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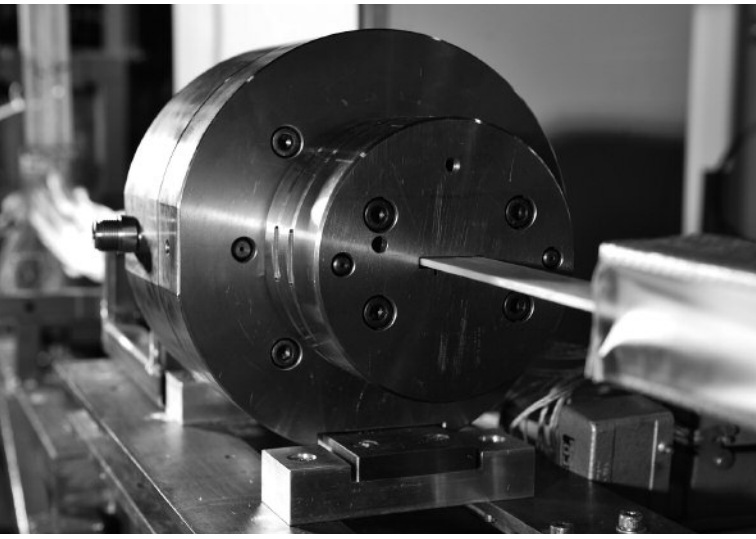

Reactive Pultrusion

Approaches for a cost-efficient FRP-profile production

International Symposium

9 October 2018

Aachen
SuperC, RWTH Aachen University

Research and practice in dialogue

About this symposium

Chairman

Dr.-Ing. Hubert Ehbing
Covestro AG, Leverkusen

As a continuous process, pultrusion offers great potential for a cost-efficient production of highly loadable profiles made of continuous fibre reinforced plastics. For a large-scale production, highly reactive resin materials are increasingly focused in current developments (e. g. polyurethanes, epoxy resins or insitu polymerizing thermoplastics). Due to the low viscosity of the constituent materials, they offer excellent impregnation properties. Thus, high performance profiles with high fibre volume contents and excellent mechanical properties can be realised. At the same time, the profile production can be realised very efficiently at high production speed due to the high reactivity of the material systems.

However, the use of highly reactive systems results in new challenges for the processing technology such as the correct construction and design of the injection box instead of a conventional impregnation bath as well as of the die technology. Furthermore, the importance of a precise process management, process control and quality assurance increases in order to guarantee a robust and cost-efficient production.

Against this background, various applications and potentials for pultrusion with reactive materials in high volumes will be demonstrated and discussed in this symposium. Researchers, material suppliers, processors and customers have the opportunity to inform themselves about new material developments, suitable machine equipment and die technologies as well as current research activities and discuss the presented solutions with technical experts.

Main topics

- New developments in reactive resins as composite matrix material
- Target applications for reactive pultrusin processes
- Equipment for the pultrusion of profiles in high volumes
- Institutional and fundamental research

Target audience

This symposium addresses engineers and technical managers in the areas of development, production and sales of innovative reactive resin systems, process development and production planning as well as processing equipment for series production of lightweight profiles and the associated quality assurance.

(Title picture: IKV/Fröls)

Programme

- **Monday, 8 October 2018**

19.00 **Get-together in the IKV technical centre for fibre-reinforced plastics**
Seffenter Weg 201, 52074 Aachen

- **Tuesday, 9 October 2018**

9.00 **Welcome**
Management of the Institute of Plastics Processing (IKV)

9.15 **Trends in pultrusion: materials, processing and applications**
Dr.-Ing. Hubert Ehbing, Covestro Deutschland AG, Leverkusen

New developments in reactive resins as composite matrix materials

9.30 **A high molecular toughened fluid thermoplastic resin: A potential for pultrusion**
Virginia Bozsak, ARKEMA Innovative Chemistry, Colombes Cedex, FR

10.00 **New lightness with PU pultruded parts**
Dipl.-Phys. Bert Neuhaus, BASF Polyurethanes, Lemförde

10.30 Coffee break

Target applications for reactive pultrusion processes

11.00 **Pultruded profiles applied – lowcost CFRP chassis for light commercial vehicles**
Dipl. Wirt-Ing. Gerret Kalkoffen, Carbon Truck & Trailer GmbH, Stade

11.30 N.N.

12.00 Lunch break

Equipment for the pultrusion of profiles in high volumes

13.00 **Pultrusion between niche and key technology**
Dr.-Ing. Klaus Jansen, Thomas GmbH + Co. Technik + Innovation KG, Bremervörde

13.30 **Turnkey pultrusion solutions**
Dipl. Ing. Sebastian Schmidhuber
KraussMaffei Technologies GmbH, München

14.00 Coffe break

Institutional and fundamental research

14.30 **Recent developments in analysis of pultrusion processes for reliable composites manufacture**
Prof. Dr.-Ing. Ismet Baran, University of Twente, AE Enschede, NL

15.00 **Holistic productivity optimisation in pultrusion with polyurethane**
Benedikt Kilian, M.Sc., Covestro AG, Leverkusen

15.30 **Enhancing the functionality of pultruded profiles**
Lorenz Wruck, M.Sc., Institute of Plastics Processing (IKV), Aachen

16.00 **Concluding remarks and farewell**

Registration

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Programme, information, registration:
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Title

Surname/First name

Telephone

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Company/Organisation

Department

Job position

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Postal code/City/Country

Billing address

Department

Address

Postal code/City/Country

USt-IdNr./VAT-IdNo.

Date Signature

Event notes

Organiser/Host
Institute of Plastics Processing (IKV) in Industry and the Skilled Crafts
at RWTH Aachen University
Prof. Dr.-Ing. Christian Hopmann
Postal address: Seffenter Weg 201, 52074 Aachen, Germany

Contact
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Telephone: +49 241 80-93828, E-mail: academy@ikv.rwth-aachen.de

Event venue
SuperC, RWTH Aachen University
Templergraben 57, 52062 Aachen

Attendance fee
The attendance fee is EUR 825 for non-members of the IKV Sponsors' Association, and EUR 675 for members. The participation fee includes the conference documents, participation in the get-together, drinks and lunch (catering is subject to VAT). Bank and transfer charges are to be paid by the participants.

Registration
Please use the registration form, which you can detach from the last page and send it back via fax or e-mail. A separate application form should be used for each applicant. IKV sends additional conference programms on request.
The easiest way to register is online at www.ikv-aachen.de

Room reservation
The aachen tourist service e.V. will be happy to assist you with your room reservation. (www.aachen-tourist.de/hotels).
P.O. Box 102251, 52022 Aachen, Germany,
Phone: +49 241 18029-50 or -51, fax: +49 241 18029-30,
e-mail:incoming@aachen-tourist.de.

Conference proceedings
The conference proceedings will be distributed at the beginning of the conference.

Data protection
In accordance with the German Data Protection Act, we would like to point out that we will keep your address in a database and process it with the help of automatic processes.

Cancellations
Please send any cancellations in a written form to IKV. If the cancellation is made By 25 September 2018, we will refund the full paid-up sum reduced by a processing charge of EUR 70. In the event of a cancellation after this date, the full attendance fee must be paid, and we will send you the conference proceedings. IKV reserves the right to cancel the event. If this happens, the whole attendance fee will be refunded. The Institute will not be responsible for other obligations over and beyond this.

Save the date

International Injection Moulding Conference (IIMC)

10 to 11 April 2019, Aachen

- Cutting-edge developments in injection moulding engineering and process technology
- Innovative approaches for the enhancement of production efficiency
- Impact of digitisation on tomorrow's production
- Technological success stories from development to production in automotive, electrical and medical applications

The highlights of our service

- Communicating expert knowledge
- Wide range of topics
- Customised qualification measures
- International Training

Do you have any questions?

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