

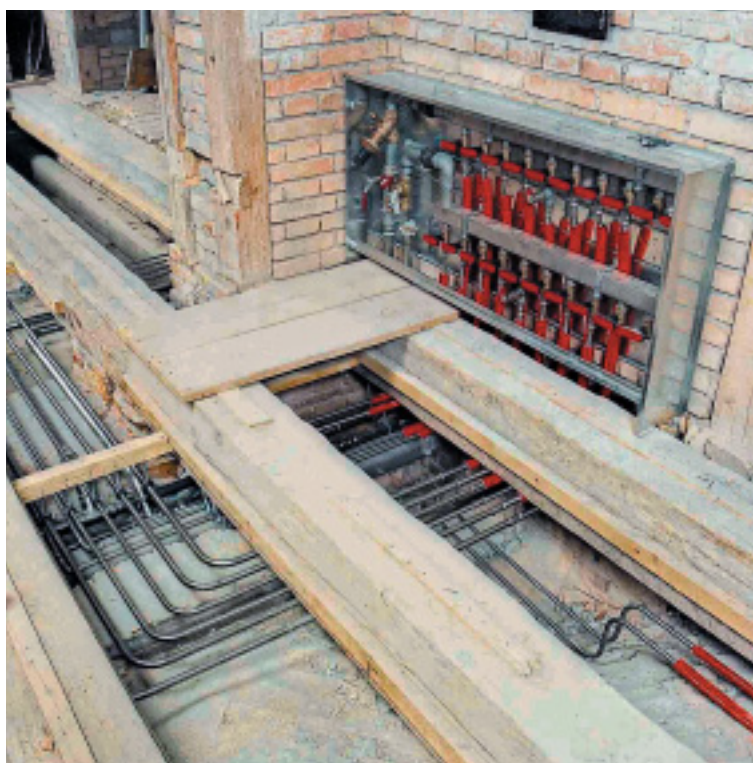
### Renovation work at Neuschwanstein Castle

At King Ludwig II's fairytale castle in southern Bavaria, completed in 1869, extensive renovation work became necessary. The managing authorities were keen for both modern technology and high-quality materials to be used, as a way of preserving the monument for many years to come.

One important project was to renew the castle's HVAC systems. The requirements for the work on this historic monument were that the materials used should be highly durable, and that no welding work could be carried out on pipe connections. The stainless steel pipework and press fittings were thus secured reliably and permanently by means of pressing tools.

As there were limited options for feeding the pipework through the binders and joists, the job of assembling the extensive heating system was quite laborious. Nevertheless all work on the engineering systems, which involved laying 1,500 metres of stainless steel pipe, was completed in a period of just two months. The largest part of the project costs of around 500,000 euros was taken up by the ventilation system which had to be able to cope with the exacting climatic conditions of 15°C at 40% relative humidity.

*When replacing the heating system in Neuschwanstein Castle, stainless steel was chosen for the pipework because of the material's high quality and durability.*



*Pipes were connected with special pressing tools that give a visual signal to indicate any connection problems. This technique gave added certainty about the effectiveness of the seal.*

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 Domestic engineering design: Staatliches Hochbauamt  
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