



ULTRAFILTRATION PLANT SOLUTION

CASE STUDY

Initial situation

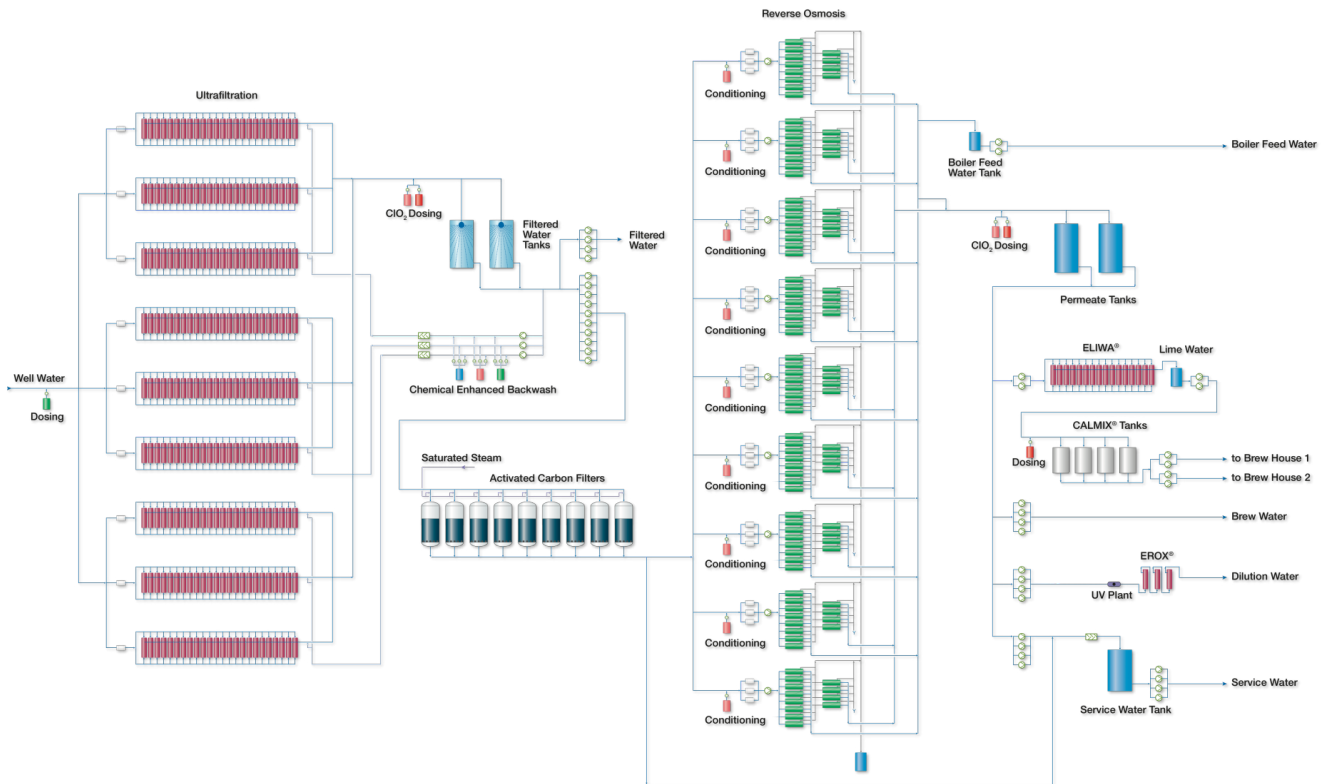
The brewery in this case study had a water treatment system consisting of classical gravel filtration to remove iron and manganese, disinfection with chlorine dioxide, activated carbon filtration and reverse osmosis with subsequent CALMIX® system. With this system, brewing water, dilution water, process water, boiler feed water and filtered water was prepared. The system had to be extended in the course of an expansion of the brewery capacity. On this occasion the gravel filtration system was reviewed, as in the past flooding had caused pollution and microbiological contamination of the wells. The production had to be temporarily suspended for this reason.

The EUWA solution

To completely eliminate the potential risk of contamination, EUWA replaced the entire gravel filtration by ultrafiltration. This membrane separation will not only remove iron and manganese from the water, but also add the benefit to remove micros and reduces the turbidity reliably and independent of the raw water quality to values below 0.1 NTU.

Subsequently, the filtered water is treated with chlorine dioxide to protect it during storage against recontamination.





Practical experience

The ultrafiltration is designed for a capacity of 1,155 m³/h. It was integrated into the existing water treatment plant and simultaneously the whole water treatment system extended to its final capacity while the brewery was fully operating.

The ultrafiltration is back-washed or chemically enhanced cleaned on demand based on the build-up of fouling on the membrane as indicated by a differential pressure build-up across the ultrafiltration membrane rather than basing flushing on treated water volume.

In this way, water and chemical consumption of the plant is significantly reduced, which positively reflects on the operating costs.

Overall performance	1155 m ³ /h
Filtrated water	105 m ³ /h
Brewing water	210 m ³ /h
Dilution water	120 m ³ /h
Process water	390 m ³ /h
Boiler feed water	15 m ³ /h
CALMIX	15 m ³ /h
Remaining consumers	300 m ³ /h



With more than 50 years of experience in industrial water treatment for the beverage and food industries, EUWA is specialized in individually tailored solutions for water treatment.

Visit www.euwa.com for more about our patented processes and systems.

EUWA Water treatment systems

Daimlerstrasse 2-10
71116 Gärtringen
Germany
Tel.: +49 7034 275-0
info@euwa.com
www.euwa.com

EUWA Singapore Pte Ltd

23 New Industrial Road,
#07-08 Solstice Business Centre
Singapore 536209
Tel.: +65 6733-6006
euwasingapore@euwa.com
www.euwa.com