

Engineering, Design and Supervision of a brine treatment plant in Colombia (75 m³ / h)

On behalf of the company Chemieanlagenbau Chemnitz GmbH (CAC) a brine treatment plant with a total capacity of 75 m³ / h was constructed and realized for Brinsa S.A. in Colombia.

The complexity caused by high operating temperature, high operating pressure and aggressive media has been solved successfully.

Scope of the brine treatment plant (main components):

- 3 ion exchanger/ co-current (1.700 mm * 3.000 mm)
- 1 fully automatic regeneration station
- 1 resin trap
- Piping system completely prefabricated
- Armatures and measuring devices
- Pneumatical and electrical components

A special feature of the plant: During the commissioning one out of three ion exchangers acts as a mercury trap and the following two ion exchangers serves to soften the salt brine. In the further course of commissioning all three ion exchangers serves to soften the salt brine for the downstream chlorine electrolysis.

Project course

KB.tec GmbH undertook the tasks of engineering, construction and supervision for the project. Thus the plant components were designed, manufactured, packaged and shipped to Colombia by KB.tec GmbH. In Colombia the plant was installed by employees of Brinsa and CAC. But the assembly and commissioning works were supervised and supported by KB.tec.

The commissioning of the plant was made in two steps: Initially, one out of three ion exchangers acts as mercury absorption and the other two were used in the lead-leg process to soften the salt brine. After an operation period of approx. two months, the brine circuit is free of mercury and the operation was switched to three ion exchangers for softening.

After the change of the ion exchanger material of the first column the plant was commissioned successfully in cooperation with Brinsa and CAC. In addition various operation modes has been tested successfully.

Since August 2016, the plant successfully produces softened salt brine.

