



CE-SPIRE-07-2020

European industry but society as well.

Concept:

iWAYS will create a new framework to streamline the condensation and collection of water from exhaust stream and purify the recovered water. Water within these streams, that is currently considered impossible or not cost-effective to recuperate, will be recovered by a new type of Heat Pipe Heat Exchanger and a water treatment system. At least 90% of the treated water will be recovered. iWAYS solutions will produce a huge reduction in freshwater consumption and improve water efficiency - by up to 30% - with an extensive system analysis of the industrial production sites involved. iWAYS operational changes will also recover heat. A substantial reduction in heat waste and energy consumption (from 10% to 80% heat recovery) will be introduced by recovering thermal energy and sensible heat. The recovery of water, heat and materials, from exhaust streams, will represent a huge environmental benefit including reduction of 60% of final gaseous pollutants and more than 70% mass flow of gaseous emissions. Three use cases will validate the iWAYS solutions in the

ceramics, chemicals and steel tubes industries.

Start date:

01/12/2020

End date:

30/11/2024

---