

## CASE STUDY: EARLY ASSEMBLY IMPROVES CONSTRUCTION PROCESS IN LEED GOLD BUILDING



Photo: NAS Real Asset Management GmbH

**PROJECT:**  
Spreeturm

**LOCATION:**  
Berlin, Germany

**COMPLETION:**  
2020

**APPLICATION:**  
Sprinklers

**PRODUCT:**  
aquatherm red pipe

### SPRINKLER PIPING SYSTEM FROM AQUATHERM ENSURES SAFETY IN THE SPREETURM

**70 metres high, 20 storeys and a new architectural eye-catcher in Berlin: that is the Spreeturm. The high-rise, which was completed in 2020 after two and a half years of construction, is located in the Friedrichshain district and in the direct vicinity of the Postbahnhof, which is listed as a historical monument. The site is part of a rapidly developing office and service location that stretches along the Spree River from Ostbahnhof to the Mercedes Benz Arena to Osthafen.**

Accordingly, the Spreeturm fits into the concept: a large part of the building area will be used as office space, with gastronomic use planned for parts of the ground floor. The premises not only offer a view of the river Spree, but also a light-flooded and exceptional working environment. Among other things, this is made possible by the special

design of the high-rise building. The team of Eike Becker Architekten from Berlin developed a square building with a façade made of one to three-storey aluminium sheets, which, along with the roof of the main entrance that looks like a sculpture, is an eye-catcher of the building. The developer of the Spreeturm is the Sechszundvierzigste Verwaltungsgesellschaft DWI Grundbesitz mbH, which sold the Spreeturm to the real estate investment and asset manager NAS Invest GmbH.

The building was planned and constructed according to the American certification system LEED (Leadership in Energy and Environment Design). This is a sustainability certification used worldwide that defines a series of standards for environmentally friendly, resource-saving and sustainable construction. The Spreeturm has achieved the Gold standard.

#### THE CHALLENGE

For the Spreeturm in Berlin, a sprinkler system was sought that could be laid directly into the concrete of the storey ceilings.

#### THE SOLUTION

The plastic sprinkler pipe system aquatherm red pipe offers maximum design freedom because it can be laid in concrete without special protective measures.



Photo: NAS Real Asset Management GmbH



## 2750 M AQUATHERM RED PIPE, 4250 FITTINGS

In the area of fire protection, BAM Deutschland AG from Berlin, which constructed the building as a turnkey overall measure, decided on the plastic sprinkler pipe system aquatherm red pipe.

*“The decisive factors for the use were the good experiences we had with the system and the many years of processing this product by our subcontractor, SMT Sprinkler-Montagetechnik GmbH Berlin,”*

explains Jörg Freitag, TGA project manager at BAM Deutschland AG.

The VdS- and IBS-certified aquatherm red pipe was laid directly in concrete. This is made possible by the special material the pipe system is made of: polypropylene, specifically the fusiolen® PP-R FS material developed by aquatherm, is not only flame retardant (building material class B1) but also corrosion resistant. In contrast to metal sprinkler systems, aquatherm red pipe can be laid in concrete without special protective measures.

This space-saving and invisible installation method offers maximum design freedom in terms of ceiling design.

*“The main advantage lies in the early installation with regard to the construction process, as the pipe network is already completed with the last concrete pour,” says SMT Managing Director Carsten Thieme. “In addition, work can be carried out here in the long term with low personnel costs. With metal systems, there is a higher manpower requirement in a shorter period of time because the schedule is of short duration.”*

A total of about 2750 m aquatherm red pipe in dimensions between 40 and 75 mm and about 4250 fittings were used. Thanks to aquatherm heat fusion, the piping system was joined to form a homogeneous, materially cohesive and thus safe unit. The pipe and fitting were briefly heated with the help of tools provided for this purpose and then simply joined together.

*“The welding is simple and reliable,” says Carsten Thieme.*

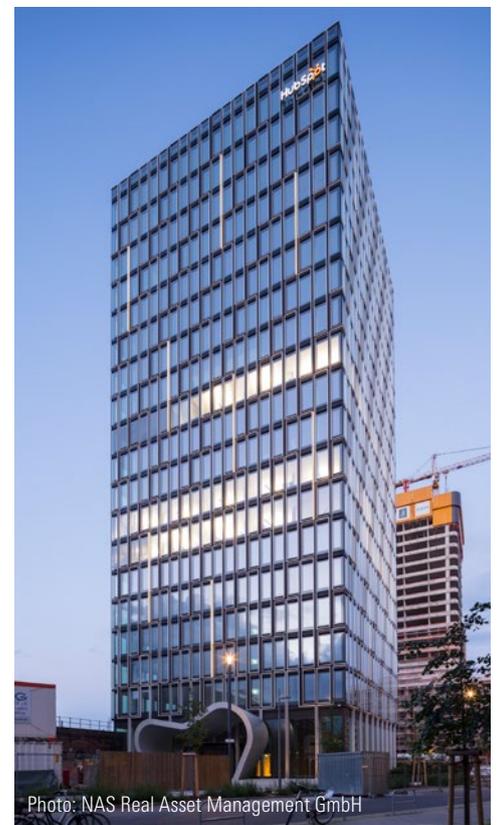


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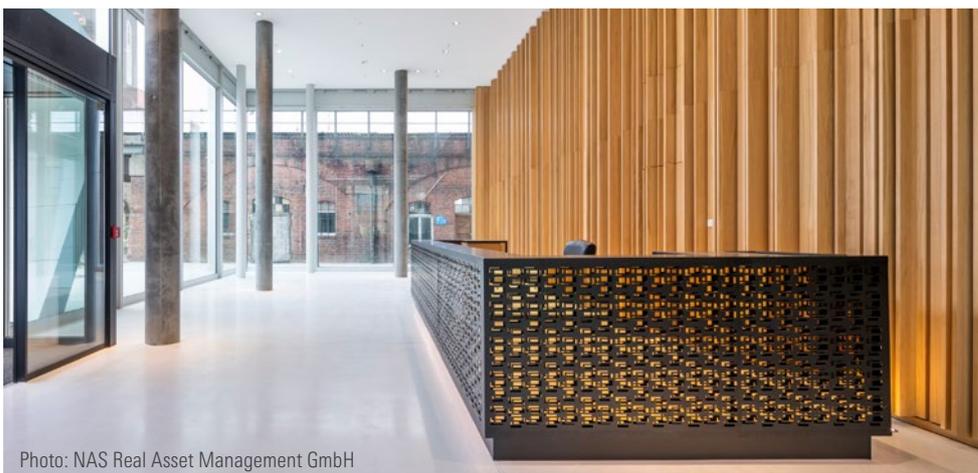


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