



# AVK INNOVATION PRIZE 2012 FOR FLEX<sup>PLAS</sup>® RELEASE FILM AWARDED TO DR.-ING. GREGOR GRASSL AND DR. MATTHIAS OTT

The Industrievereinigung Verstärkte Kunststoffe e. V. (AVK; Federation of Reinforced Plastics) awarded the AVK Innovation Prize 2012 to Dr. Matthias Ott – Plasma Technology and Surfaces PLATO – and Dr.-Ing. Gregor Graßl – Fraunhofer Project Group Joining and Assembly FFM – for their outstanding development work on release agent free FRP component manufacture using an innovative film technology. The two scientists of the Fraunhofer Institute for Manufacturing Technology and Advanced Materials IFAM, Bremen and Stade, were presented with the first prize in the category “Innovative processes” at Composites Europe, the European trade fair for composites, technology, and applications, on October 8, 2012 in Düsseldorf.

The newly developed Flex<sup>PLAS</sup>® release film allows release agent free production of large fiber reinforced plastic (FRP) components such as those used, for example, in the manufacture of aircraft or wind turbines. The new films not only result in higher manufacturing productivity for FRP components but also have advantages for subsequent coating and for protection during transport. All these attributes are of much interest to industry, as reflected in the large demand (see page 107; “Pioneering development: Flex<sup>PLAS</sup>® allows FRP components to be manufactured without the use of release agents”).

The Flex<sup>PLAS</sup>® release film is a thin, firmly adhering plasma-polymer release layer of less than 0.3 micrometers thickness. It allows easy demolding and leaves behind no residues at all on the component surface. The film can be applied using a special deep-drawing process without alteration of the process design, and is suitable for both female and male molds. It is also very durable and elastic. It can even withstand extreme elongation up to 300 percent without functional impairment. This allows it to also be applied to curved and structured molds without fold formation.

Following the production, the components can be coated without further pre-treatment because there are no residues on the components. The new technology also allows in-mold coating: Here, the component is coated integrally by applying a gel-coat to the film.

## CONTACT

### Institute

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**1** AVK board members Dr. Gerd Ebwein (left) and Dr. Rudolf Kleinholz (right) presented Dr. Matthias Ott and Dr.-Ing. Gregor Graßl (center) with the AVK Innovation Prize 2012 (© AVK/Foto Behrendt & Rausch).