

Project Information Sheet

Recycling steel making solid wastes for added value Energy Efficiency building products (REWASTEE)

Programme area:	First Application and market replication projects
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Website:	www.rewastee.eu
Benefits (max. 150 characters incl. space):	Removal of EAFD from the waste stream and recycling it into multifunctional sustainable building products.
Keywords:	EAFD, steelmaking, waste valorization
Sector:	Recycling, Sustainable construction, steel industry
Type of solution	Product and technology
Duration:	01/07/2014 - 31/12/2016
Budget:	€ 1.387.287 (EU contribution: 50%)
Contract number:	ECO/13/630286

Summary

The REWASTEE project aims at the industrial validation, market deployment and replication of a patent protected manufacturing process for the valorization of steelmaking wastes into multifunctional building products that provide acoustic insulation and enhanced thermal inertia. In specific, REWASTEE offers an alternative for the inertization, stabilization and valorization of Electric Arc Furnace Dust (EAFD), a hazardous waste according to the European Waste Catalogue (EWC). The REWASTEE approach will reduce the economic costs associated with steel waste, the environmental impact of its entry into landfills, and provide added value as a product for sustainable construction which demonstrates a better use of resources and raw materials.

Market demand is present for such a material as the insulation, retrofit and construction markets are recovering following the economic downturn in 2008/2009. Indeed, energy saving and sustainable products are recovering first. Furthermore, government efforts to reduce energy consumption will lead to the adoption of new building codes and increased energy saving standards.

The manufacturing and market deployment of REWASTEE materials will start in Spain followed by the identification and construction of opportunities in the Italian, French and UK markets. In doing so, business models and stakeholder relationships will be established for REWASTEE products across key European markets.

Expected and/or achieved results

- Reduction of environmental impact of the steel sector, using tons of waste diverted from landfills (7.10⁵ ton of CO₂ equivalent per year could be potentially avoided as a result of REWASTEE project results).
- Introduce into the market an innovative building material and set up the industrial methodology required for the efficient processing of steelmaking waste and its reintegration into a productive chain. Current capacities allow the production of a minimum of 40.000 m²/month (max. up to 120.000 m²/month) of REWASTEE material, which can contribute to greater efficiency in buildings and reduce carbon footprint through the introduction of alternative building products.
- REWASTEE expect to manage over 2000 tonnes of EAFD during the project and up to over 9.000tn two years after the project in Spain, Italy, France and UK.
- Reduce the economic cost for steelmaking sector associated to waste management up to 4-5M€.
- Reduction of risks surrounding the handling and landfilling of EAFD.

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