

KraussMaffei Group driving growth in China

During the recent Chinaplas 2014 event in Shanghai, China, the KraussMaffei Group has officially inaugurated the second production hall at its manufacturing plant in Haiyan, China. Around 400 of its customers and business partners attended this event.

As part of the expansion of the plant, the production space has been doubled and now covers 22,000 m². By doing so the company is continuing its expansion strategy in China, where it sees considerable growth potential for its brands **KraussMaffei**, **KraussMaffei Berstorff**, and **Netstal**.

Products manufactured locally to European standards

Expanding its plant in Haiyan shows that the KraussMaffei Group is responding early to the changing requirements of the market and thereby increasing its competitiveness. "By doubling our production capacity to 22,000 m², we are accommodating the increasing demand from China and Asia for products that are manufactured locally, while drawing on our considerable European expertise and meeting our high standards of quality," emphasized **Jan Siebert**, CEO of the KraussMaffei Group.

"Lightweight Design" is changing automotive manufacture with increasing speed. More and more components, which were traditionally manufactured from steel or aluminium, are giving way to fibre-reinforced plastic parts: Sidewall panels, base pans, entire roofs, front-end carriers, carbon design parts and more besides. KraussMaffei is playing a key role in ensuring that these parts can also be mass-produced economically.

KraussMaffei Group were also pleased to announce that a leading Chinese automotive component supplier is benefiting from their expertise in lightweight construction and is investing in a turn-key high-pressure resin transfer moulding (RTM) system. The Chinese automotive supplier **NBHX** is now also taking advantage of the opportunity to manufacture fibre-reinforced plastic components with cycle times of just three minutes.

Growth through setting the right course

NBHX is a company with 9,700 employees, making it one of the biggest automotive component suppliers for plastic visible and structural components, and a pioneer in lightweight construction in China. They expect that lightweight construction will also see above-average growth there, and have therefore invested in the high-pressure RTM technology from KraussMaffei.

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Recently, a high-pressure **RimStar Compact 8/4** RTM machine was commissioned for manufacturing epoxy resin parts, and a second **RimStar Compact 8/8** RTM machine was commissioned for manufacturing parts with a polyurethane matrix. Added to these are an **MX** mould carrier with a mould fixing area of 3,000 x 2,000 mm and a clamping force of 600 t, and a prototype mould.

The General Manager of NBHX's R&D department, **Dr. Karsten Brast**, attaches great strategic importance to this investment in the new machines and systems from KraussMaffei: "Based on the feedback from several customers, we are confident that, with the HP-RTM technology, we are on the right path. We have already noticed great interest in lightweight components from OEMs and expect to start to use these in series production, step by step." On the KraussMaffei systems, NBHX is gaining experience in the manufacture of structural and visible components in the form of composites that are reinforced with carbon fibre or fibreglass.

NBHX's customers include almost all of the automotive manufacturers that have production facilities in China and, through their cooperation with American, European and Asian brands, practically the entire crème de la crème of the automotive world. The main focal points are plastic components for the interior and exterior, which are increasingly being trimmed down to lightweight construction and reinforced with carbon fibre or fibreglass.

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Fast composites are in demand

The HP-RTM process allows fibre content of up to 70 % and enables the use of polyurethane (PU), epoxy resin or base polyamide as a matrix material. To make the production of fibre-composite components for the automotive sector suitable for series production, KraussMaffei says it has carried out pioneering work in many areas: For mould carriers, in mixing and dosing

technology, and even in energy-efficient pumps, which they have produced themselves for some time now.

In this context, **Erich Fries**, Head of the Composites & Surfaces Business Unit, pointed out one of the new key components: “To shorten the cycle times in the RTM process and to increase the quality of the parts, we have developed new self-cleaning high-pressure RTM mixing heads to ensure excellent mixing of the matrix components and short response times. One important advantage for the customers is the development of a precise metered addition of release agents directly via the mixing head, which means that the manual release agent procedure is no longer required.”

Discussions with experts in lightweight construction

During the Chinaplas in Shanghai, visitors to KraussMaffei's trade show stand and to an open house (23 – 25 April 2014) at the KraussMaffei Group's site in Haiyan were able to find out about the topic of lightweight construction. Among other things, the roof module for the **Roding Roadster R1**, which is manufactured using the surface RTM process, was on display and its manufacture was explained. The newly developed surface RTM process enables cost-effective mass production of paintable fibre-reinforced visible components for automotive construction. Paintable components are created by flow-coating the surface of the fibre-composite component with a polyurethane layer directly in the cavity, without the need for any additional intermediate steps.

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