

## Technology Offer

### Title:

Increased productivity of thermoformable composite parts by lamination technology (e.g. for delicate reinforcement fabrics or difficult material combinations) (Ref: 10 DE 1486 3GVM )

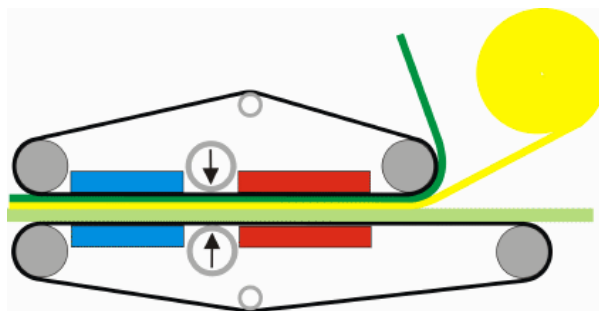
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### Abstract:

**A German SME develops tailored processes for the production of semi-finished thermoformable materials for composites. Starting point is the specific problem or product idea of a composite manufacturer. Solutions can be evaluated by the customer in a large-scale test center. Core competences are in fusing, laminating, pressing, hot-stamping and thermo-forming. Manufacturers of thermoplastic composite parts with specific needs are addressed. Joint development and technical assistance is offered**

### Description:

The German company is a producer of laminating flatbed machines for coating, calibrating, thermo-bonding, powder scattering, hot-stamping and thermo-moulding. They have substantial expertise in developing industrial processes for laminating flexible materials (technical textiles or non-wovens from carbon, glass or aramid fibres; foams; foils) or rigid materials (honeycombs, wood, metal, composite plates) into thermo-formable semi-finished products.



Lamination can be used as a first step in the production of composites, especially for materials that are hard to join directly (e.g. aluminium with thermoplastics or wood with thermoplastics), or for materials that are complicated to handle during production because they are mechanically not stable.

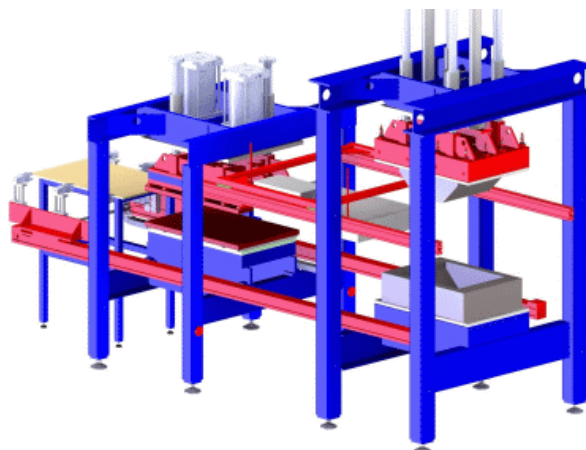
In the first case, laminating a raw material with a suitable interface material makes it possible to avoid the need for e.g. reactive gluing of the two components. In the second case, laminating can stabilize the raw material (e.g. carbon fibre fabric) into e.g. easy-to-handle thermo-formable mats. In both cases the aim of the lamination step is to get a semi-finished product that can be further processed by standard technologies with high productivity, e.g. moulding, thermo-forming etc.

The specific expertise of the company is in jointly developing a complete industrial scale lamination process, tailored to the production process and desired new products of a customer. Starting point of the development is a specific raw material or a laboratory scale process of the customer. Output of the joint development is the implementation of the industrial scale laminating process at the customer, including training of the employees.

### Innovations and advantages of the offer

Development of tailored solutions to tricky materials processing problems in composite production. Implementation of laminating technology to simplify production processes, for new products and/or improved production.

Difficult to handle or to process materials can be handled in standard processes with high productivity, by implementing lamination as a new additional process step into the production line.



### Current and Potential Domain of Application

Production of composites of any kind, especially using thermoplastic materials as one component

### Other Profile Details

Organisation: Bayern Innovativ Bayerische Gesellschaft für Innovation und Wissenstra

Network Partner: Bavaria2Europe

Country: Germany

Entry Date: Fri, March 12, 2010

Validation Date:

Deadline: Tue, February 01, 2011

**List of Keywords**

Technology

- ✦ Coatings
- ✦ Forming (rolling, forging, pressing, drawing)
- ✦ Joining techniques (riveting, screw driving, gluing)
- ✦ Composite materials
- ✦ Plastics, Polymers

Market

- ✦ Plastic fabricators
- ✦ Fibre-reinforced (plastic) composites
- ✦ Other fabricated plastics
- ✦ Processes for working with plastics

**Current Stage of Development**

Already on the market

**Exploitation of RTD Results**

None

**Intellectual Property Rights**

Secret know-how

*Comments*

**Organisation/Company**

Type: Industry

Size: 50-249

**Collaboration Type**

- ✦ Joint further development
- ✦ Adaptation to specific needs
- ✦ Transfer of knowledge in new raw materials
- ✦ New way to use an existing production line
- ✦ Change in the partner sought's currently used technologies (installations, process, facilities)
- ✦ Technical consultancy

*Comments*

- Type of partner sought:

Industry

- Specific area of activity of the partner:

All type of composite manufacturers, especially based on difficult-to-handle fabrics or hard-to-join materials

- Task to be performed by the partner sought:

Providing the raw materials and defining the desired production process or product. Joint testing of alternative solution in the large-scale test center. Purchasing the machinery and implementing it into the production line. Receiving staff training.

**Targeted Countries**

ALL

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