

FWO-Control - OEM

- sustainable energy and cost savings especially for feed water boiler -

FWO-Control-OEM provides OEM suppliers with an efficient way to save energy and costs on their customers' feed water boilers. Practical examples show that a savings potential of up to 80% of the vapour steam losses is possible. Regardless, FWO-Control-OEM offers the suppliers the opportunity to offer their customers with their know-how efficiency measures for an energy management system according to ISO 50001.

After approval, FWO-Control-OEM monitors the water quality of the boiler feed water. This continuous monitoring makes it possible to react very dynamically to load fluctuations and to work particularly efficiently in boiler operation, whereby chemicals can only be dosed according to qualitative requirements and not according to quantitative specifications. Recognized oxygen-free space allows a saving of recent loss of vapour steam.

To prevent deposits and/or corrosion in boilers, conditioning agents are added. The fully automatic, continuous measurement and monitoring of the feed water allows the OEM to implement a quality-related demand-based dosage of the conditioning agent instead of the rigid quantity-related dosage.

This leads to a significant reduction in the used chemicals, with up to 60% savings in practice. The consequence is that a higher thickening is achieved in the steam boiler. This reduces the energy losses and amounts of desalination.

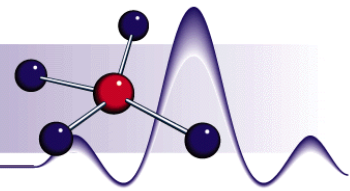
Divided into the three modular sensor units conductivity, pH and oxygen monitoring, it is possible with the FWO-Control-OEM to continuously monitor the specified analytical threshold values of the feed water and continuously via an external dosing control even with changes in the boiler operation of alkalization and residual oxygen binding according to customer-specific requirements. Thus, an optimal use of chemicals with a high analytical efficiency for the boiler operation in a variety of regimes is possible.

The measured values of pH, conductivity and residual oxygen content are stored with a time stamp in an electronic logbook and can be transferred to an external PC via a data stick and evaluated there.

Measured values are visualized in the display and transferred via an Ethernet interface to the OEM control system, where the customer-specific controls, regulations for inhibitor or vapor control must be implemented. Regardless of this, a graphical measurement output is also possible on the display as a function of time. Optionally, FWO-Control-OEM also offers GSM remote transmission and SMS service alerting, but these must be taken into account in the communication protocol. Thanks to the latter, prioritized errors are transmitted to selected persons in charge via GSM communication.

Sensor calibrations must, if necessary, be carried out manually on the device. The required user guidance is displayed in the password-protected touch panel.





TECHNICAL DATA

Dimension in case:	600 x 980 x 220 mm (W x H x D), wall mounted
Weight:	about 35 kg
Surrounding temperature:	5 °C ... 50 °C
Relative humidity:	20 % ... 80 %
Cooling water connection:	shut-off branch ½" internal thread
Cooling medium:	pressurized supplemental water, 1...10 bar, 5...20 °C
Hot and feed water connection:	shut-off branch ¼" internal thread with upstream hot water magnetic filter 100µm
Quality hot and feed water:	pressure afflicted, max. 10 bar, sediment-free
Drainage:	pressure-free, PA-pipes OD 15 und OD 8 mm

OPERATING DATA

pH measuring range:	6 ... 13 pH (temperature compensated)
Oxygen measuring range:	0,001 mg/l ... oxygen saturation (temperature compensated)
Conductivity measuring range:	1...1.000 µS/cm (temperature compensated)
Measuring cycles:	continuously after approval
Sensor control:	manually at the device; optional calibration solutions
Operating time sensors:	about 6...12 months, no guarantee
Signaling:	temperature exceeded / sensor service

ELECTRICAL CONNECTIONS

Power supply:	power supply unit 230 Volt, 50 Hz (protection class: I)
Operating voltage:	about 20 Watt
Alarm contacts:	potential-free changeover contact, max. 230 Volt, 10 A
Ethernet:	TCP/IP network protocol
Codierung:	binary or ASCII execution
Release measurement:	potential-free input or network
Optional:	router with GSM connection