



FLEXWELL-Project Antarctica, 2023

BRUGG
Pipes
Pioneers in Infrastructure



Project

For the Alfred Wegener Institute (AWI), which operates the 'Neumayer Station III' research station in the Antarctic, we supplied a customised replacement pipeline for wastewater disposal in the ice field. The station, which has been the base for German Antarctic research since 2009, is a place where researchers live and work all year round. The heated, insulated flexible pipe system was specially adapted to the extreme climatic conditions on site to ensure reliable functionality. A flawless infrastructure is essential for Neumayer Station III in order to maintain research operations and supplies under these exceptional conditions.

Execution

The requirements included a 50 metre long FLEXWELL FHK 127/220 pipe system with two redundant heating wires, which were wound helically around the carrier pipe.

To ensure a constant heating output, the pipe was equipped with a controller that limits the heating output to 30 watts per metre. Due to the extreme temperatures and the environment, the carrier pipe and all external components were made of stainless steel. At the end of the pipe, a welded AV was integrated with additional sealing using a shrink hose.

The customer had specific requirements for the order:

- Delivery on a disposable wooden drum
- Provision of a bending machine for at least one year

The pipe was delivered on schedule at the beginning of August and corresponds exactly to the technical specifications of the system originally used in 2007.

Our flexible manufacturing process enabled the pipe to be produced and delivered quickly so that it could be transported to Antarctica on time.

Result

The customised replacement pipeline ensures the continuation of treated wastewater disposal at Neumayer Station III under extreme conditions. The Antarctic is a fascinating but also hostile place. Without the right equipment, the icy desert can be deadly. At the same time, it offers data treasures that make a decisive contribution to a better understanding of our planet.

The redundant heating of the pipe and high-quality materials ensure long-term, trouble-free utilisation. The project once again demonstrates our expertise in the development and delivery of specialised solutions for demanding applications worldwide.



Trench through east hill.



Trench with gradient is finished, length approx. 50 m.



External drums with straps.



Holding the pipe in the centre of the trench.



Rotzler winch pulls pipe from drum.



Old and new pipe.