CASE STUDY: Supporting Customer's Innovations

Situation:
A leading yacht manufacturer developed a process that would allow them to mould a series of 32 meter (105-foot) yacht hulls directly from a "negative plug," thus eliminating the usual six to ten months required to build an epoxy/polyester mould and the high cost of the raw materials.

The usual process for such a large hull is to construct a wood plug, surfaced with a polymeric resin to give a good surface finish. This takes weeks, if not months, of careful work by skilled craftsmen. A mould is then made from the plug, after which it is removed, polished, cleaned, sealed and released. Only then can boat hulls be made from the mould.

They decided to make a "negative plug" rather than a mould. The plug was made in PU paste and precision-milled down to 0.3 mm (.01 inches). There were several factors to be considered to recommend the right release agent. The plug was highly porous and would require complete sealing and the surface area was very large, 425 square meters (465 square yards), so the potential for pre-release had to be considered and eliminated.

Solution:
Chem-Trend ran preliminary tests to determine the system's release efficiency, first using a two-square meter PU plate and then a larger 55-square meter (60 square yard) staircase mould. Chem-Trend recommended a complete system, consisting of a mould cleaner followed by ten coats of a Chemlease® sealer product to close down porosity in the PU, and then three coats of a Chemlease® release agent.

Benefits:
The customer was very satisfied when a perfect, 32 meter (105-foot) hull eased its way directly out of the "negative plug." Never before had such a large yacht hull been manufactured in this way, and it was made possible by Chem-Trend.

Chem Trend
Release Innovation™

"Chem-Trend has an excellent system for sealing and releasing directly from tooling block. Using the Chemlease® line has saved us both time and money."

Mr. Jonas Pedersen
Owner, Tuco Yachts

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