Shredder residue and Tar-containing Asphalt RECyCling

STAREC

Jansen Recycling, a recycling company, based in Son, the Netherlands, will invest in the first full scale application of a pyrolysis installation for thermal cleaning of shredder residue (SR) and tar-containing asphalt (TCA). The recycled output materials (such as sand and grid) will be re-used in the pavement, water construction and concrete industry. The pyrolysis installation will recycle 30% SR (74,617 tons) and 70% TCA (264,600 tons). Until now, no pyrolysis technique has been available for thermal cleaning of these materials. Alternative for SR is land filling and for TCA is re-use in road base and cleaning by combustion. Innovative aspect of the new pyrolysis technique is the continuous process instead of a batch process. The process doesn’t depend on one type of material, but a variety of materials can be cleaned. Actual market introduction is hindered by market barriers such as legislation (no EU-wide legislation). With good dissemination, this project can stimulate: 1) other EU recycling companies, government authorities and suppliers of waste materials to invest in this new profitable recycling technique; 2) an EU wide adoption of recycling legislation.

Benefits

Thermal cleaning of shredder residue (SR) and tar-containing asphalt (TCA). The recycled output materials (such as sand, grid) will be re-used in the pavement, water construction and concrete industry.

Results

- 100% reduction of toxic chemicals such as mineral oil, PAHs and Hg (total amount of toxic chemicals equals 743,159 kg/installation/year);
- Reducing (hazardous) waste: 37,308 tons SR, 132,300 tons TCA in year 1 (at 50% capacity);
- Diverting SR waste from landfills;
- Reduction of use of primary sand and grid: 115,000 tons in year 1 (at 50% capacity);
- At least 3.5 times more energy re-use per ton compared to thermal cleaning by combustion (energy re-use 8.84 W/ton in stead of 2.26 W/ton) and at least 15% water reduction (100 l/ton) compared to thermal cleaning by combustion.

Partners and coordinator

<table>
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<tr>
<th>Partner</th>
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<tr>
<td>Jansen Recycling B.V.</td>
<td>Netherlands</td>
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Contact

Jansen Recycling B.V.
1 Kanaaldijk Zuid-Oost
5705 BE Helmond Noord-Brabant
Netherlands

Contact point

Name: Zondag, Arno
E-mail: azondag@ajansenbv.com
Tel: +31 40 2832946

Budget

Overall budget: 700.000,00 € (EU contribution: 22,00 %)

Key documents

- Project Fact File [3]
  DOC 369.5 KB

In brief

Sector: Recycling

Duration: 02/07/2009 to 01/11/2011

Contract number: ECO/08/239070

Website: http://www.ajansenbv.com

Tags:
  - asphalt
  - recycling

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