



ETEKINA

Thermal energy recovery

ETEKINA aims to recover more than 40 % of the waste heat stream in energy intensive industries with the help of heat pipe heat exchangers (HPHE).



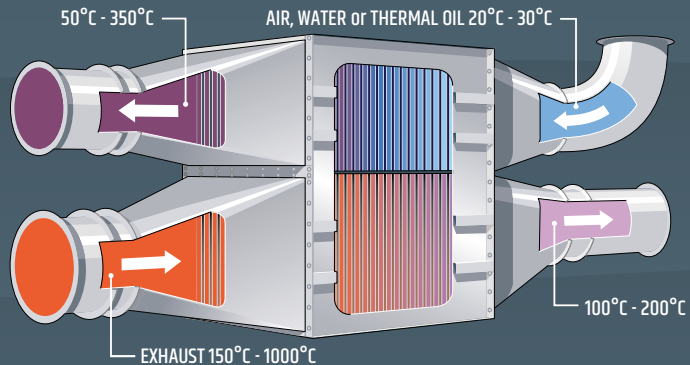
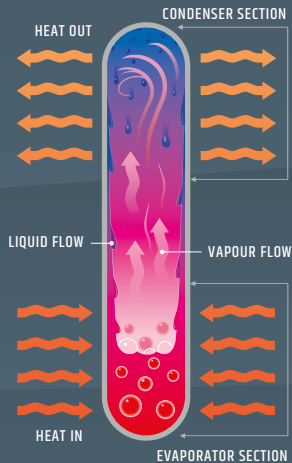
The installation of a heat exchanger prototype will provide an opportunity to significantly improve the heat management inside a plant, reduce environmental impact and reduce energy bills – with an estimated payback time of less than three years.

WHAT ARE HPHEs?

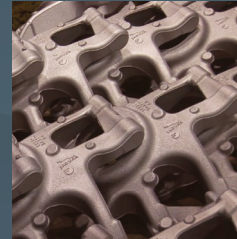
A **heat pipe** transfers **thermal energy** passively from a hot to a cold stream by a boiling condensation cycle inside a hermetically sealed metal tube. In this way, heat from the hot area can be transferred very efficiently to a cold part of the pipe. In the ETEKINA project, the engineers will combine many heat pipes to create a **heat exchanger** design according to the specific needs of each production plant.

THE CHALLENGE:

Within the production lines there are different exhaust streams at different compositions, flow rates and temperatures that could possibly damage the system. The engineers need to find the right set-up and select the right materials for the heat pipes so that the **thermal recovery** will work efficiently inside the plant's environment and within the temperature range applied. Moreover, ETEKINA aims to re-use the recovered heat in the recipient processes without compromising on the quality of the produced parts.



Aluminium Industry



With the ETEKINA prototype being designed and installed in one of their production units, FAGOR EDERLAN, a leading global automotive supply specialist in Spain, expects to benefit not only from a direct cut in their energy costs, but also from applying the concept to many more of their production lines.

Steel Industry



Metal Ravne, a steel producer in Slovenia, plans to increase their global competitiveness, secure local jobs and contribute to meeting the EU's 2020 climate goals thanks to the savings through heat recovery.

Ceramic Industry



Atlas Concorde, one of the leaders in ceramic tile production from Italy, expects ETEKINA HPHE prototype to deliver significant improvements in energy efficiency and lower costs.



HEAT PIPE TECHNOLOGIES FOR INDUSTRIAL APPLICATIONS

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 768772.