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Press release

No Lightweight Construction without Learning Processes

Aircraft constructors such as Airbus and Boeing as well as virtually all car producers are placing their bets on lightweight construction techniques to drive down the fuel consumption and CO₂ emissions for airplanes and passenger cars. Unfortunately, long hardening times still prevent large-scale series production of plastic components with reinforcing carbon fibres. This could be avoided if industry were to undergo a drastic phase of learning to open up new groups of materials. This includes placing such things as fibre-reinforced thermoplastics on the same level with duroplastics and their chemical reactions. They are the hope for launching economical series production because of their measurably reduced cycle periods in production.

MESSE BREMEN and the Faserinstitut Bremen e. V. (FIBRE) 2012 launched the ITHEC congress fair for topics just such as this. ITHEC (the International Conference and Exhibition on Thermoplastic Composites) delves into all of the many facets of engineering and manufacturing high-performance structural components based on thermoplastics. Ideas poised for the future are in just as much demand as adapting existing technological building blocks when we're talking about overcoming the obstacles in the way of automated lightweight construction.

Dr. Hubert Borgmann is the project manager at MESSE BREMEN. He thinks that "even the first event with its board of international experts has demonstrated that industry is capable of economically and sustainably manufacturing large-scale series of CFK components with new material pairs and cutting edge processing techniques." Beyond this, the first ITHEC showed that the new lightweight construction techniques also access new areas of application in offshore and wind energy system construction. For instance, that includes fibre-reinforced pipelines based on high-performance thermoplastics for offshore deep-sea oil and gas drilling as an alternative to steel-plated pipes.

Even electrical cars are neither economical, nor do they have acceptable ranges without car body parts from fibre reinforced materials that can be manufactured at low prices. There are increasing ways for a hybrid combination of thermoplastic composite materials and other lightweight construction materials. These hybrid solutions are one of the focuses of ITHEC 2014 that will be taking place at MESSE BREMEN from 27-28 October 2014.

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Other information and addresses for examples of publications:

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