Press release

July 6, 2017

Bilfinger SE

Carl-Reiß-Platz 1-5
68165 Mannheim
Deutschland

Kontakt
Ullrich Esser
Telefon: +49 621 459-2486
ullrich.esser@bilfinger.com
http://www.bilfinger.com

Bilfinger to supply cloud chamber for international climate research

AIDA research project at the Karlsruhe Institute of Technology focusing on dynamically controlled cryogenic and vacuum technology

Combined experience in special solutions: Bilfinger company Babcock Noell has been awarded a contract to construct a cylindrical, dynamically controlled cloud chamber fitted with highly specialized cryogenic/vacuum technology for the AIDA large-scale research facility at the Karlsruhe Institute of Technology (KIT). The project forms a central element of plans to expand the facility for climate research and enhances Babcock Noell's profile as a mechanical engineering specialist and long-standing partner to various international research institutions.

AIDA is the abbreviation for "Aerosol Interactions and Dynamics in the Atmosphere". The purpose of the ambitious project is to conduct research into the impact of ice-forming aerosol particles on the climate, the weather and the environment as well as the formation of clouds and precipitation. Aerosols are minute suspended particles arising from diverse natural and man-made sources. Most of them serve as condensation germs for the formation of water droplets in the clouds that freeze at around minus 35 degrees Celsius. Many of the planned AIDA experiments will provide details of the formation and growth of ice particles which exert key influence in the clouds on precipitation and the earth's climate system.

Top precision and dynamics
Babcock Noell is developing and supplying a cylindrical cloud chamber for the sophisticated KIT research project based on the latest state-of-the-art cryogenic/vacuum technology. With its long-standing experience in this area, it is offering a system that makes it possible to dynamically control the temperature in a range from plus 30 degrees Celsius to minus 60 degrees Celsius with a deviation of less than one degree Celsius.

“The development and construction of the cloud chamber are extremely complex, while the ensuing milestones from detailed planning to production and assembly as well as the start-up pose their own unique challenges with a special application of this kind,” explains Dr. Ronald Hepper, managing director of Babcock Noell. “Backed by our long-standing experience and the quality of our work, we want to contribute to the success of this research project and help to ensure that the ambitious targets of the AIDA project are met. In this way, it will be possible to forecast rainfalls with significantly greater precision in the future.

Captions

Picture 1
A view inside AIDA: Researchers will be using the facility to see how dust particles, for example, influence the formation of clouds and precipitation. (Photo: Martin Lober, KIT)

Picture 2
Structure of the cloud chamber