SMAR Azure Ltd

SMAR Azure Newsletter – Dec 2012 – No 8

Features:

- Interview with **Richard Bouzaid (Doyle New Zealand)** on how he uses SA-Evolution to design the STRATIS sails
- Interview with **Martijn van Schaik (Seahorse Naval Architect)** on how RigEdge aids his work

LATEST NEWS

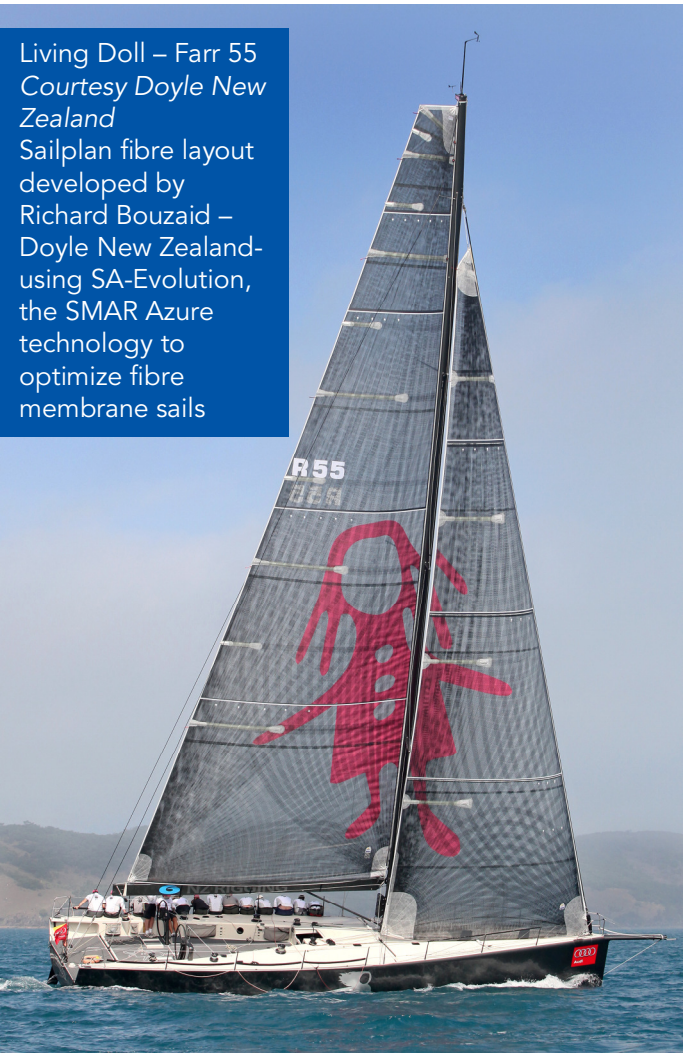
AzureProject version 4 and RigEdge version 2 are now available as commercial and demo versions

boot Düsseldorf

19. – 27.1.2013
www.boot.de

boot - Dusseldorf - Hall 11 stand C25

The SMAR Azure team will be delighted to meet you at the forthcoming boat show in Dusseldorf. The team will be happy to provide demonstrations of the new AzureProject v. 4 and the newest RigEdge version 2. Watch out for the "boot" newsletter for the full show program.



Living Doll – Farr 55 *Courtesy Doyle New Zealand*
Sailplan fibre layout developed by Richard Bouzaid – Doyle New Zealand- using SA-Evolution, the SMAR Azure technology to optimize fibre membrane sails

STRATIS

DOYLE

Interview with Richard Bouzaid (DOYLE NEW ZEALAND) on how he uses SA-Evolution to develop STRATIS membrane sails.

We have been working with SA-Evolution, the software technology developed by SMAR Azure to optimize fibre-membrane sails- for 6 months now. Through this period we worked alongside the SMAR Azure team, with feedback and suggestions we ensured the tools would let us achieve our goals.

Our primary use for SA Evolution - which includes the ability to calculate wind loads and flying sail shape - is for the structural analysis of membrane sails, and the ability to analyse the strains in the membrane for the range of possible trim conditions that any given sail could see. We then have to ensure that we have a strong enough structure, and the correct alignment for the loads identified.

Given that a sail will be set up differently on the yacht from the design point that it was originally modeled to, the deformation information is important to consider in order to have the sail work more efficiently through its range, and also to structurally remain stable so the membrane does not suffer permanent damage, and the desired shape is held. The first results of the analysis were seen in sails built from our Stratis membranes on an Australian Farr 55, Living Doll.

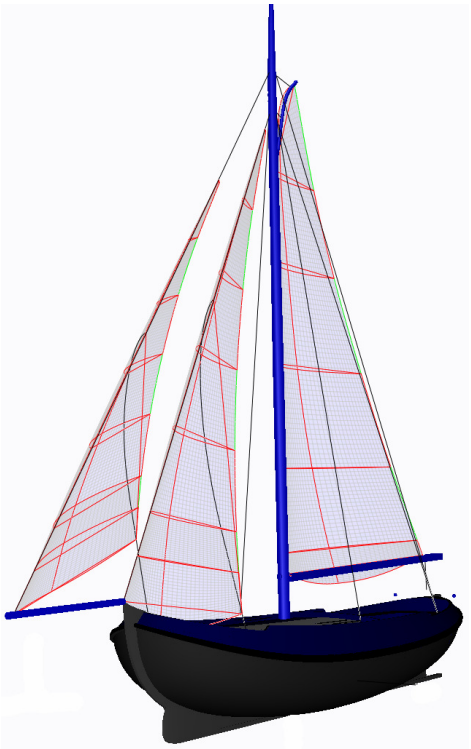
The sails for this boat reacted very closely to what the analysis suggested Structurally they were strong enough to carry the yacht through a large range of wind strengths whilst maintaining a very light base structure.

Richard Bouzaid (pictured on the right) is a director of Doyle sails NZ, manufacturers of Stratis membranes for the Doyle group of sailmakers. Richard has been involved with many significant sailing programs, he has been a sail trimmer on board Alinghi winning the Americas Cup in Auckland in 2003, and sail trimmer and coordinator on- board Whitbread Race's winning Yamaha. Richard designs for many international race projects including Hugo Boss, Leopard, Team Korea AC 45.

We look forward to further developments with these tools and further integration with our membrane sail technologies

Above: a photo of the Lemsteraak, flush deck (traditional Dutch) sailing yacht.

Below: the RigEdge model of the Lemsteraak boat.



Seahorse Naval Architects

Interview with Martijn van Schaik (Seahorse Naval Architect) on how RigEdge aids his design work

Seahorse Naval Architects are currently using Smar-Azure's RigEdge technology for a 12.85m flush deck Lemsteraak (traditional Dutch) sailing yacht.

This yacht needs to be optimized for the current new rating formula, therefore a wide variety of hull shapes and sail dimensions must be numerically tested, within the boundaries of the class rules and criteria for 'originality'. The spars and rig must also be in strict proportion with the actual loads in order to optimize performance without compromising on safety.

Our main reasons for using RigEdge are:

- For yachts where the spars and hardware are custom made and designed, like the Lemsteraak, it gives a much more detailed insight into the actual loads from the sails. This is the reason why SmarAzure's team wrote an extension of RigEdge to include a Gaff Spar.
- For Super Yachts and other large sailing vessels. These vessels are so large, that the rigging loads and the associated longitudinal bending moment are of the utmost importance when considering construction. Previously during the early stages of design (were mast builder and even yard were not decided on) rigging loads were also not known. With RigEdge I am able to calculate the rigging loads and the load on the chainplates myself and make informed choices regarding the construction from the start of the process.

Martijn Van Schaik (pictured on the left) was raised in the province Zeeland on the river Scheldt estuary. He started sailing with his parents in their traditional Dutch sailing boat. He then studied Maritime Technology (ship hydromechanics) at Delft University of Technology. After completing his degree he worked with Hoek Design Naval Architects from 1991 – 1999. He moved from there to SeaHorse Marine design where he was head of drawing and later partner.
He is now self – employed within Seahorse Naval Architects.

SMAR Azure Ltd
21-23 Hill Street
Edinburgh -EH2 3JP
United Kingdom
Tel. 44 131 610 7627
Fax. 44 870 706 0996

For more info about products and service, please contact **Sabrina Malpede**
Email: sabrina@smar-azure.com
Mobile: + 44 7919 888 654
WEB: www.smar-azure.com

Bringing Innovation in the Yachting Industry