Martens

Member of GHM GROUP

Fully-automatic hardening of drinking water on ships

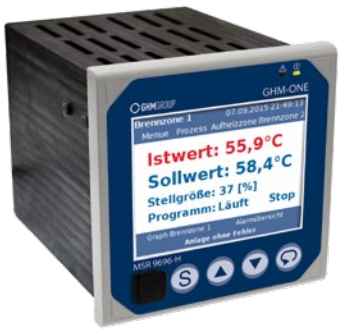
GHM-ONE with pH probes

Application case

Salt water is transformed into drinking water on ships by reverse osmosis systems. Because the water generated in this manner would have properties that would corrode the pipelines, it is passed through a dolomite filter and CO_2 is added to harden it. With this adjustment of the scale carbon dioxide buffer, the taste of the drinking water is also improved.

In order to operate the system efficiently, the addition of CO_2 takes place proportionally to the volume flow of drinking water consumed and depending on the pH value.

A central system is required to monitor the measuring points in the supply line to the hardening filter and in the drain line, as well as automatic regulation of the CO_2 dosing quantity.



GHM-ONE

BENEFITS:

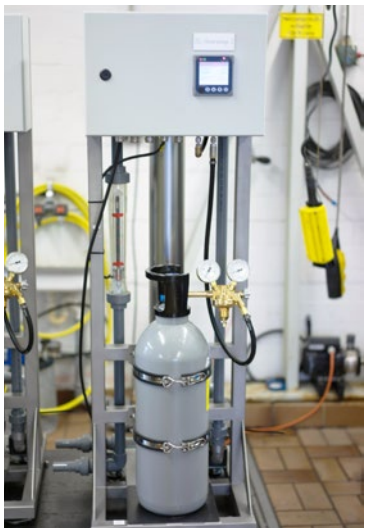
- Replacement of multiple display units (2x pH, 1x flow) with central visualisation device
- Possibility of external parameterisation of the CO_2 mass flow regulator
- Plain text operator guidance through the calibration process of the pH probes
- Diverse configuration options: Multilingual, recording and graphical presentation of process data, password-protected operating levels

Our solution

Our GHM ONE multi-function regulator is the optimal solution for this measuring and controlling task. Our compact device is installed in the switch cabinets of the water preparation system for this application.

In normal operating mode, the large touch display shows the measuring results of the two pH electrodes. It also allows the user to calibrate them and define limit values. When calibrating the pH electrodes, the GHM-ONE offers the operator guidance by describing the procedure in detail with text instructions. The CO_2 dosing quantity can also be adjusted by the versatile multifunction device.

All processes required for this task converge at a central point thanks to the GHM-ONE. This saves space and reduces the number of display units required.



Our customer

R.T.S. Rochem Technical Services is one of the world's leading manufacturers of reverse osmosis systems. The main applications are drinking water preparation (military and civilian) and purification of heavily contaminated waste water, such as landfill seepage water.

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Issued 06/19