



INDUSTRY Chemical industry

APPLICATION Hydrogen production

Water treatment for alkaline electrolysis

The green hydrogen fuel company Everfuel is leading the flagship project, HySynergy, in establishing a 20 MW Power-to-X (PtX) facility. The hydrogen will be supplied to the nearby refinery in Fredericia as well as zero-emission fuel for mobility and industrial partners.

Production of green hydrogen requires ultrapure water. The choice of electrolyzer technology and source water determine the required water treatment.

The HySynergy project uses alkaline water electrolysis (AWE) technology and the source water is city water free from chlorine. The water treatment solution consist of softening followed by double-pass membrane filtration to obtain ultrapure water quality.

TECHNICAL DATA

- Water source: City water without chlorine
- Flow (max): 4500 L/h
- Conductivity: < 5 $\mu\text{S/cm}$

UNITS IN PLANT

- Softening unit type SMH 602-F
- Brine tank
- Double-pass reverse osmosis type DPRO C3-6/3
- Dosing tank with mixer
- Dosing pump
- Feed water tank 2 x 5000L
- Booster pump