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LIFE HI4S Pilot plant installation currently happening in Arcelor Mittal facilities

How often have you heard about waste heat recovery in industrial processes? How often does it become reality? Implementing waste heat recovery solutions may become a challenge, especially when dealing with waste heat at high temperature and in harsh environments. This is exactly the scenario of the steel making industry, a lot of waste heat but extremely difficult to recover and reuse. Seven companies from Spain and Italy are joining forces to make this happen in ArcelorMittal.

In the framework of the LIFE HI4S project, the consortium is currently working on the installation of a pilot plant in the ArcelorMittal plant located in Sestao, Spain. The aim of the pilot plant is to demonstrate that recovering waste heat from electric arc furnace off-gas is both possible and cost-effective, with the ultimate goal of eliminating the need for fossil fuels. The recovered waste heat will not be wasted anymore and the project will demonstrate that it can be used to pre-heat scrap and produce electricity.

This translates into huge energy savings. In addition, the pilot plant will test an innovative thermal energy system aiming to turn an intermittent source of heat into a constant supply of energy, improving the overall system efficiency.



Prior to the installation, suitable analysis has been carried out by the engineering expert SDEA Solutions, who ensured the correct fit of all the components. The pilot plant design represented a complex challenge due to the limited space typically available in steelmaking facilities. Therefore, the consortium had to take into account both thermal and mechanical constraints while developing a design that could allow us to keep carbon footprint to its lowest possible level, making it reliable, compact and environmentally sustainable.







The commissioning of the pilot plant is scheduled for the beginning of December. Starting from that time, the consortium will concentrate efforts in testing and collecting data regarding the functioning of the pilot plant.

LIFE HI4S EU Project

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