

application *focus*

Marine industry



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Mould	Faster mould making
Application Summary	Seamless modeling pastes, such as RenPaste™ SV/HV4503-1, bring specific product benefits to the marine industry. Manufacturers can quickly build large-scale models. For example, components of an exceptionally long single mast super yacht built in Barcelona ; the whole process took three months as opposed to at least six months, if a wooden model had been built.
Products used	<ul style="list-style-type: none"> • RenPaste™ SV/HV4503-1 • XD 4563 grey resin • HV 4503 hardener • Renshape's XD4535/4536 epoxy laminating system
Process used	It required a super structuremould for the roller bar mesuring 15m*6m. First stage : the mould was made by 3VU direct from digital data supplied by the designer, using reverse engineering techniques. The complete mould consisted of 11 individual 300cm*200cm*70cm sections. The negative slightly undersized polystyrene model of the superstructure was built and then each of the individual mould section was coated with two 17mm thick layers of RenPaste. After polishing, the 11 mould sections were sent to Festa. The final production process utilised Renshape's XD4535/4536 epoxy laminating system and this was autoclaved for the initial curing then for post-curing.
Main characteristics	The extra benefit of this robotic extrusion process is that it minimises operator contact and workplace contamination. The paste models were then CNC machined quickly and easily and the finished surface was so event that no flaws were detected. Festa adopted advanced aerospace production techniques involving high temperature and pressure cycles applied by means of autoclave. The mould was supported by a metal frame while in the autoclave and showed excellent resistance to heat and with good dimensional stability.

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