



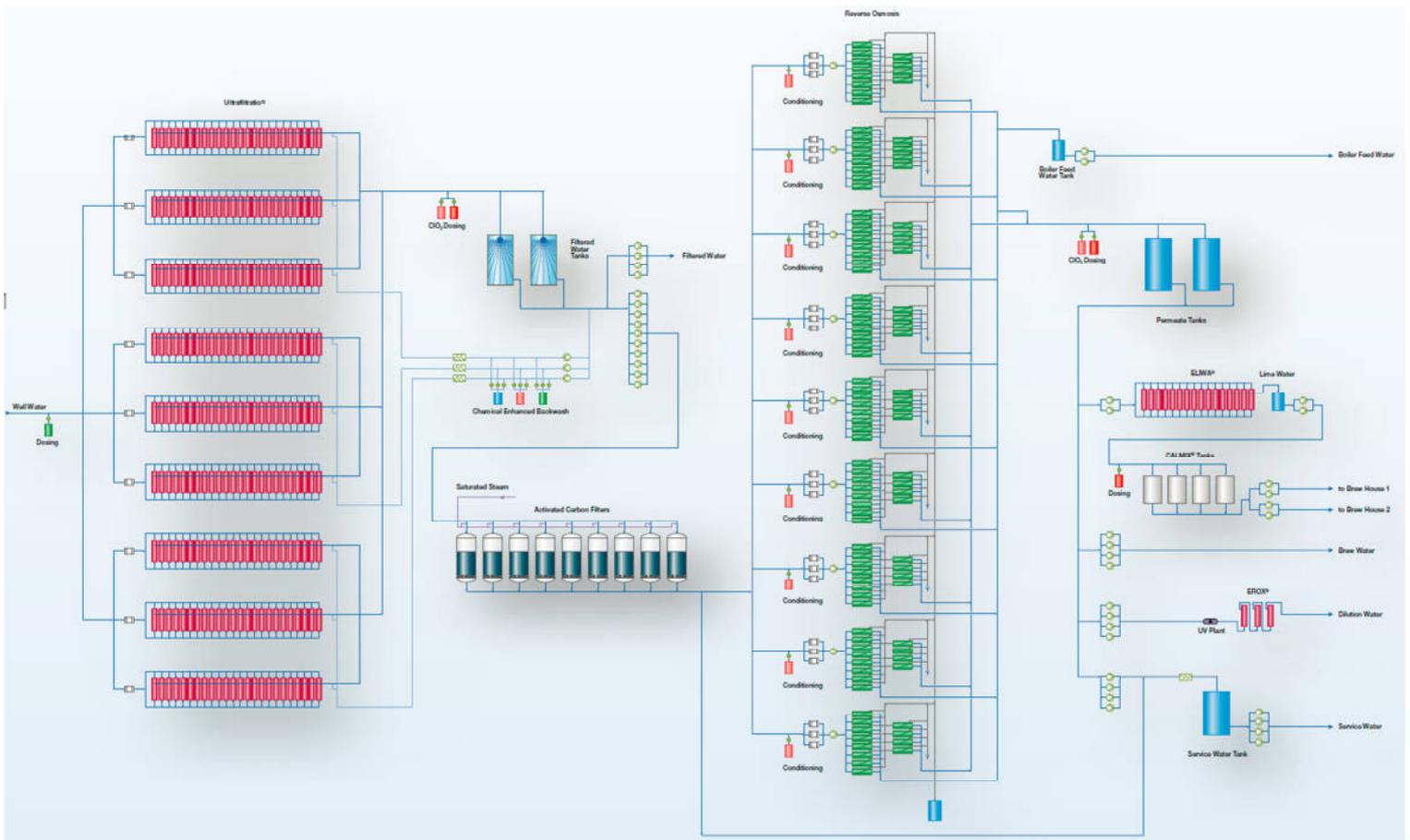
EUWA Ultrafiltration – Plant Solution

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.

Gesamtleistung:	1155 m ³ /h
filtriertes Wasser:	105 m ³ /h
Brauwasser:	210 m ³ /h
Verdünnungswasser:	120 m ³ /h
Betriebswasser:	390 m ³ /h
Kesselspeisewasser:	15 m ³ /h
Calmix:	15 m ³ /h
restliche Verbraucher:	300 m ³ /h

THE WORLD OF WATER TREATMENT

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