Eco-innovation in steelmaking: a new system for 100% recycling of electric-arc furnace slag

SLAG-REC

The SLAG-REC project aims at realising a new system for slag recycling and also introducing it to the market through a mix of market preparation activities targeting electric-arc furnace operators in Europe. The project activities will be executed through the strategic collaboration of three partner enterprises: the steelmaker (inventor and first applier of the new system), the engineering specialist and the machinery constructor. The output of the innovative slag treating system is a product which can perfectly substitute the actually used natural sand and gravel - not renewable natural resources - for example in road construction without any risk of swelling. By use of this system an enormous quantity of slag deriving from steelmaking can be saved from simple dumping - in Europe 12 million tons/year are actually dumped! - by transformation in a re-usable prime material.

Benefits

An innovative system can transform electric-arc furnace slag in a re-usable prime material to be used for example in road construction.

Results

- By the end of the project the expected results are: 1) the first applied system constructed and validated in ASO Siderurgica Srl; 2) a business model for European electric-arc furnace operators which analyses the costs and benefits of the investment in the new system.
- On the long run: 1) minor use of natural resources for road construction and their substitution with recycled EAF slag; 2) minor quantity of electric-arc furnace slag dumped and minor costs of slag handling; - greener steelmaking sector.

Partners and coordinator

<table>
<thead>
<tr>
<th>ASO Siderurgica Srl [1]</th>
<th>Italy</th>
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<td>Cabra Engineering S.r.l.</td>
<td>Italy</td>
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<tr>
<td>MaschinenFabrik Liezen und Giesserai Ges.m.b.H. [3]</td>
<td>Austria</td>
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Contact

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Contact point

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Budget

Overall budget: 1.366,935,00 € (EU contribution: 43,00 %)

Key documents

  PDF 2.24 MB
- Project Fact File [5]
  DOC 366 KB

In brief

Sector: Recycling

Duration: 27/06/2009 to 26/06/2011

Contract number: ECO/08/239025

Tags:
  dairy
  recycling

Related projects

- EUFIR [6] A European system for collecting and recycling discarded equipment from...
- AGRIPORT [8] Agricultural Reuse of Polluted Dredged Sediments
- BIOLIX [9] Bio-hydrometallurgical beneficiation of non-ferrous concentrate from...
- BP SORTING [10] BP SORTING - BLACK POLYMER SORTING
- RECYCLEDPALLETSYSTEM [12] Closed loop pallet system – production, implementation and recovery of...
- COFERT [13] CO2 capture and nutrients recycling using a patented algae system for bio-...
[CYPROBELL] Cyprobell - Grey Water Recycling Plant

[E-AIMS] E-AIMS - AUTOMATIC AND INDIVIDUALISED SORTING AND MANAGEMENT PROCESS OF E-

[ECOMETRE] ECOLOGICAL METAL RECYCLING

[SEPARATE] Enabling market uptake of innovative separation and cleaning solutions for...

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[WPF] From Waste Paper to Furniture

[OLAX] GLOBAL SOLUTION FOR RECOVERY AND REUSE OF THE INK WASTE OF THE

[NUMIX] High performance Lightweight aggregate for concrete from the recycling of...

[ECO-RUBBER] INNOVATIVE USED TYRES RECYCLING AND RUBBER SINTERING PROCESS FOR ECO-

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[PARILAS] PARILAS - QUALITY ALUMINIUM RECYCLING

[NATURALISTA] POST-USED SHOES RECOVERY IN FOOTWEAR INDUSTRY AND OTHER APPLICATIONS

[PROWASTE] PROWASTE - EFFICIENT UTILIZATION OF PLASTIC WASTE THROUGH PRODUCT DESIGN...

[RECYTUBE] RECYTUBE - INCREASING THE USE OF RECYCLED CARBON NANOTUBE (CNT) COMPOUNDS...

[RHOSES] Regenerating PVC HOses and Sponsoring Eco-Sustainability

[SATURN] Sensor-sorting Automated Technology for advanced Recovery of Non-Ferrous...

[STAREC] Shredder residue and Tar-containing Asphalt RECycling

[NATSTOCER] Sludge free-process for the production of innovative natural stone-like...

[SUPERPET] Super-Clean PET flake process for high quality recycling of PET bottles

[SUPERTEX] Sustainable Flame Retardant Technical Textile from Recycled Polyester

[T4T] Textiles for Textiles

[THE DIAPERS PROJECT] THE DIAPERS PROJECT - A ZERO EMISSION GREEN PLANT

[TWINCLETOES] Tyre Wire in Concrete Leading to Environmental Sustainability

[RECTYRE] USED TYRES VALORISATION AS LIGHTWEIGHT FILLER FOR EMBANKMENTS

[WS-REC] WS-REC - DESIGN AND CONSTRUCTION OF A WINDSCREEN RECYCLING LINE


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