So that Mannheim has an uninterrupted power supply

FLEXWELL® Safety Pipe as the oil supply line for the new auxiliary steam generator plant in the large power station in Mannheim

The large-scale power station (Großkraftwerk (GKM) Mannheim has been supplying electric power since 1923 and district heating since 1937, at present from five generator blocks, of which four are in operation. Block 9 is currently being built. Heat is fed into the district heating network of Mannheim, in addition going to heat Heidelberg and Speyer as well.

An auxiliary boiler is a small steam generator in a larger boiler plant which serves to ensure or to back up the supply with steam when the main steam boiler is not operating or can only supply insufficient steam. Gas or heating oil is needed to operate the auxiliary boiler.

The medium (heating oil EL) and the legal requirements were only some of the criteria to consider in looking for the right type of piping for this project. The routing runs above ground alongside buildings, across pipe bridges and along the coal store. On top of this, various differences in height need to be negotiated and a riser line run for 25 m up the outside wall of the flue gas scrubbing plant. All in all, the entire route covers some 750 m.

In addition, the heating oil pipe specification called for a double-walled and monitorable line for safety reasons: it's hard to imagine a better fit for these demands than FLEXWELL® Safety Pipe.

Laying the piping directly off the reel onto the cable racks

The first timeframe for BRUGG Rohrsysteme, one week to lay the first partial stretch of 2 x 540 m of piping onto the cable racks, fell in the middle of March 2013, with sub-zero temperatures and nasty weather conditions. Using a lifting platform, the engineers were hoisted up to a height of 4 m to adjust the remote-controlled laying process with traction ropes. It was important here not to obstruct the internal rail traffic, which continued without interruption. Right at the outset it was necessary to negotiate a structural projection on the building as well as overcome a height difference of +1.50 m. Although the preparatory work by the other trades took longer than planned, reducing our time frame, the overall construction schedule was met.

In order to reach the overall length of 1,420 m (feed and return flow), it was only necessary to fit one single connection. This meant that the required monitorability of the line was maintained along its whole length. The routing ran straight ahead for over half the distance, but now the FLEXWELL® Safety Pipe could really demonstrate its advantages over other systems. The FSR 60/83 (DN 50) piping convinced everyone with its narrow bending radius.

The riser line on the outside wall of the flue gas scrubbing plant posed a challenge for installation crew and piping alike. The piping was mounted on the wall in cable racks here too, running into the building at a height of 25 m. The task here was to make the pipe especially secure to withstand the operating pressure of 18 bar.

No fittings needed to change direction

Riser line on the flue gas scrubber plant

Solutions for the future

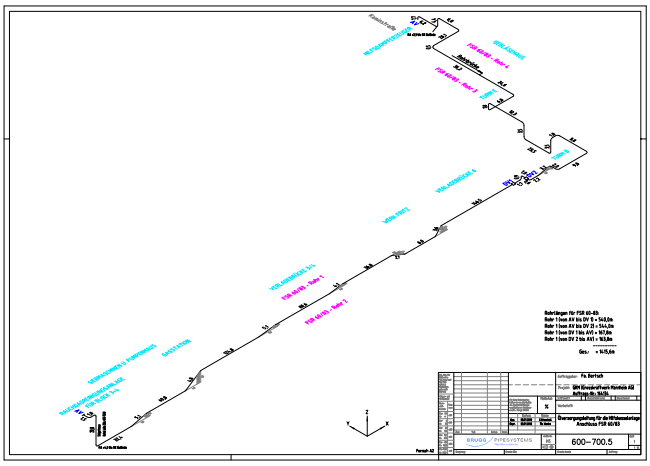
BRUGG PIPESYSTEMS
Flexible solutions

FLEXWELL® Safety Pipe as the oil supply line for the new auxiliary steam generator plant in the large power station in Mannheim

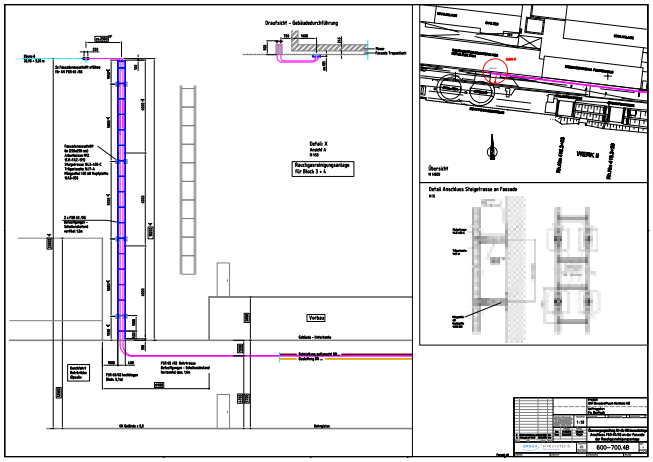
FLEXWELL® Safety Pipe guarantees resistance to adverse weather influences when laid above ground while at the same time complying with the safety standards for the protection of human beings and the environment.

The pipe connection from the boiler building to the flue gas scrubber plant involved installing a total of:

- 1,420 m of FSR 60/83 (DN 50)
- 4 flanged connections
- 2 integrated through-connections
- 1 special vacuum leak detection device



Routing of the FLEXWELL® Safety Pipe in the Mannheim power station



To contact us and for further information, please fill in the following details and send them by fax to +49 (0)5031 170-170.

❑ Please send me detailed information material

❑ I have a project I am currently working on and would like to speak to you personally

Sender

Company:

Contact person:

Telephone:

eMail:

Street/No.:

Postcode/Town:

Company stamp

BRUGG Rohrsysteme GmbH
Adolf-Oesterheld-Straße 31
D-31515 Wunstorf
phone +49 (0)5031 170-0
fax +49 (0)5031 170-170
info.brg@brugg.com
www.brugg.de

A company of the BRUGG Group

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