

## Design Concept

Sydney businessman, Denis O'Neill wanted a super fast 50' harbour racer, making full use of today's technology, while paying tribute, aesthetically, to the current America's Cup Class yachts.

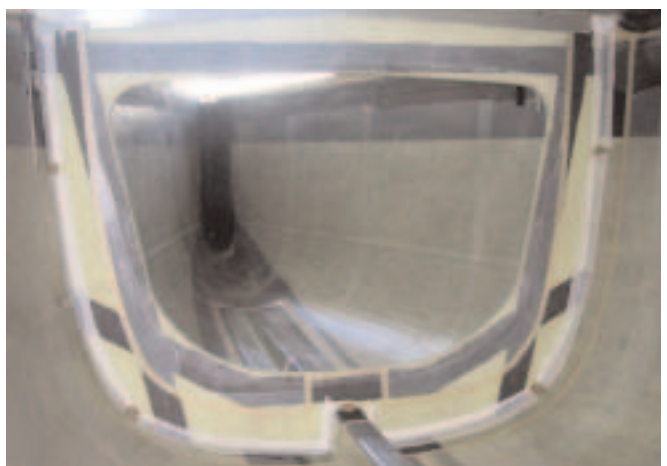
Atomic was designed by Andy Dovell (Murray Burns & Dovell) with aggressive styling that incorporates the advances made in hull design in the AC Class. Atomic's canting keel design (patent pending) has resulted in a boat that is significantly more powerful for its weight than an equivalent yacht without a canting keel. And with the addition of America's Cup type wings on the keel bulb, it solves the need for an additional leeway-resisting surface automatically, as the keel is canted – thus introducing automatic transmission to turbo-charged yachting!

Designed to be super fast, Atomic needed to be light-weight, and also had to look super sleek. Black and red being the colour combination of choice, posed questions in choice of structural and finishing materials to obtain the optimum results. Builders, Azzura Yachts on the Gold Coast, and Andy Dovell worked with ATL Composites for the best materials for this project

## Construction

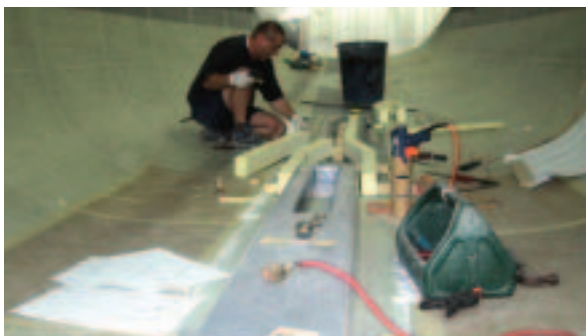
DuFLEX™ Composite Strips, cored with BALTEK® SB.50 80kg/m<sup>3</sup> end grain balsa and laminated with a unidirectional E-fibreglass on either side, were manufactured by ATL Composites, and used to strip plank the hull of this custom project.

BALTEK SB.50 is genetically selected at BALTEK plantations, processed and graded to produce tightly controlled cellular density throughout. The end-grain core has consistent design properties including extremely high strength and stiffness to weight ratio. BALTEK SB.50 is the ideal core material for sandwich structures where extreme performance and weight savings are critical.



The edges of the DuFLEX strips were beveled slightly to ensure a tight fit, reducing the quantity of epoxy adhesive required, therefore keeping weight at a minimum. To optimise this, the topside planking was wider, reducing the number of glue lines, and then reduced in width as the hull shape became more compound toward the bilge area. A lightweight satin weave cloth was then applied to prepare the hull for the final vacuum bagging of the structural laminate and high performance reinforcing in specific areas.

The extended working time of KINETIX® R240/H341 Wet Preg, allowed for fiberglass impregnating equipment to be employed to reduce the labour vacuum, at relatively low temperature, resulted in excellent mechanical properties, including a high HDT that ensured a reliable base for Atomic's final black, red and silver paint finishes.



<b>Length Overall</b>	16.100 m
<b>Length on Waterline</b>	10.437 m
<b>Beam on Deck</b>	3.100 m
<b>Draft</b>	4.150 m
<b>Displacement</b>	8000 kg
<b>Sail Area</b>	160 sq m
<b>Engine</b>	40 HP Yanmar
<b>Murray Burns Dovell</b>	<a href="http://www.murrayburnsdovell.com.au">www.murrayburnsdovell.com.au</a>
<b>Azzura Yachts</b>	<a href="http://www.azzurayachts.com.au">www.azzurayachts.com.au</a>



Photo -Andrea Francolini



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