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RENASTE® XD 4618 – DEVELOPED SPECIFICALLY FOR MARINE APPLICATIONS

RenPaste® Seamless Modelling Pastes (SMP) from Huntsman Advanced Materials are widely used in the marine industry, with successful projects ranging from rowing boats, leisure, speed and racing boats to luxury yachts.

Now after working closely with their marine industry customers, Huntsman Advanced Materials have developed a new version of RenPaste SMP specifically for marine applications – RenPaste XD 4618-1. The versatility of this new material enables marine model-makers and ship-builders to build almost any marine model from large hulls and decks, (up to 36 m, to date) to highly specialist applications such competition rowing boats.

RenPaste XD 4618-1 A/B is a cost effective epoxy paste material that fits perfectly with the largest CNC milling machines to provide faster and more accurate models for the construction of both small and large boats. Specially formulated for fast extrusion with CNC application a future option, low shrinkage, easy milling and good surface finish, the use of RenPaste SMP together with CNC milling provides design options delivered with a speed and accuracy not previously available.

The Italian-based company Forme S.r.l. specialise in building models and moulds for the marine industry and have used RenPaste SMP in several projects. They recently built the model of the hard-top for the 63ft (19m) long leisure yacht *Azzurra 63* for the Neapolitan ship-builder Baia.

Forme built the complex hard-top model (measuring 7500x4000mm) used to make the fibreglass mould which will be used to make up to 20 production parts. The *Azzurra 63* was originally designed as a coupé yacht and the hard-top was then offered as an optional extra.

To make this component using traditional techniques and materials such as wood, would have been a more expensive and time-consuming process where the inner side would have been built first, cured for a few days, then inverted to allow the construction of outer side. The work would have to be done in stages with each stage checked to ensure an accurate fit.

However, using CAD/CAM data, a computer controlled CNC milling machine and RenPaste SMP, the accuracy of fit was ensured and Forme was able to build both the inner and outer halves of the two sides at the same time. This reduced the construction time of the GRP mould to only 45 days.

Baia supplied the CAD data used to machine cut the polystyrene undersized substructure used as the base of the model. This was covered with a layer of RenPaste SMP and cured at room temperature for about three days. The low shrinkage allowed Forme's technicians to produce on large sections of the model in one operation. Once cured, the model was machined on a CNC milling machine (size 13m x 3.30m), varnished with polyester and used to make the fibreglass moulds. The final result was a 8m-long structure made of two perfectly fitting halves.

Mr Paolo Gori, Director at Forme S.r.l., comments: "in the *Azzurra 63* project we had to face many difficulties due to the large size of the model, and its intricate geometry, especially where the glass panels were to be inserted, and the minimum dimensional tolerance we could bear since the inner and outer halves of the hard-top had to fit. Therefore we had to specify a superior quality product, such as RenPaste SMP, able to meet this demanding application.

“Once cured RenPaste SMP exhibited low shrinkage, a high surface quality which didn’t require much hand finishing and it was easy to machine, generating only a small quantity of dust. Moreover, thanks to the enhanced strength of this new marine paste formulation, its dimensional stability and the good balance between quality and cost. We have used RenPaste in other projects such as the construction of the model of a 13m long competition rowing boat used in the recent Olympic games in Athens.”

For further information about RenPaste XD 4618 A/B/ and the complete range of Huntsman Advanced Materials products, go to: www.huntsman.com and click on Advanced Materials. For further information about Forme, go to: www.forme-srl.it

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