

An Entire Boat Made in Composite Material

On the Wave of Carbon

On the wave of the experience gained with the project 'Luna Rossa', Persico has under-taken a research and development path involving composites and the various processing challenges it brings, that has lead it to develop interesting solutions aimed at increasing productivity and quality of these materials. These solutions have recently been used with the construction of an entire boat (Volvo open 70) in composite material that will compete for the team Abu Dhabi Ocean Racing in the Volvo Ocean Race 2011/2012

"In the past years, composite materials have experienced a great evolution that has lead them to spread to several application fields, first of all in ship building and automotive," says Marcello Persico, managing director for Persico Marine Division. "Starting from the know-how, gained in over 35 years of activity of our Automotive, Rotomolding, Marine and Engineering

divisions; in our in-house research and development department we have developed innovative technologies, aimed at increasing productivity of parts in composite material. For instance, we have patented an aluminium mould for the construction of masts in carbon." The mould is made of two halves and includes an oil heating and cooling circuit: thermal control

has always been one of our strengths. To develop this process Persico initiated to collaborate with SP (Gurit's nautical division) that has supplied a special composite material based on carbon fibre. Once the carbon had been laminated inside the mould, the mould is then closed, heated and brought to pressure with the presence of a pressure bag inside it. At the end of the cycle, the



From left: Jason Carrington (Abu Dhabi Ocean Race Team's technical manager), Marcello Persico (managing director Persico Marine Division), Mark Bishop (design engineer Farr Yacht Design) and Mark Somerville (operations manager Persico Marine Division), at the interior of the boat on the stocks

piece is extracted and it features great dimensional accuracy and a perfect surface finish. The great advantage of this procedure is that it allows to position all the carbon layers simultaneously together increasing productivity and saving time, as with conventional methods

this is very time consuming. Consequently, there is a single compaction process, a single heating process and in only two days it is possible to obtain a finished mast without using autoclave.

"For the first experiment, we constructed a mast that has been judged by an expert of the America's Cup," Marcello Persico adds. "So that he could evaluate the results: he confirmed with NDT (non destructive testing) the perfect compaction of the material. At this point we have manufactured a mast for a Mumm 30: even in terms of coupling accuracy and functionality this is comparable to other 'traditional' masts.

Last summer Abu Dhabi ADTA contracted Future Fibres to construct its carbon masts and suggested them to turn to Persico for the boat (Volvo Open 70) construction. Once in our plant, Abu Dhabi managers have found themselves facing a reality above the average of companies operating in this field of race yachts. After this visit, they preferred passing the job order to us for the construction of the entire yacht".

Songwon at Chinaplas 2011

A Successfully Executed China Strategy

Just 12 months after the announcement of its business structure in China, Songwon Industrial is pleased to be attending Chinaplas 2011 (Hall 12.2, Booth: D11) as an established and respected player in the Chinese polymer additives market

Based in Hong Kong, Songwon China is the investment arm into an increasing number of Songwon entities in China. Songwon Shanghai Trading is the main operational company where sales and sourcing activities on behalf of the global Songwon group will be conducted. Chemservice Asia complements these activities by providing an unparalleled service in regulatory advice and is an authority on Reach compliance in China. Songwon Baifu Chemical is a joint venture with Tangshan Baifu Chemical to manufacture and sell thioester antioxidants and will be fully incorporated by mid 2011 with a fully backward integrated capacity of 6000 tons. Customer acceptance of the value that Songwon delivers has driven the need for a full analytical laboratory to be located in Shanghai, which will be operational by the end of 2011. The new facility will become a centre of excellence for specialty chemical analysis, as well as providing quality control for sourced products.

"We are very pleased with the progress we have made in China in such a short time", stated Jongho Park, chairman and president of Songwon Industrial. "The commitment we made to customers in China has been recognized and we are being rewarded by growth and long term business commitments. This is driving the need for extended services, such as the analytical laboratory, and the extension of our product range. Songwon Baifu will be influential in China and will provide world class thioester antioxidant products to our other key regions."



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