Today the company has three sites, two private breweries and a total operating area of 65,000 m². In Austria, Starzinger GmbH is primarily associated with the company's own brand names, Frankenmarkter mineral water, Frankenmarkter lemonades and "Schartner Bombe". 230 employees at three sites ensure that the total of four PET, three glass and two can filling

facilities work smoothly and the total output of 170,000 units per hour is achieved.

When you enter the equipment hall in the headquarters in Frankenmarkt, you immediately notice it's all about rhythm, flexibility and activity 110 employees and six facilities ensure that this remains the case. In addition to the own-brands mentioned, additional mineral water brands, wellness drinks, soft drinks, sparkling wines, wines, black coffee and, particularly,

energy drinks are filled, packed and dispatched. The facilities run in shifts almost 24 hours a day: two PET lines with a maximum output of 1 x 10,000 liters per hour, and 1 x 22,000 liters per hour, two can facilities with a maximum output of 20,000 or 40,000 can per hour, a glass line with a maximum output of 10,000 liters per hour and a container facility. An over-arching process control system is a special challenge: the equipment consists of different machines from different manufacturers.

PRECISION IS THE MOTTO AT STARZINGER.

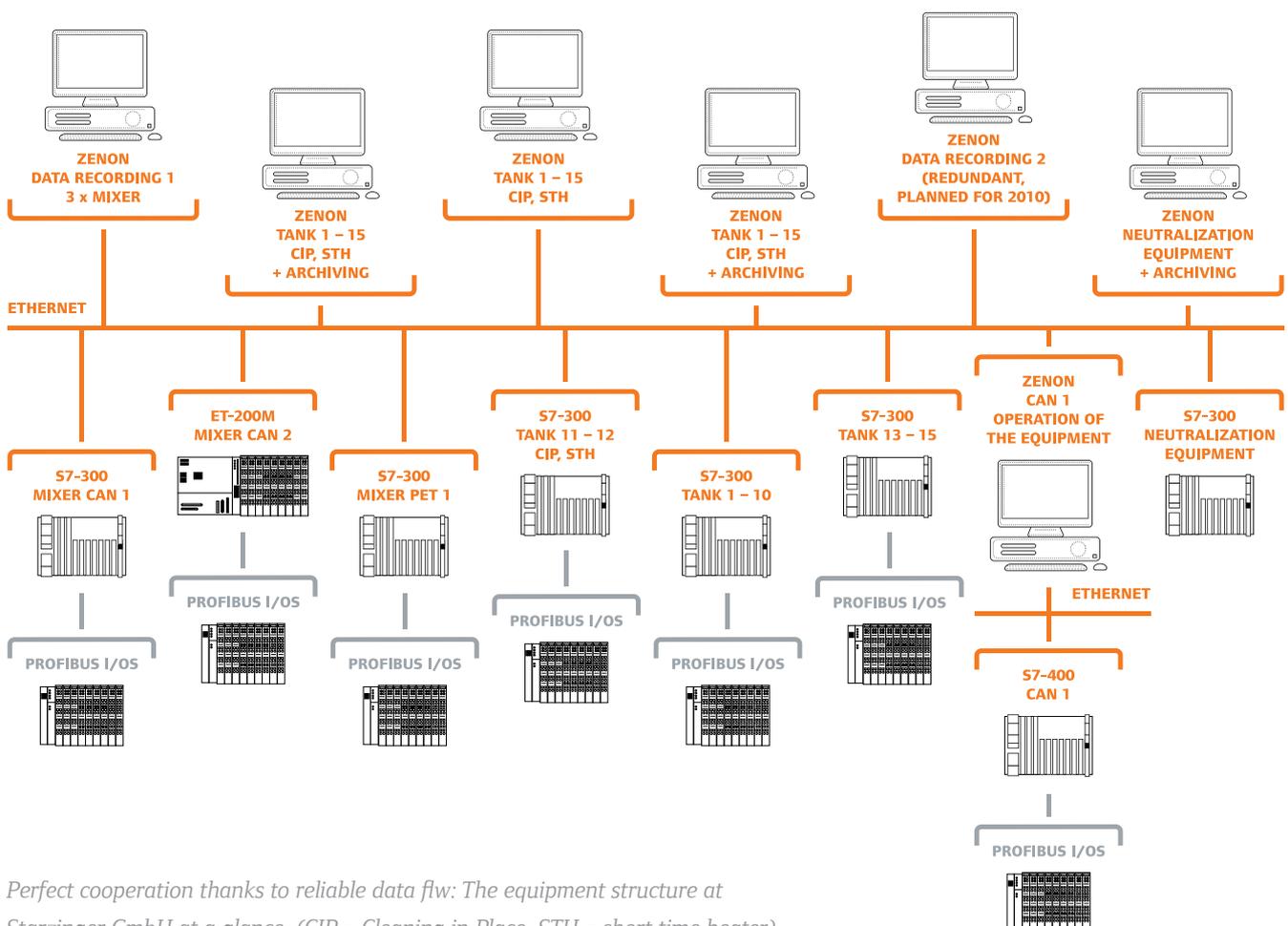
The factory in Frankenmarkt was expanded during the period from 2001 to 2003. The complexity of production increased accordingly. Numerous data must be evaluated, analyzed and presented to the authorities at state, federal, EU and

international level. There is additional pressure from the customers, who require high product quality and punctual delivery. To be able to continue to meet these expectations, Starzinger GmbH brought specialist support to Frankenmarkt. Together with Preishuber GmbH from Pöndorf, experts in electrical and automation technology, a process control system was to be implemented that would record all process-related data and visualize the equipment and its processes. zenon came into play at this point. Georg Hager, Production and Quality Manager at Starzinger GmbH in Frankenmarkt says: "The increase in contract filling requires precision and efficiency whilst maintaining our high quality. In order to keep the production as flexible as possible and to be able to meet the increasing requirements from authorities and customers, we looked

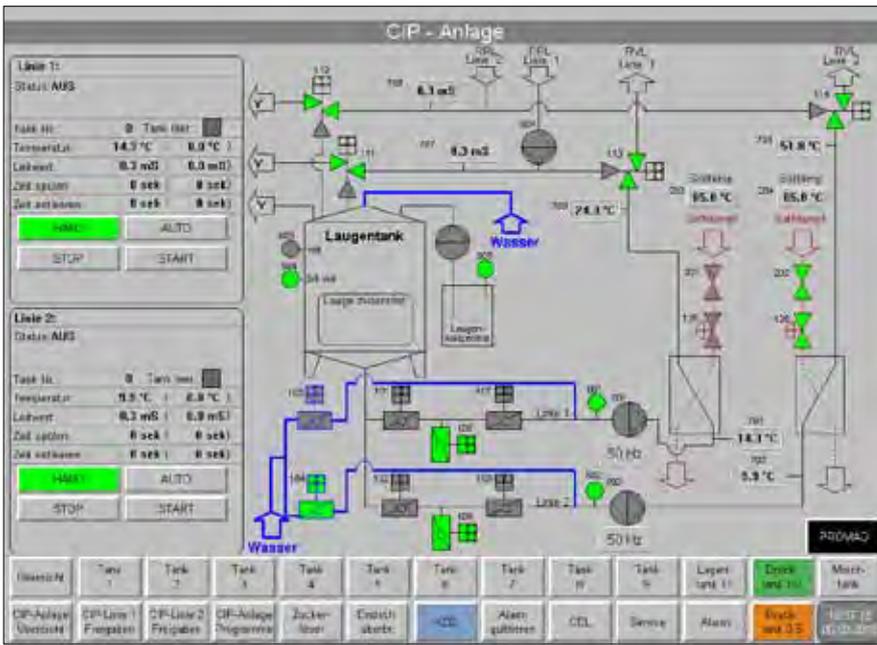
for a new solution. With zenon, we have found a system that can meet these requirements. With zenon we can utilize all resources optimally, record fewer losses and reduce costs as a result."

FROM THE PRODUCTION LINE TO THE SUPER-MARKET SHELF.

There are a total of 18 tanks at Starzinger GmbH located throughout the factory. In them the different fluids are stored, before being processed into the end product in the correct mixing ration. In order for equipment downtimes to be kept to a minimum, the syrups are stored temporarily in their own syrup tanks and mixing tanks. Only in this way is it possible to prepare the diverse drink mixes for filling in time. Five additional pressure tanks will ensure that this preproc-



Perfect cooperation thanks to reliable data flow: The equipment structure at Starzinger GmbH at a glance. (CIP = Cleaning in Place, STH = short time heater)



High quality demands are made on not only the drinks and their packaging but also on the hygiene in the production process. With CIP (cleaning in place) the production equipment is properly cleaned. zenon provides for the necessary overview.

essing remains possible. Two of these are already in operation, three more are to follow.

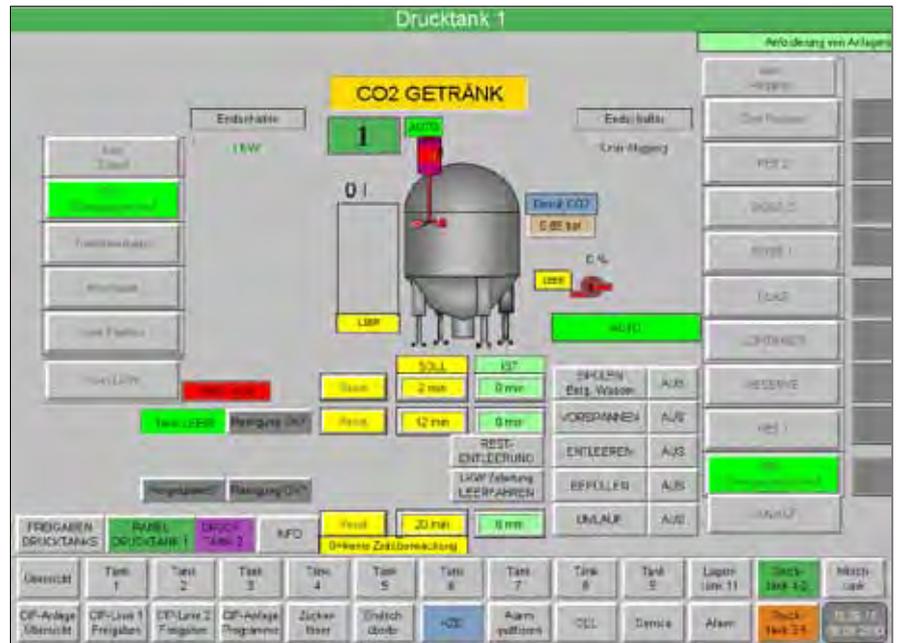
At the start of each filling line, mixing equipment ensures that the individual contents are mixed at the proper ratio. Before filling, the bottles or cans run through various processes on a conveyor belt: first they are tested to see that they conform to standards then they are disinfected and cleaned. In doing so, zenon records the respective status information and registers any deviations from standards in the alarm information list. The PET bottles must be heated and blown up before filling, which takes place at a pressure of 40 Bar. The cans are generally already supplied pressed. These are also first checked for quality, cleaned and then filled according to a pre-defined recipe. After being sealed with an alu-

minum cover, they are pasteurized at 72 degrees Celsius and thus made non-perishable. Whilst a pre-sorted amount of cans come out of the pasteurizer and are then cooled, the next cans are heated by means of energy recovery. In doing so, zenon monitors the parameter temperatures and provides the values in the event list. If a value is outside of the pre-defined limits, there is an entry in the alarm information list. Thanks to precise archiving of data, the temperature values can be shown at any time. The cans are ultimately packaged according to the printed “best before” date on the bottom of the can, placed on pallets in the warehouses and dispatched.

DATA VOUCH FOR QUALITY.

These processes are visualized and oper-

ated by touch-PCs that serve as an interface for the users, directly connected to the equipment. Twelve of these are located throughout all facilities – zenon runs on more than half. They are controlled centrally by the control system, which runs in another room on another computer and checks all flows of data. As an additional module, Starzinger GmbH uses the archive server, extended trend and the report generator. With the archive server, the drinks filler registers all process-related data, online and in real time. Extended trend makes it possible to look at individual data in a combined form as a trend, according to requirements and parameters set. The reports are especially important for the drinks filling company. Mr. Hager explains: “We create what is known as a batch protocol for each item of equipment for our own process moni-



The new pressure tanks at Starzinger GmbH make coordinated preliminary work possible, in order to be able to fill the large amounts of the diverse end products. In zenon, all important parameters such as fill level or pressure are traceable.

toring and for the authorities, which contains all process-related values such as pasteurizer temperature, Brix values or CO2 values. We print out this log at regular intervals and present it to authorities such as the health authorities. All data required can be seen at any time. Thus we can prove at any time that the values of a certain batch corresponded to the guidelines. This traceability is in line with our commitment to quality here at Starzinger.”

DIFFERENT SOURCES OF DATA – ONE ARCHIVING PROCESS.

Filling facilities are not yet currently integrated into a superordinate network structure - everything is recorded locally. Stephan Preishuber, CEO of Preishuber GmbH says “The biggest challenge for implementation was the total archiving, because data from different equipment from different manufacturers had to be combined. However, there were no problems thanks to the openness of the zenon system. We were able to prepare all data accordingly, without limiting production or intervening during ongoing operation. A network, ideally also redundant, would be a sensible way of developing this project.”

AN OVERVIEW OF THE PROJECT AND ITS ADVANTAGES:

- ▶ zenon 6.20 SP4, archive server, extended trend, report generator
- ▶ Real-time recording of data and central archiving ensure traceability
- ▶ Extended trend enables flexible production
- ▶ Report Generator provides all process-related data at a glance
- ▶ Optimal utilization of resources – less loss – cost savings
- ▶ Simple connection of different control systems (Siemens and B&R) thanks to zenon’s hardware independence