



# DOMESTIC HOT WATER HEATING USING HEAT PUMP AND STORAGE TEMPERATURE CONTROL IN THE SECONDARY CIRCUIT

## MEASUREMENTS AT A HEAT PUMP FACILITY IN UTTWIL TG

### Annual report 2008

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SFOE project coordinator	Thomas Kopp, head of R&D program "heat pumping technologies, cogeneration, refrigeration" of SFOE
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### SUMMARY

On the basis of the examinations in the project «Domestic hot water heating using heat pump» the storage operation against legionella is to be examined by means of storage temperature control in the secondary circuit and the following questions are to be answered:

- How reliable is a storage temperature control in the secondary circuit in practice?
- How can an ideal performance factor be reached by combination of stage and shift loading?
- Which is the ideal regulation concept?

This is to result in developing recommendations which fulfil the following requirements:

- Appropriate for the planning of facilities for domestic hot water heating in detached houses, apartment houses, school buildings etc., i.e. facilities of any size
- The facilities for domestic hot water heating have to work in a failure-free and energy-efficient manner both during summer and winter operation
- The facilities for domestic hot water heating are to be appropriate for being planned and realised with standard heat pumps, heat exchangers and accumulators
- During normal operation warm water temperatures around 55°C are to be reached with a good performance factor (stage heating)
- In the storage operation against legionella warm water temperatures of more than 60°C are to be reached by means of storage temperature control in the secondary circuit only with the heat pump, i.e. without additional heating

The operations planned for 2008 (execution of measurement) could be completed. The final report will be finished at March 31, 2009.