

# **Corrosion on domestic installation pipes: Water damage caused by galvanic corrosion currents**

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## **Abstract**

In combination with geothermal probes, heating systems are nowadays increasingly used to cool buildings in the summer months. The economic and environmental advantages of this technology are undisputed. However, its successful use requires that the conditions relating to corrosion protection are respected. Otherwise, costly leaks can occur after only a few years of operation. The underlying damage mechanism is driven by galvanic corrosion. While the process responsible for damages is well understood, the sudden occurrence of relevant damages needs further consideration. In the past, the damage caused by external corrosion of domestic installations negligible. However, with the introduction of systems that are used for cooling in the summer months the risk of external corrosion in domestic installations has increased considerably, which is reflected in an accumulation of the corresponding damages. The causes of the damages are explained, particularly critical situations identified, and possible protective measures discussed.