







Reslag Project Details

 Duration 42 months	 Composition 19 partners from 8 countries
 Start date 01-09-2015	 End date 01-03-2019
 Budget Total cost: € 9,668,551.93 EU contribution: € 8,022,006.68	 Technology Readiness Level TRL: 5-7

Interest Groups

 INDUSTRY	 KEY PROFESSIONALS	 SCIENTIFIC COMMUNITY
 POLICY MAKERS	 GENERAL PUBLIC	 STUDENTS

For more information www.reslag.eu

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REslag

Turning waste into value

HORIZON 2020



Funded by the European Union's H2020 Programme Waste-1-2014. GA - 642067

Reslag Presentation

The European steel industry generates more than 20 million tons of slag per year. About 25% of this by-product is not recycled, representing a severe environmental problem in Europe. Reslag project faces the challenge of the valorisation of the steel slag providing 4 eco-innovative industrial alternative applications opening new markets for the steel slag.

Reslag Objectives

The main objective of RESLAG project is to make an effective valorisation of the steel slag and reuse it as a feedstock for 4 innovative applications. This view is aligned with the search of a circular economy in the steel sector with a cross-sectoral added value approach. The developed technologies oriented for the steel slag recycling will be technically demonstrated at industrial pilot level, led by first line end-user industries.

Specific targets for different priority areas are also envisaged, such as:



Close to zero-waste steel industry



Eco-innovative technology development



Social, Sectoral and Policy making

Reslag Valorisation Strategies



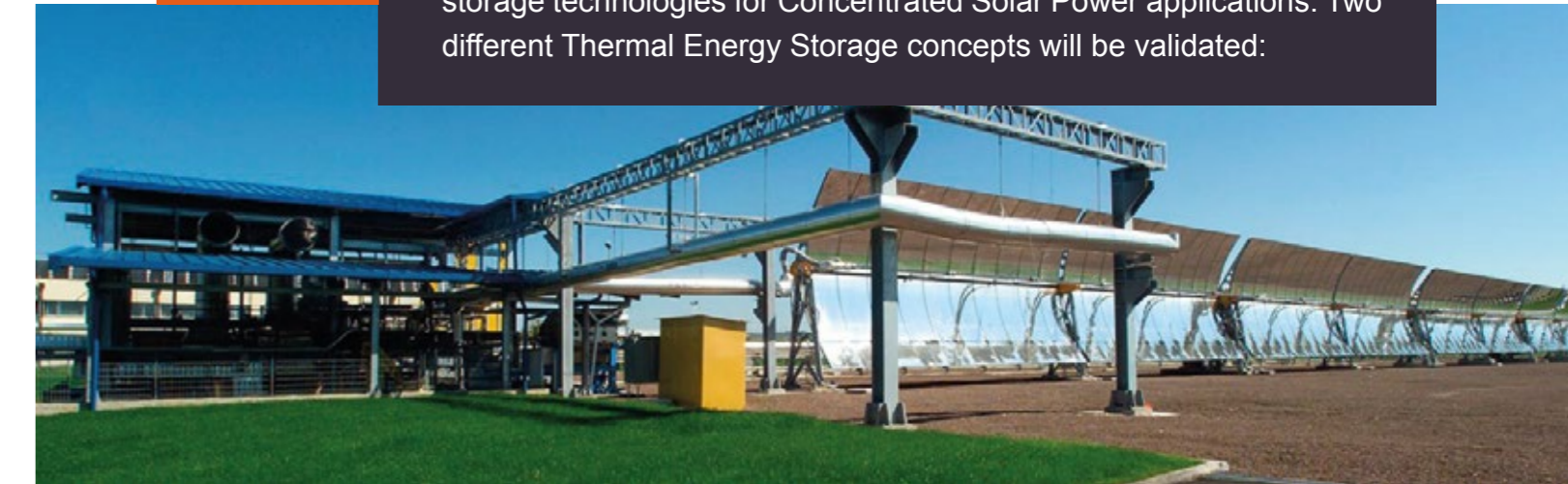
Slag as feedstock to extract high added value metals

The objective is to extract between 0.1 and 3 % of high added value metallic elements such as, Cu, Cr, Ni, Zn and other critical metals. This pilot will target a new methodology based on selective hydrometallurgy for non ferrous high added value metal extraction from steel slag.



Slag as feedstock for Thermal Energy Storage systems in Concentrated Solar Power applications

RESLAG project aims to remove the constraints present in current storage technologies for Concentrated Solar Power applications. Two different Thermal Energy Storage concepts will be validated:



a

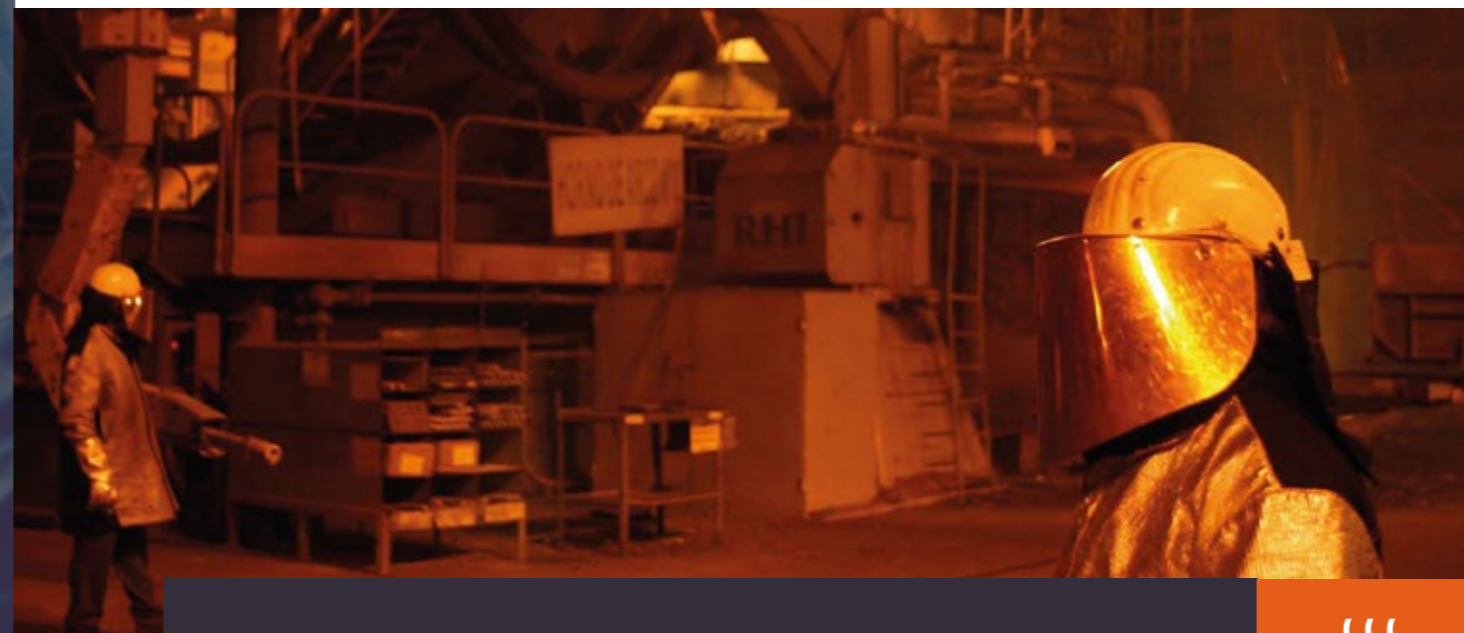
Thermal Energy Storage using air as heat transfer fluid.

The objective of the pilot is to demonstrate the viability of air and steel slag to obtain a low cost and effective storage at high temperature (800°C) for solar central receiver systems. This storage alternative will open new technologies for high temperature solar thermo-electric production.

b

Thermal Energy Storage using molten salt as heat transfer fluid.

The key point of this technology is the noticeable cost reduction of the currently implemented molten salt storage solution. As a result, a competitive, efficient, and technically enhanced storage system is obtained, with a full compatibility with current CSP plants.



Slag as feedstock for Thermal Energy Storage systems in industrial waste heat recovery applications

The RESLAG project aims to design and construct a high temperature, high thermal performance and cost effective heat recovery system oriented to the waste heat recovery in the steel industry. In particular, the heat content of the off-gas coming out from the Electric Arc Furnace (EAF) is the recovery target. This approach presents a double objective: recover up to a 15% of the primary energy, contained in the EAF off-gas stream and the use of steel slag as a successful heat storage material.



Slag as feedstock for refractory and ceramics material production

The aim of this pilot is to develop a processing route able to convert the slag into feedstock for refractory ceramics. The approach is to maximise the amount of by-products in raw material mixtures for castable refractory material production.

