

Many yachts requiring retrofitting do not have architectural designs available. **Above**—The laser scans provide remarkably precise measurements for the designers to work with. **Right**—OCD's redesign (in Maxsurf) of the same aft sections with new twin rudders.

recommendation was to revert to a single rudder, or new rudders, further forward and inboard. The client opted for the latter. I worked in Maxsurf to determine where the rudders should be. One of the problems was that the distance from the waterline to the root of the rudder was too great. So when the boat came upright, the rudder was ventilating [it sucked in

air], and the boat would spin out, losing control. But by moving the rudders forward and inboard, you start losing the advantage of having twin rudders. So it was somewhat a Hobson's choice.

"This type of work, reviewing existing designs from other offices on and off the water, has been a feature of the kind of consultancy we've

undertaken on numerous cruising and racing yachts of all sizes since twin-rudder boats entered mainstream yachting. Foil/appendage design and consultancy for owners of existing boats and shipyards has also become a steady income stream for the company in recent years. Not surprising, with over 30 of our own high-Froude-number twin-rudder designs on the

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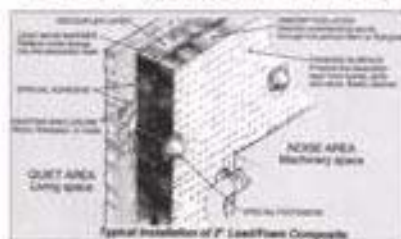
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