

CONSTRUCTION MATERIALS NEWCOMER

Kick-off event on the application of Textile Reinforced Concrete

Parallel to the Experience Composites Trade Fair from 21st–23rd September 2016 in Augsburg, the 8th user conference of the Tudalit e.V. took place. Some of the branch attendees took the opportunity, on the third day of the trade fair, to inform themselves about the relatively new material, Textile Reinforced Concrete, at the kick-off event “Carbon fiber applications in the construction industry”.

Dipl.-Wirtschafts-Ing. Knuth Ensenmeier, responsible partner for Innovation & Technology at the HWK Schwaben, guided through the event. Dr.-Ing. Silvio Weiland summarised the history of the relatively new construction material and the new possibilities this has opened up in the construction sector for the interested “newcomers” among the attendees. The Tudalit e.V. employee and head of QS, Bilfinger Instandsetzung GmbH, Hamburg, titled his presentation programmatically “More than 20 years of Textile Reinforced Concrete – a German success story”.

Well and good

The practical side was the main focus when Bernhard Kölsch, craftsman, artist and founder of the Concrete Factory, cast two Textile Reinforced Concrete components, directly on site. While doing this, the national BMW award winner for 2016 chatted entertainingly about the constructional and design benefits of this “underestimated material”. He also invited the audience to feel free to lend a helping hand in his process. We would like to express our gratitude in this regard to Dr. Michael Kögl and Renate Brechenmacher from the Bauinnung Schwaben who prepared the site, and provided a specialist for support.

In theory and practice

Following this, there came some very informative presentations and reports from the practical side. These ranged from “Lightweight construction application in shell structures from carbon concrete”, which Dr.-Ing. Sandra Gelbrich, Head of the research center “lightweight construction” of the Institute for lightweight structures in the TU Chemnitz presented, up to the practical



Textile Reinforced Concrete opens up new possibilities



Practical use of the new material was also shown

building presentation “Textile Carbon Reinforcements in concrete construction” from Dipl.-Ing. Ammar Al-Jamous, departmental managing director of CC Tudalit. This was complemented by “Development and Measuring of Carbon Reinforcements – Prognosis and Development” by Dr.-Ing. Harald Michler from the research group Textile Reinforced Concrete, at the institute for solid construction in the TU Dresden.

“Application possibilities of Textile Reinforced Concrete” was presented by Dr.-Ing. Christian Kulas, Departmental Head of Textile Reinforced Concrete at the Solidian GmbH. A wonderful example of this is to be found at the companies’ headquarters in Albstadt, a 15 m long pedestrian bridge, the first in the world to be constructed purely from Textile Reinforced Concrete. During his talk “Textile Reinforced Concrete from the local authorities’ perspective” construction mayor Dipl.-Ing. Udo Hollauer was very convinced that pure Textile Reinforced Concrete applications were appropriate when one thinks sustainably.

Spread throughout were numerous addresses like that from Roy Thyroff from Fraas Solutions in Textile for the Tudalit e.V., or Oliver Heiss for the Bavarian Architects Chamber and from Dipl.-Ing. (FH) Ralf Wulf from the Building Division of the city of Munich for



With a loud blast of the carbon trombone from CCEV member Nägeli Swiss AG, Prof. Dr. Hubert Jäger, chair of the board of Carbon Composites e.V., opened the symposium at “Experience Composites 2016”.

the Bavarian Engineers Chamber. Dipl.-Ing. Klaus Posset explained the details about “Mae West – a complex art work from Carbon Fiber Reinforced Plastics”, especially on the problems of the final assembly at temperatures of about -20°C. Another practical construction presentation was “Restoration measures in a sugar silo using Textile Reinforced Concrete” (Dr.-Ing. Silvio Weiland), followed by the challenges of “Redesign of the State Opera House Berlin” (Dipl.-Ing. Andreas Ehrlich, TU Chemnitz), and the vision of the movable “Self supporting Island Arcoval” from Martin Maria Daum (Architekturbüro Purist, Karlsruhe).



On site Bernhard Kölsch cast a tile with Textile Reinforced Concrete

Summary

What was notable was that the presentations, although they were not coordinated in advance regarding content, resulted in a comprehensive, complementary, unified experience. The event was highly successful, even if more participants would have been welcome, perhaps from the large craft businesses.

A heartfelt thank you goes to all those involved for their efforts. They contributed to more applications for Textile Reinforced Concrete, to an appropriate growth of experience and therefore to the achievement of our common goal “Convince planners and

local authorities”. An important step in this direction is also the availability of the prototype of the “Planner portfolio” from the editors Dr.-Ing. Ingelore Gaitzsch and Prof. Peter Offermann.

Further Information:

Prof. Dr.-Ing. habil. Ralf Cuntze,
Carbon Composites e.V.,
phone +49 (0) 81 36 / 77 54,
ralf_cuntze@t-online.de,
www.carbon-composites.eu



175 exhibitors were present at the first fair on composites in Augsburg.



802 pupils visited the fair, where the CCeV Study Prize was awarded for the third time.

