

FRIENDSHIP

LC-SC3-RES-7-2019

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Full Title: Forthcoming Research and Industry for European and National Development of SHIP

Aim:

The FRIENDSHIP project aims to demonstrate that solar heat can be a reliable, user-friendly, high quality and cost-effective resource to meet the heat requirements for industrial sectors such as Textile, Plastics, Wood, Metal and Chemicals. The project will rely on the expertise of a consortium including research centres, industry leaders, as well as technology and heat suppliers.

Concept:

A range of different couplings of technological and control innovations will be investigated: optimization of heat transfer coefficients; coupling and reliability of different solar technologies; introduction of high-temperature heat pumps; combined heat storage bringing flexibility on both solar and process loops with guarantees of continuous operation as well as plug-and-play integration; thermal chillers for cooling demand; and smart control to ease operation of the overall installation in accord with relevant process specifications. The proposed systems will be able to supply both heat at temperatures up to 300°C and chilling down to temperatures of -40°C. In order to guarantee the replicability and scalability of the proposed demonstration, specific work will be carried out with world-class industries involved in the consortium (regulatory studies, financial incentive schemes, and local energy markets creation), with a specific focus on relevant users cases: industrial sites and parks in European countries where solar heat is currently underused.

Start date:

01/05/2020

End date:

30/04/2024