



EE-17-2016-2017

## **ETEKINA**

**Full Title:** HEAT PIPE TECHNOLOGY FOR THERMAL ENERGY RECOVERY IN INDUSTRIAL APPLICATIONS

**Aim:**

Demonstrate cost-effective waste heat recovery in industrial applications. Raise awareness of innovative heat recovery technologies that will be applied where the thermal energy is wasted. Facilitate market penetration of new heat exchanger technology applications into non-ferrous, steel and ceramic sectors.

**Concept:** Project's key goal is to improve the energy performance of industrial processes by supporting the development of heat recovery market in industry. ETEKINA aims to recover more than 40% of the waste heat streams with the help of heat pipe heat exchangers (HPHE) in the non-ferrous, steel and ceramic industries. The project will demonstrate the cost effectiveness and reliability of such heat pipe based solutions for the valorization of furnace fumes. As part of the project, three HPHE prototypes will be built and tested at Fagor Ederlan (Spain), Metal Ravne (Slovenia) and Atlas Concorde (Italy) Thereby different stream temperatures and flow rates combined with different heat sink needs will be addressed for the development of each individual heat pipe. In addition, specific designs will also be considered depending on the fumes' properties (deposits, corrosion, etc.) in order to ensure efficient heat recovery. Once solutions have been developed, we will look into how they operate in practice and will assess them for economic and energy performance.

**Start date:** 01/10/2017

**End date:** 30/09/2021

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