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121

Feature

Land Transportation

Manufacturing
3D printing

Solutions
Construction

“We want to bring the story of composites to the end user in a different way”

interview



DR. CHRISTIAN KISSINGER,
FOUNDER AND CEO, KISS
MARC SCHRIEF,
FOUNDER AND CEO, SMACK

JEC Composites Magazine: What did you observe about the composites market that led you to propose new services now?

CHRISTIAN KISSINGER: Today, composites only account for about 2% of the materials world – this represents a major discrepancy with the potential composite solutions can offer. Very often, traditional industries face the problem of understanding what composites can offer; that’s where a “translator” with a general understanding of both worlds is needed.

Can you describe the two entities, how they complement each other, and the nature of their collaboration?

MARC SCHRIEF: After having been in the industry for about 20 years working for companies that manufacture raw materials for all types of end users, it was time to start something new. We always had the ambition to combine companies and technologies through the entire value

chain – simply to help grow the whole composite industry.

C.K.: With our entities, we take the freedom to work on projects that are – at least at the beginning – not only driven by sales and figures, but more by the potential to deliver solutions. This is of course a slightly different challenge than we had before, but at the same time it is a great motivation.

M.S.: If you want to develop new markets for composites, a deep techno-commercial understanding is not only helpful but essential. The approach is much stronger if you use a global network to bring the best-in-class players in the composites industry together. With KISS focusing more on the western side of the world – mainly North and South America – and SMACK being closer to the European and Asian side, we can provide a global network that links partners on a global scale with existing solutions and new ideas.

How confident are you that composites will continue to develop?

C.K.: For centuries, civilizations have heavily relied on the development and use of composite materials to advance technology and infrastructure. The beginning of the fibre-reinforced polymers (FRP) industry

and the composites industry as we know it today started with the development of the first synthetic resins in the 1930s and the introduction of the first glass fibre by Owens Corning in 1935. Today, the composites industry is still evolving, undergoing rapid development and growth in various sectors. The numerous features of composite materials and the benefits they provide – including light weight, high strength, corrosion resistance, design flexibility, part consolidation, and dimensional stability – have already led to their use in many different industries. What is exciting is that it feels like now, as composite solutions have made their way and proven their excellence in various

industries, the time seems right for a “new age of composites” to deliver integrated solutions. From aircraft and military uses, automotive and transportation, civil infrastructure, construction and consumer products to renewable energy, composites will demonstrate their potential to offer smart solutions with environment-friendly materials.

M.S.: The best example for the success of composite materials is the wind industry, where we saw a parallel development of wind generation and composite solutions. Composites were known to the pioneering (wind) engineers from the glider technology. Today, the wind industry is one of the biggest volume



Past to present - building on the success of composites in Wind to create future solutions for other industries

applications for composites in general, using about one million metric tons per year.

In less than three decades, the demand for composites grew with the size of the blades. In the early 90's, the maximum length of a wind blade was about 20m, developing rapidly to a standard length of about 50m in 2015. And who knows where this trend will stop, but designing and producing 100m and longer blades seems not to be too far away.

As a result, blades are not producible in other materials than composites if you want to achieve the same requirements for geometries, weight, strength, stiffness, etc.

C.K.: The development in the wind industry was only possible as a "team approach" of multiple factors that played a role in the advancement of composites. The right combination of raw materials, like fibres, resins and core materials, has to meet design and process requirements that are defined with a good understanding of composite design principles.

If we want to repeat the success story of wind applications in other industries, we need to tailor the story to each market and segment a bit differently. But in general, it will stay an approach that can only be won by the best team on the pitch.

What is the real prize for composites?

C.K.: The common goal of all composite players should be to grow the share of composites and open new markets and applications to composite solutions rather than to fight for the same piece of the pie.

We need to change the story of composites to make it under-



Final touch on a complex mold - showing the dilemma of composites balancing the freedom of design with the need for automation for high volume production

standable to other industries, allowing them to participate in the benefits and to use composites more easily.

M.S.: It is absolutely essential to start sharing knowledge between market sectors in order to broaden composite usage in a bigger way. Often persons or entities are afraid of losing their specific know-how. Therefore, we need to create an environment of trust where all can bring in the expertise needed to deliver the best composite solution.

Which arguments are likely to help further the development of composites?

M.S.: We all know the benefits of composites very well, such as their light weight, corrosion resistance and design flexibility. But in most of the cases, composites have a cost disadvantage compared to conventional materials like steel or concrete. To overcome this hurdle, we need a solid model to explain their lower life cycle costs.

The most difficult part is to explain the benefits to industries outside the composite world in an easy and understandable way. Only if we are successful in telling our story understandable and compelling we have the chance to connect to new industries.

C.K.: To increase the competitive advantage of composite materials, we take a holistic approach of technologies with – and this is key – an agnostic view of different solutions, bring together existing technologies and processes and optimize to the requirements of specific industries.

There are multiple pitfalls to overcome, like automation, variations, tolerances, manual labour, F&E predictability (failure), cost and certainly the perception that composites are complicated to work with. Nearly all major composite players are working on these topics separately but we will reach our common goal – to grow the use

of composites – more easily if we combine our efforts.

How will you go about winning people over?

M.S.: There is a place for every material – metals, composites, wood, etc. – but we need to use it wisely. In other words: use composites where they make sense to claim the most benefits.

C.K.: We want to bring the story of composites to the end user in a different way, sharing the success of composite end users with peers of their industry, from their point of view – not from the composites enthusiasts' perspective. A story that you have been part of or that has been executed is always stronger than a nice but theoretical idea presented with a good PowerPoint presentation. We have to offer other industries easy access to composites by delivering composite solutions. □

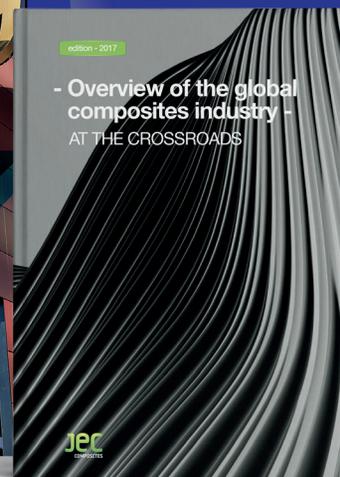
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