



## Piping system for cooling water in Munich

### Reference project: Technical University of Munich (TUM)

**For over 150 years research and teaching has been carried out at the Technical University of Munich. Over 16 Nobel prize winners have worked at TUM. Diesel, Dornier and von Linde have become world-famous inventors.**

At TUM's site in Garching the cooling-water system for a new canteen was replaced this summer. The lines had to be laid in an existing media duct.

The pipes were inserted through narrow shafts, and welding was not possible.



**Issues**

For the developer, the Freistaat Bayern and the consultant engineer it was important to avoid any fire hazard and thus exclude welding. Dynamic installation with many tolerances in the laying of the new cooling system and just-in-time delivery were the most important criteria for the choice of the piping system.

**Solution**

The Munich engineering firm Climaplan decided on the Alvenius piping system because it can be installed using quick couplings. Compared to conventional piping systems, spiral-welded Alvenius pipes are considerably lighter, thereby enabling quick installation.

All Alvenius components are equipped with the high-quality thermoplastic protection of CorroFlo®, and have also been given external corrosion protection using RocShield® coating.

Connection to the existing lines was achieved using Alvenius-compatible plain-end couplings.

**Customer benefits**

The coupling technology allows installation using a simple wrench. Even under the most difficult conditions the couplings can be removed. Couplings allow angularity, absorb expansion and attenuate vibration.

Because of the limited space for installation of the pipes, they were produced and delivered in 3-metre lengths. As Alvenius pipes are up to 40% lighter than other pipes, the installers from Caliqua in Munich were able to complete the installation very quickly.

**Facts**

- 440m pipes in DN150 for cooling water
- Pressure rating 10 bar
- CorroFlo® and RocShield® coated pipes and pipe fittings



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