



Sourcing service composite technology

The Composite Arena supports in finding the appropriate manufacturer of production equipment for fiber reinforced materials. The database content of the Composite Arena is created by the branch associations which work together in VDMA Working Group Hybrid Lightweight Technologies. With this common approach the whole process chain for the production of composites is offered in the sourcing service.

The database for production equipment for composites

- Machines for the production and treatment of fibers
- Machines for the production of textile structures
- Machines for the confectioning of reinforcement textiles
- Machines for the preprocessing of materials
- Machines for the manufacture of composites
- Machines for composites processing/machining
- Precision tools for composites
- Handling technology
- Measurement and test systems
- Machines for recycling
- Software for the design of components and composite production



www.composite-arena.com

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Working Group
Hybrid Lightweight Technologies



The network of hybrid lightweight technologies



DesignStudio Cover: BMW Group, Inside: BMW Group, SGL Group

Hybrid Lightweight Technologies – Base for saving energy and resources

Multi-material design sees materials increasingly being combined in lightweight applications. Motivated by the need to save energy and resources, the automotive industry, alongside aerospace, transport and the wind industry, is now the force driving lightweight construction. If the most suitable material, with its particular characteristics, is deployed in the right place, this will ideally produce the optimal system solution sought both in terms of design and economy.



Series manufacturing requires suitable production and bonding technologies such as plant and machinery manufacturers have to offer. The Working Group Hybrid Lightweight Technologies is application-oriented and considers a wide range of materials and industries. Its areas of activity extend from materials by way of bonding technologies to production technology networking. The overarching questions to be examined will include simulation methods, functional integration and life cycle considerations.

The Working Group is accessible across Europe as a network for the exchange of experience and for helping its members to develop markets and strengthen their market position worldwide. By 2020, lightweight construction around the world is expected to total EUR 140 billion for the transport sector alone, with growth rates of seven to eight percent.

Who we are

The Working Group Hybrid Lightweight Technologies within the Mechanical Engineering Industry Association (VDMA) was established in January 2016. Its member firms have been active already in the former Composite Technology Forum. They are mainly technology suppliers for the manufacturing of fiber composite parts and light construction components in the combination of composites and metal.

The Working Group's cooperation is open not only to the roughly 200 VDMA member firms along the value creation chain, but also to users, supplier industries and research institutes. The machinery manufacturing skills in lightweight construction are matched with the requirements of customer industries.

Our aim is to develop production, automation and joining technologies throughout Europe, which are not confined to any particular material, so that sustainable jobs can be created. VDMA Working Group Hybrid Lightweight Technologies is a founder-member of the trade association Composites Germany and a promotional supporter of the Composites Europe trade fair.

Participating associations within the VDMA

- Foundry Machinery
- Garment and Leather Technology
- Machine Tools / VDW
- Measuring and Testing
- Metallurgical Plants and Rolling Mills
- Plastics and Rubber Machinery
- Power Systems - Wind Industry
- Precision Tools
- Robotics and Automation
- Textile Machinery
- Thermo Process Technology

Main focus

Customers and markets

The Working Group seeks to be an interface between the skills of machinery manufacturers and the needs of industries using hybrid lightweight materials and components. The objective is to create a close network between the players.

Exhibitions policy

As sponsor of Composites Europe trade fair, the Working Group is actively involved in establishing an important trade fair hub in Germany.

Sourcing service composite technology

The Working Group's sourcing service is the first systematic classification of technologies for the manufacture of fiber composite components and a source of information for customers, user industries and at trade fairs.

Understanding the process

Series manufacture of composites and hybrid materials requires an understanding of the various stages involved and how they fit together. The VDMA possesses such skills along the process chain and the Working Group will help to network them.

Research

Hybrid lightweight technologies are an industry characterised by innovation. The Working Group advocates promoting research in a precompetitive environment.

Public relations work

The Working Group seeks to raise awareness about manufacturing technologies and automation skills of plant and machinery manufacturers among users, the public at large and politicians.

<http://lightweight.vdma.org>