

#### PRODUCTS + INSTRUMENTS





#### **CUSTOMER: KURITA EUROPE GMBH, GERMANY**

Kurita Europe is a subsidiary of Kurita Water Industries Ltd. headquartered in Tokyo, Japan. Founded in 1949, the Group has 7,500 employees worldwide with a turnover of approximately 2.1 billion USD. Kurita is one of the international market leaders in industrial water and process treatment. Founded 1989, the European team consists now of about 585 employees at 12 various locations, covering the EMEA (Europe, Middle East, Africa) sales area. With own production facilities Kurita contributes to a reliable supply chain for our customers. Own R&D centers, laboratories and pilot test plants allow Kurita to develop continuously customised state-of-the-art technologies.

#### Kurita Europe Technology Center

The Kurita Europe Technology Center in Germany is a state-of-the-art R&D facility with cutting-edge technology and equipment. It serves as a vital hub for Kurita Europe to develop innovative products and solutions, contributing to the realization of a sustainable society.

"The complete PTFE lining of the reactor as well as of the sensors for temperature and pressure measurement in combination with the simultaneous stirring have been a crucial factor for our purchase decision of the DB-300 reactor." - Dr. Duygu Disci (Innovation Manager CSV & Energy, Kurita Europe GmbH)



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## CHALLENGE

Due to the resistance of standard metal alloy, the researches on chemical and hydrodynamic processes in solutions with a high salt content in the field of energy technology and environmental technology have been a difficult problem to solve for Kurita Europe GmbH. The reactors also have to withstand increased temperatures and pressures for hours or even for days. In order to carry out comparative test series, alternating pressure load has been an issue effecting the resistance of the test apparatus, too.

## **APPLICATION**

Kurita Europe GmbH uses the DB-300 reactor for tests in a temperature range between 100 and 220 °C. In addition, synthetically mixed salt solutions or salt solutions from customer specific processes are used. The researches mainly relate to product stability in the medium used as well as to corrosion tests based on metal coupons. Therefore, maintaining constant pressure and constant temperature conditions over several days is mandatory. For this process, the reactor should be easy to operate.

## EQUIPMENT

high preactor DB-300 reactor with BLH-650/BAH-300 combination for heating and stirring

# **RESULTS/BENEFITS**

The complete PTFE lining of the reactor and the measuring sensors enable Kurita to work with strongly saline media. The continuous monitoring of pressure and temperature contributes to achieve high reproducibility in comparative tests. The design and the closure system of the auto-clave allow an easy handling and impresses by its durability.

"The combination of the single components for different experimental setups allows us a multiple deployment of the DB-300 reactor and therefore a cost reduction. The easy handling of the often heavy reactors was another reason for the purchase decision", explains Dr. Duygu Disci, Innovation Manager CSV & Energy at Kurita Europe GmbH.

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