Pressinformation

BINE Informationsdienst

Bonn, 18 June 2012

Investigating underground corrosion processes

Geothermal research laboratory at Groß Schönebeck

Deep geothermal plants in northern and southwestern Germany often work with highly saline thermal waters. The high salt content and pressure, dissolved gases and the temperature level mean that all plant components are at a high risk of corrosion. At the geothermal research plant at Groß Schönebeck, the German Research Centre for Geosciences in Potsdam is systemically investigating this issue. The BINE-Projektinfo brochure “Corrosion in geothermal plants” (06/2012) presents this work, which involves continually monitoring the physical and chemical parameters of the underground water and testing the corrosion resistance of different materials.

To ensure the reliable and economic operation of geothermal plants, it is important to know the precise composition of the deep waters (fluids) in order to be able to estimate the possible physical and chemical fluid interactions. For this reason, a geothermal plant is operated under realistic conditions at Groß Schönebeck in which the fluid and gas monitoring is conducted during the ongoing operation. The facility also has several corrosion test tracks. Here the corrosion resistance of components and material samples, including various steel types and nickel alloys, are tested until the reactions reach equilibrium on the material surfaces. The intention of the tests is to check the results of previous laboratory investigations under practical conditions.

Its location and high salt content means that the Groß Schönebeck facility is typical for many geothermal sites in Germany. Fluid parameters from plants in other regions are incorporated into the investigations. The intention is to develop a fluid-specific and site-dependent material application catalogue.

Contact
Uwe Milles
presse@bine.info

BINE information service
Kaiserstraße 185-197
53113 Bonn
www.bine.info

BINE is an information service by FIZ Karlsruhe
www.fiz-karlsruhe.de and supported by
Federal Ministry of Economics and Technology
on the basis of a decision
by the German Bundestag