

Bonn, 25 September 2018

Building large heat storage tanks from segments

Construction technique is also suitable for solar systems and heating networks

A consortium from research and industry has deployed segmental construction for a larger storage tank for the first time. The storage tank is made from enamelled and sealed steel segments. The construction method has been tried and tested for cooling storage. The new BINE Projektinfo “Cost-saving erection of large heat storage tanks” (10/2018) presents the first results from a demonstration model with a volume of approx. 100 cubic metres. The researchers tested the durability in regard to temperature changes, the corrosion resistance and the suitability of various insulation materials.

The pilot storage tank, installed in Nortorf (Schleswig Holstein) can be charged and discharged with an output of 230 kW. For the first time, the construction principle, which is flexible in terms of shape and size, has been transferred to heat storage for the temperature range of up to 100°C. Heat storage tanks using segmental construction are suitable for both temporary and seasonal storage in solar and district heating systems. Storage sizes of between 500 to 6,000 m³ could also perspective be achieved. Thanks to the low heat losses and a stable temperature stratification, there are many possibilities for use. The concept boasts comparably low investment and operating costs.

The research project is building on the experience gained from a large cool water storage tank that has been tried and tested in the district cooling network of the city of Chemnitz for more than ten years. The research project was jointly carried out by farmatic tank systems in Nortorf as well as teams from Chemnitz University of Technology and Stuttgart University.

The BINE-Projektinfo brochure, which can be obtained free of charge from the BINE Information Service at FIZ Karlsruhe, is available online at www.bine.info or by calling +49 (0)228 92379-0. The brochure cover and additional image material can also be downloaded from this web portal in the press section.

Contact
Uwe Milles
presse@bine.info

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