

# RESEARCH RESULTS FOR DISTRICT HEATING UTILITIES: THE MAIN OBJECTIVE OF THE IEA DHC TASK SHARED 6 PROJECT

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## **Abstract**

Besides the current energy crises, the decarbonisation, and the transformation of existing district heating (DH) systems is the big challenge for DH utilities in Europe. For achieving the climate goals high investments are needed and the implementation in existing DH systems must take place during ongoing operation, while ensuring security of supply. Many DH systems in Europe has been built in the urban areas since the oil crisis in the 1970s. The DH pipes in these systems are the backbone of the transformation process and some of them are close to the expected service lime according to the design. In this context, it is becoming increasingly important to know the remaining service life of DH pipes [1].

Since many processes influence the material ageing of DH pipes, the results of available lifetime prediction models show a large deviation, so that many researchers work on this topic. The current scientific results on ageing of DH pipes are leading to a more reliable result in lifetime estimation, but due to the high requirements of standardisation bodies these results are not implemented in the relevant standards so far. To make these results available for DH utilities it is needed to migrate the scientific results in the standards due to the aspect of security of supply.

The annex task shared 6 “Status assessment, ageing, lifetime prediction and asset management of district heating pipes” is an international project supported by the International Energy Agency’s Implementing Agreement “District Heating and Cooling” [2]. By investigating the remaining service life of natural aged DH pipes based on the latest scientific results scientist, experts and district heating utilities are improving the lifetime estimation on DH pipes. It is planned to suggest improved ageing tests and lifetime prediction models for the adaption of current calculation rules in European standards [3].

**Keywords:** District heating pipes, ageing, asset management, lifetime prediction, standards

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## REFERENCES

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