

topdeck

ISSUE NUMBER 9

DIXON 
yacht design

TOMORROW'S YACHTS TODAY

Skipper's briefing

Some of you may not know that Dixon Yacht Design has been very active in Asia for over 25 years. It was very gratifying therefore to receive the prestigious "Yacht Designer in Asia of the year award" at the Asia Boating Awards of 2010.

Not only does it recognise the body of work that Dixon Yacht Design has been responsible for over many years in the region, but our on-going success in the developing markets of Asia. In this, and future editions of Topdeck we shall introduce some of the builders that we are working for and the exciting designs we have developed for them.

In this issue we also inform our readers of the development work we have been undertaking in motoryacht hull design; from the innovative hulls for the Azimut Magellano series, to the extensive model testing of slender hulls for Superyacht projects. We also have a number of clients such as Peri Yachts for whom we act as naval architect for their range of fast Motoryachts.

The Superyacht industry, as with the rest of the boat industry, is going through challenging times. For designers the challenge is to create new designs and concepts which will encourage the client into a new build rather than a brokerage boat. At Dixon Yacht Design we are happy to take on this challenge and are developing state of the art designs for our clients, some of which are shown in this issue.

Bill





The Discovery 50 Catamaran

Every inch the thoroughly modern cruising catamaran the Discovery 50 is our first design for this quality British builder.

Easily handled by two people, the 50 has been designed right from the outset to be a yacht capable of world cruising in considerable comfort. On deck the comfort is provided by a superb cockpit with a generous dining area and sunbeds; transom decks which are great for sunbathing or barbecues and have steps for swimming and diving. The foredeck has bow seats, plenty of sunbathing room and the real luxury of a hot tub/splash pool.

Below, the Discovery 50 is a superbly designed and built luxury home. A considerable amount of customisation is possible with the layout of the cabins but, whatever the choice, all benefit from being spacious, well lit and in having en-suite facilities. The main living areas are just as inviting. A large and very comfortable saloon has an equally capacious galley located so the cook maintains contact with the rest of the crew while preparing meals; and the navigation area is positioned to allow the vessel to be safely piloted from it in poor weather.



Photos courtesy of DiscoveryYachts



Pearl 75

Many of our client relationships are long term, and Pearl Motor Yachts is a company we have been designing for since 2002. Our latest project is the company's superb new flagship, the 75.

Technically up to the minute, with ZF pod drives and a sophisticated hydraulics system that handles several pieces of equipment including the flybridge bimini, the door to the jet ski garage, the passerelle and the bathing platform, the 75 also has a flybridge of class beating size which is fully equipped with a bar, barbecue, fridge and icemaker.

The beautifully built and finished interior is remarkably light and spacious and available with several layout and styling options.



Performance Yachts

Our work for Performance Yachts has turned into a unique project; with 'benchmark' vessels strategically located at lengths from 90 to 125 feet. Why 'benchmark'? Because the PY range are custom designed and built to match the owner's exact requirements. So if the 109's interior cannot produce the interior that the owner wants, but a yacht 3 feet longer could, then that is what will be designed and built for that owner. It may sound expensive but the final cost is highly competitive with quality production yachts and the Performance Yachts marketing model, which is also unique, and allows this keen pricing, deserves close inspection at the company's website.

All Performance Yachts however share a similar family profile, and are superbly built, using the very latest light but immensely strong materials to ensure that light air performance is excellent and heavy air performance sea kindly and comfortable.

Shown here is a Performance Yachts PY-125, and to demonstrate the customisation described above, a rendering of an owners cabin in an even larger PY range yacht, as yet unannounced.




Meteor

Comfort and performance in equal measure were the requirements of the owner of the 30.5m 'Meteor' project, as she is currently known; an owner for whom we have already designed two yachts. 'Meteor' will be a powerful yacht but capable of being sailed with a relatively small crew. Composite construction keeps weight down and allows us to fully exploit additional interior volume in crucial areas of the accommodation. Weight considerations have also affected the choice of rig, and the carbon rig and rigging, as well as obviously reducing weight aloft, will also increase stability.



Images courtesy of Rhoades Young





Comfort starts on deck, which is designed to have different socialising areas, with aft deck seating, the guest cockpit itself, and additional informal seating forward in the foredeck tender recess. The interior layout, which has been designed in conjunction with Rhoades Young, focuses very much on the split level pilothouse, a focus point of the design; the aft windows and door fold away to give a cohesive indoor / outdoor living space with the guest cockpit. A carefully thought out living plan is essential on any yacht, and on 'Meteor' the pilothouse configuration allows the integration of a 'serious' engine room, with full standing headroom, making maintenance both efficient and convenient.



Photos courtesy of Azimut

Azimut Magellano 74

As Naval Architects for Azimut's Magellano 74, we worked as part of a team that also featured internationally renowned designer Ken Freivokh who was responsible for the interior and exterior styling. Dixon Yacht Design provided the naval architecture and the production engineering.

Most notable of our work on this yacht was the hull design which involved many hours of design, tank testing and the use of free running radio controlled scale models. The result is a very special motoryacht which satisfies two roles in one; efficient cruising at semi-displacement speeds and comfortable and economic cruising at displacement speeds. Setting new standards for large motoryachts, the hulls lower resistance provides better fuel economy and longer range while her excellent directional stability allows her to operate at high speeds in large following seas, without broaching or bow diving.

Our new hull design will also feature on the second of the Magellano models, which will be launched soon – the 50.



Peer Gynt 90



In a radical departure from the trawler yachts they are so well known for, Peer Gynt are now building custom designed motoryachts with very modern styling. We have designed this 28m vessel for the company. It's an extraordinary yacht that has a hidden secret in its stern; a customised garage that houses the owners Porsche 911.

Johnson 65

Johnson Yachts are one of Taiwan's most respected motoryacht builders and we have been designing their yachts for nearly 30 years. Having recently created a range of larger motoryachts ranging from 87 to 125 feet we have now turned our attention to redesigning the company's smaller models starting with the 65.

The new Johnson has a very different image from the current range and it is unusual, if not unique on a yacht of this size to have an enclosed sky lounge. Designed originally for the Australian market we have no doubt the yacht will have worldwide appeal. Every aspect of the vessel has been carefully considered from its propulsion, which features ZF pod drives, to the very comfortable interior based around a single level saloon with four guest cabins and a very spacious owners suite amidships.



Optional open flybridge

Saturn 47

The Saturn 47 is a high quality blue water cruising yacht built in Taiwan for the British company Saturn Yachts. This is a vessel which simply oozes blue water sailing experience as one look at the extensive specification shows. It is not just our design, which from day one was dedicated to producing a powerful cruising yacht which would be easy for two people to handle on long voyages, but the thought that has gone into the choice of equipment that demonstrates that this is a vessel designed by a team who really understand long distance sailing.



By contrast the HS 46 from Hansheng Yachts is a truly ground breaking design for a Chinese boat builder; the first modern cruiser racer of this size built specifically for Chinese customers. Thoroughly modern in design she has been designed to compete under IRC against imported designs. Equally modern production methods are employed to ensure this three cabin yacht is both efficient to build and of the highest quality.

High Speed Displacement Hull Form The Golden Ticket



The quest for low resistance, easily driven hull forms is not new. Since the dawn of time humans have been experimenting to find this 'Holy Grail', from prehistoric hollowed out tree trunks to modern day highly efficient, 'slender' Naval vessels.

The operating spectrum of each vessel is wildly different and, what is good for one might very well not be for another. In today's economic climate it is the responsibility of the designer to design an efficient hull shape which is optimised to its operating spectrum. To add further complications, external factors such as berthing facilities also influence the development of hull shapes which has seen the development of relatively beamy, fast motor yacht hull shapes which, whilst being fuel efficient at high speed, are not so at lower speeds.

At Dixon Yacht Design, we have been continually investing in a program of R & D to develop a hull form which has the capacity to travel at relatively high speed (as you would expect from a faster hull form) with a capacity for efficient comfortable passage making, at slower speeds.

As we all know, once a yacht is launched and trials carried out, most yachts rarely ever run at top speed, but mostly operate at much lower cruising speeds, which is not only comfortable for the guests but is more economical and increases range.

Our research has lead us to develop a relatively slender hull form combining a round bilge hull, with an optimised transom shape, trim control devices and spray rails.

This hull form is comparable to displacement yachts, but has influences from sailing yacht hulls, and shows a major improvement in resistance compared to typical semi-displacement motor yachts.

As well as tank testing, radio controlled model testing was undertaken to investigate and verifying the design in different sea states, and different headings. Of particular interest was the directional stability in following seas, where the hull showed excellent stability and control characteristics.



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