

EXPERT KNOWLEDGE

September 2020

Project: Industrial heat pumps in Austria

By putting steps in place to overcome existing barriers, this project associated with IEA Heat Pumping Technology aims to initiate a broad-based market launch of industrial heat pumps in Austria. The project involves analyzing and cataloguing national case studies, working up data for a web-based information platform, developing information materials to educate various stakeholders and carrying out publicity activities.

Ensuring a reliable, cost-effective and sustainable energy supply system in conjunction with environmental and climate protection is a major global challenge for the 21st century. Increasing the generation and use of renewables and improving energy efficiency are the most important steps toward achieving these energy policy objectives.

Although the market for domestic heat pumps can be served with standardized products and systems, most industrial heat pump (IHP) applications have to be adapted to suit their specific individual conditions. Extensive skills are also required when it comes to planning and assembly. The main goal of the project is to overcome the remaining difficulties and obstacles preventing wider-scale use of industrial applications.

By drawing on previously unused waste heat, IHP systems can significantly reduce primary energy consumption and CO₂ emissions, thus making an important contribution toward meeting national climate and energy policy objectives.

Surveys have shown that, although heat pumps are available, they are only sporadically used in industrial processes in Austria. Applications already in place include the generation of process heat and cooling in the foodstuffs industry (e.g. breweries), flue gas condensation in biomass power stations, or to produce hot water in laundries.

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Barriers to the use of industrial heat pumps identified by Austrian businesses, other than financial considerations, included technical or structural barriers such as risks relating to production safety and inadequate experience in the absence of a large enough existing system base.

The primary goal of the project was therefore to put steps in place to overcome these barriers and initiate a broad-based market launch of industrial heat pumps in Austria. Examples illustrating best practice and the potentials offered by heat pumps in industrial processes were systematically worked up and catalogued in an effort to offer potential users in Austria, and other stakeholders such as system planners and official decision-makers, encouragement to put these systems in place.

In addition to the existing case studies from an earlier project, insights gained from nationwide research projects on processes with major potential for the industrial use of heat pumps in Austria were added into the mix. These include industrial drying processes and processes requiring simultaneous heating and cooling.

The publicity measures planned as part of the project, such as the web-based information platform and the national symposium, will serve both to increase knowledge and make it more readily available to potential users in Austria and other relevant target groups, which in turn will help to overcome the current lack of information.

The project consortium has also built up a lot more expertise in this field in recent years, which it has made available internationally to help improve the visibility of national research activities in this area (see also [Link](#), in German).

At the Chillventa eSpecial CONGRESS on Tuesday, Dr Veronika Wilk of Austrian Institute of Technology GmbH will focus on aspects relating to industrial heat pumps in Austria and the results of the project. Get your [ticket](#) for the Chillventa CONGRESS here.

The Chillventa eSpecial will offer an extensive array of expert presentations in two online blocks. The first block will illustrate the use of industrial heat pumps from various perspectives and share the latest insights. This block is

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organized by AIT, Austrian Institute of Technology GmbH, Vienna. The second block will cover heat pumps used in heating for buildings, and is organized by Fraunhofer ISE, Freiburg. Get your [ticket](#) now.

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