

When safety really must be the first priority ...

FLEXWELL safety piping® in the medical decay-in-storage facility of the Magdeburg University Clinical Centre



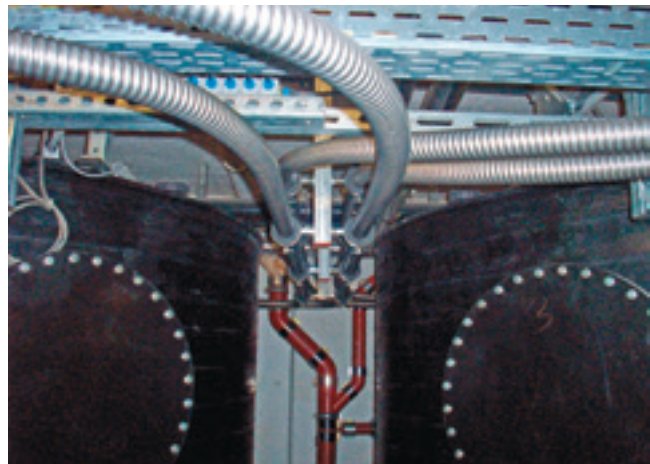
Jens Sonnenberg,
planning engineer HEKUMA

“The UKMD project was a genuine challenge for us. Thanks to BRUGG and the reliable support they gave us with their expert knowledge and experience in the planning and installation phases under difficult conditions, we were able to realize the project within the tight deadlines we were working to, so that we could hand over the system to a satisfied customer on time.”

140 m BRUGG of FLEXWELL safety piping® FSR-M 30/48 were installed in the decay-in-storage facility of the Radiological Department of the Magdeburg University Clinical Centre. Seven heating lines with 14 single pipes running through the cellar were installed there under very difficult conditions.

The Magdeburg University Clinical Centre (UKMD), which comprises 26 clinics and ten other institutes, is a maximum medical care hospital with a focus on research and teaching. Jens Sonnenberg, planning engineer at the engineering consultancy HEKUMA, had the following task: The hot water supply lines in House 40 (Nuclear Medicine) needed to be replaced. The pipes run through a decay-in-storage facility. Contaminated fluids and objects are stored in this cellar for a certain time in order to allow radioactivity to decay. In particular, waste water is collected in large storage tanks.

The existing pipes were single-walled and made of steel. The standard DIN 6844-2: Plants in Nuclear Medicine Part 2, however, requires under Point 8.2.2 “water security in such rooms”. For this reason the existing pipes were no longer the best available technology and therefore also failed to fulfil the Clinical Centre’s safety standards.



FLEXWELL safety pipe® as heating pipe between storage tanks for contaminated waste water in the decay-in-storage facility

HEKUMA was asked to bring the storage facility up to the technological state-of-the-art, which meant refitting this part of the heating system with a double-walled pipe system. With the expert support of BRUGG, the planning office developed a design based on our flexible FLEXWELL safety pipe® FSR.

Since the decay-in-storage facility is “stuffed full” of tanks, canisters, power units and piping, the routing of the piping was first of all predefined at an on-site inspection allowing for the very difficult problems of use of space in the cellar. For reasons of fire safety the wall entries were made using an approved BRUGG BSHN R120 fire safety bulkhead. The 14 individual pipes were divided into three appropriate sections, each of them monitored by a VLR 410/E vacuum leak detector. After the two-week installation period the 14 FSR pipes started operations again and were handed over to the customer.



Flexible laying of the heating pipes



FLEXWELL safety pipe® – Heating pipes with retrofitted insulation

Solutions for the future

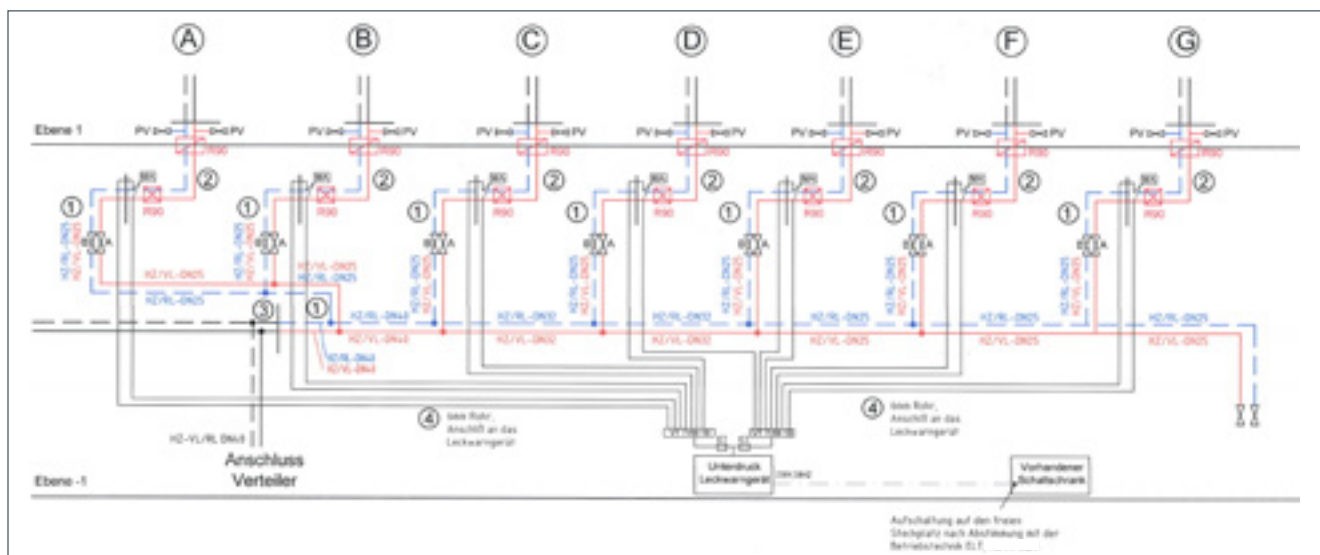
FLEXWELL safety piping® in the medical decay-in-storage facility of the Magdeburg University Clinical Centre

Conclusion

BRUGG FLEXWELL safety pipe® is not only the solution you need for the transport of water-hazardous and/or flammable substances, but also when heating water has to be protected from contamination. And thinking about the safety aspect has to proceed on two tracks

in this case:

- spillage of a substance which could potentially cause damage to the environment is prevented
- the medium is prevented from contact with a hazardous substance from the environment.



Flow diagram for a double-walled leak-monitored heating pipe system

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