

Thermoplastics and Asia lead composites growth

The global composites sector will grow 4% to reach 10m tonnes - €85bn in monetary terms - by 2013.

David Vink reports

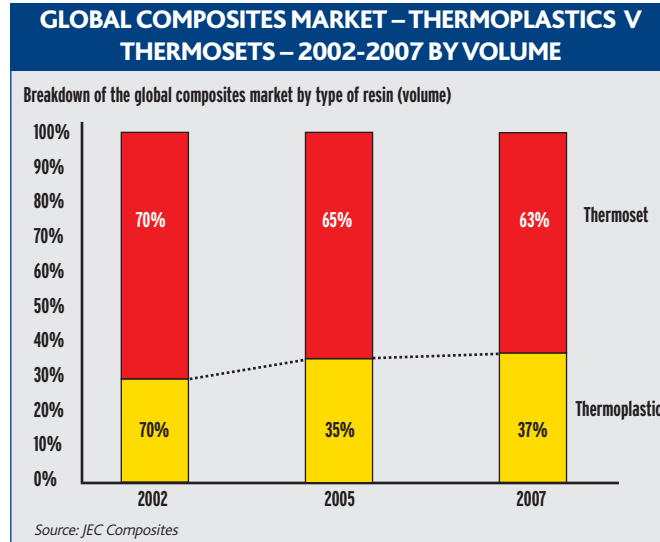
The global market for composites has grown at a rate of 4% a year since 1999 - rising from a total of 5.9m tonnes to 8.2m tonnes by 2007 - and is predicted to continue that growth to reach a total of 10m tonnes (€85bn in value terms) by 2013, according to Frédérique Mutel, president and CEO of the JEC Composites association.

Speaking at the JEC 2009 fair in Paris earlier this year, Mutel said the North American and EMEA (Europe, Middle East and Africa) regions are currently leading composite consumption and are worth €25bn (3.1m tonnes) and €19bn (2.2m tonnes) respectively. In these areas, composites have an average market price of over €8 per kg on account of their use in high-value aerospace and wind energy applications.

Worldwide, average composite prices amount to €40 per kg in aerospace applications, €15 per kg for wind energy, €5 per kg for transportation and €3 per kg for storage tanks, she said.

According to JEC, Asia Pacific and the rest of the world together account for 3.3m tonnes of composite use, corresponding to a total value of €18m at an estimated average composite price of €5.5 per kg. However, growth is strongest in Asia and the region is expected to account for 51% of growth by 2013, compared to its 25% share over the period between 2002 and 2007.

Per capita consumption of



composites varies widely across the world, with levels in the BRIC countries – Brazil, Russia, India and China – not exceeding 2.5kg per inhabitant. In contrast, levels average at 10kg in the US and between three and six kg in Europe, Japan and Australasia.

In terms of end use, the transportation market currently consumes 28% of the world's composites, followed by construction (27%), electrical and electronic (16%), consumer goods (9%), pipes and tanks (7%) and marine (6%). And although aerospace and wind energy take small shares at respectively 4% and 3%, these markets are predicted to deliver the highest levels of growth over the next few years.

Mutel also highlighted the rapid gains made in the thermoplastics composites sector. She said the market for thermoplastic-based composites grew by 8% between 2005 and 2007, compared to just 2% for thermosetting resins. And while thermosetting resins held a 70% share of the market in 2002, this figure fell to 65% in 2006 and 63% in 2007, as thermoplastics can now be used for a number of automated processes and are easier to recycle, she said.

Speaking at the same conference, Dr Elmar Witten, president of the Germany-based AVK Federation of Reinforced Plastics, said the European market for glass reinforced plastics (GRP)

amounted to around 1.195m tonnes in 2007, having grown by 5.6% in 2006 and 6.2% in 2005.

In Europe, he said hand lay-up composites account for the lion's share of the market at 244,000 tonnes, according to 2007 figures. SMC follows closely behind with 226,000 tonnes, followed by spray-up (124,000 tonnes) and RTM (122,000 tonnes). The markets for GMT/LFT, BMC, filament winding, centrifugal casting and GRP sheets are all between 50,000 and 100,000 tonnes. Fastest growth in 2007 came from the RTM (13%) and GMT/LFT (10%) sectors.

Witten said that European GRP production in 2007 was led by the Iberian Peninsula (Spain/Portugal) at 270,000 tonnes, followed by Italy (210,000), Germany (155,000), UK & Ireland (144,000) and France (131,000). Construction and transport accounted for most of the European GRP market, followed by sports and leisure and electrical and electronic applications.

Meanwhile, the latest assessment of the US market by the American Composites Manufacturers Association (ACMA), published in May, said that shipments of composites reinforced with glass fibre amounted to 1.38m tonnes in 2008, down from a peak of 2.04m tonnes in 2005.

