Technology Offer

Title:

Recycling of composites (natural, glass or carbon fibre reinforced thermoplastics) into new products (Ref: 10 DE 1486 3GV1)

(Open)

Abstract:

A German SME is specialised in manufacturing machinery for the plastics industry. They developed a new technology for recycling fibre reinforced thermoplastics which is suitable for natural, glass and carbon fibre reinforced materials. The one-step process directly transforms used plastic scraps into new products. Mechanical properties of the end products are excellent. The company is looking for industrial partners who want to implement this new technology in their production.

Description:

The new techonolgy is suitable for recycling industrial thermoplastic waste and is a perfect sollution for both immediate in-house recycling (ie: as part of a zero-waste initiative), or for recyclers with various streams of plastic waste. The technology is particularly interesting for the automotive, construction and aerospacial industries as it allows for the immediate recycling of fibre-reinforced plastic waste into new products.

The company offers cooperation to find and implement an optimum solution for recycling the specific composite wastes of a potential user. The offer includes analysis of the composite waste and its recycling possibilities, joint development and adaptation of the recycling technology to the specific problem, implementation of the machinery at the user's site, and training of the user's staff in using this machinery.

Picture 1: Typical GFRP waste from automotive industry

Picture 2: Prototype product from recycled waste scraps

Innovations and advantages of the offer

The new technology provides a one step system for recycling various fibre-reinforced plastics, (such as natural, glass, or carbon), and proposes the following advantages:
1. A gentle recycling of glass fibre-reinforced thermoplastics such as GMT, LFI or other similar products, with glass-fibre length remaining intact throughout the recycling process, thus resulting in a superior end result compared conventional processes;
2. The process is suitable for both virgin and recycled fibre-reinforced thermoplastics;
3. The mechanical properties of the reinforced thermoplastics are excellent;
4. The shear rate of the mixture is lower than in other processes.

Other Profile Details

Organisation:	Bayern Innovativ Bayerische Gesellschaft für Innovation und Wissenstra
Network Partner:	Bavaria2Europe
Country:	Germany

Entry Date: Thu, March 11, 2010

Validation Date:

Deadline: Wed, January 26, 2011

List of Keywords

Technology

- Moulding, injection moulding, extrusion, sintering
- Composite materials
- Recycling, Recovery

Market

- Other industrial process machinery for textile, paper and other industries
- Other industrial equipment and machinery
- Other pollution and recycling related

Current Stage of Development

Available for demonstration

Exploitation of RTD Results

Private Research

Intellectual Property Rights

Secret know-how *Comments*

Organisation / Company

Type: Industry

Size: 50-249

Collaboration Type

- Joint further development
- Adaptation to specific needs
- Change in the partner sought's currently used technologies (installations, process, facilities)
- Engineering
- Technical consultancy

Comments
- Type of partner sought:

Industry

- Specific area of activity of the partner:

Either composite producing industry or polymer recycling companies

- Task to be performed by the partner sought:

Supply samples of the composite waste for recycling tests. Specify for which applications the composite wastes shall be used (if this is allready known). Discuss the test results and make a final decision about the re-use of the composite waste. Purchasing tailored recycling machinery from the offering company. Implementing the mechinery into the own production with assistance by the offering company. Receiving staff training from the offering company in proper use of the machinery.

Targeted Countries

ALL

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