

SUPREME COURT OF THE STATE OF NEW YORK
COUNTY OF NEW YORK

Golden Gate Yacht Club,

Plaintiff,

v.

Societe Nautique de Geneve,

Defendant,

Club Nautico Espanol de Vela,

Intervenor-defendant.

Index No. 602446/07

**AFFIDAVIT OF
CRAIG PHILLIPS**

CRAIG PHILLIPS, being duly sworn, hereby deposes and says:

1. I am over 18 years of age and am a citizen of Australia.
2. I am the Sail Loft Coordinator for BMW ORACLE Racing. I have extensive experience in both America's Cup competition and commercial sailmaking. From 1984 though 1994, I worked for North Sails in Sydney, Australia. During my career at North Sails, I became the Head of Department for sail manufacturing.
3. I participated in the America's Cup as a sail coordinator for One World Challenge in 2003 and Emirates Team New Zealand in 2007. I served as a production manager for the following America's Cup teams: Il Moro Di Venezia in 1991-1992, OneAustralia in 1994-1995, and AmericaOne in 1999-2000. In 2001-2002, I was the sail program manager for OneWorld Challenge. Many of these teams raced with 3DL sails. Based on these experiences, I am familiar with the use and manufacturing of 3DL sails in America's Cup racing.



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The 3DL Manufacturing Process undertaken at North Sails Minden, USA

Construction Facility.

4. Each 3DL sail is exclusive and unique to a particular yacht, unless of course the yachts are identical.

5. The process to design a 3DL sail starts on a computer screen. A sophisticated 3 dimensional CAD program creates an electronic manufacturing file via a sail designer operating design software licensed to them by North Sails. In summary, the sail designer uses the software to design a specific shape & yarn structure to support the shape and expected loads for a given use (e.g., wind range) of that sail. The designer can accurately define the optimum mold shape within the software. This shape is loaded via the three-dimensional CAD program into the molding hardware.

6. After the sail designer has completed the design it is sent to a processing team within the North Sails 3DL factory in Minden, Nevada, USA. This team runs the design on the mold software to eliminate any design flaws that may have occurred. This team also checks what type of batten pockets are specified by the sail designer, and the sail dimensions, to ascertain which mold the sail will be manufactured on. If the sail is too large to fit on the mold, a join or several joins will be nominated throughout the sail.

7. The mold is then shaped by up to 60 air pressurized jacks & lifters. There are also many fiberglass rods to fair the mold from one end to the other. At this stage the mold is checked visually for any necessary additional (manual) fairing.

8. Once the mold is faired, a gantry supporting the fiber-laying head completes a dry run over the mold to ensure there is no contact with the mold at the molds highest point. The sail sizes are also marked at each corner after the gantry passes.



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9. Next, the first vacuum film (plastic barrier) is laid on the mold in the same perimeter shape as the sail section. This plastic barrier is to prevent any air escaping from the laminating system later in the process.

10. The first Mylar film is then laid on the mold and in the same perimeter shape as the sail section. See Exhibit A. This Mylar is joined together & shaped horizontally to make one large piece of Mylar. The Mylar surface is now tensioned on all its edges to ensure maximum tension on all sides of the film.

11. The fiber head will then mark & lay yarns across the mold where the first join will be located. The joins are marked with a red yarn to identify the sail edge at the joins.

12. The fiber head is now ready to lay the many yarns required for the sail designers custom yarn layout. All yarns are applied under even tension, and adhere to the mold surface. See Exhibit B.

13. After approximately half of the yarns are laid on the mold, the batten pockets are installed to the sail designer's requirements. After the pockets have been installed the yarn process continues.

14. Once the yarn process is completed, the mid film is positioned on top of the yarns & tensioned forming a sandwich of Mylar & fibers (yarns). The second vacuum bag film then covers the whole sail which compresses the laminate (sandwich). The mid film also has a secondary matrix of yarns to handle off axis loads.

15. The gantry fiber head is switched out with a heating element "drag blanket" that slowly moves across the sail. The heat moves the glue through the laminate,



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and the yarns form one complete bond. This causes the laminate effectively to become one homogeneous, three-dimensional section.

16. Once the heating process is completed the sail or sail-piece, sometimes called a “blank”, is removed from the mold and laid out flat for five days for “post curing.” After the curing process the sail or sail-piece is clear to ship to the finishing loft. See Exhibit C.

AC33

17. North Sails refers to their sail lofts around the world where the 3DL sails are assembled into a completed sail as “finishing facilities.” Only the Minden, Nevada (USA) and Sri Lanka 3DL plants are called “construction” or “manufacturing” facilities.

18. The BMW ORACLE Racing (BOR) sails are of similar size to Alinghi’s and therefore the costs and time to manufacture and finish are similar. Due to the sheer size of these sails, the North Sails molds are not big enough to handle the sails in one piece, hence the BOR sails are also constructed in the same manner as the Alinghi sails. On average three pieces are constructed, then joined and final finishing details added.

19. The finishing of 3DL sails at customers’ premises includes joining the membranes, attaching leach and luff tape, corner rings and webbings. See Exhibit D. The time taken to undertake this task depends on the sail and for the BOR AC33 trimaran, 60 to 120 hours is a reasonable estimate of total man hours. The finishing team consists of five people and would be completed over two or three days per sail. The pictures in Exhibit E illustrate the area of 3DL sails constructed in Minden versus the area of finishing work. It also identifies the joining seams and approximate dimensions of BOR sails versus Alinghi sails.



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20. The cost of the BOR 3DL sails from North Sails average approximately USD\$200,000 for a headsail and USD\$400,000 for a mainsail. The finishing cost, using a labour rate of USD\$40 per hour and allowing for materials, is between USD\$3500 and USD\$7000, depending on the sail.

21. In most cases, the BOR 3DL sails were delivered to BOR by North with added features such as the batten pockets installed. This is standard practice in the construction of 3DL sails.

22. From my observations of the Alinghi and BOR sails, I conclude that they have been constructed using similar methods, including the installation of added features such as the batten pockets.



Craig Phillips

Dated: January 27, 2010



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EXHIBIT A



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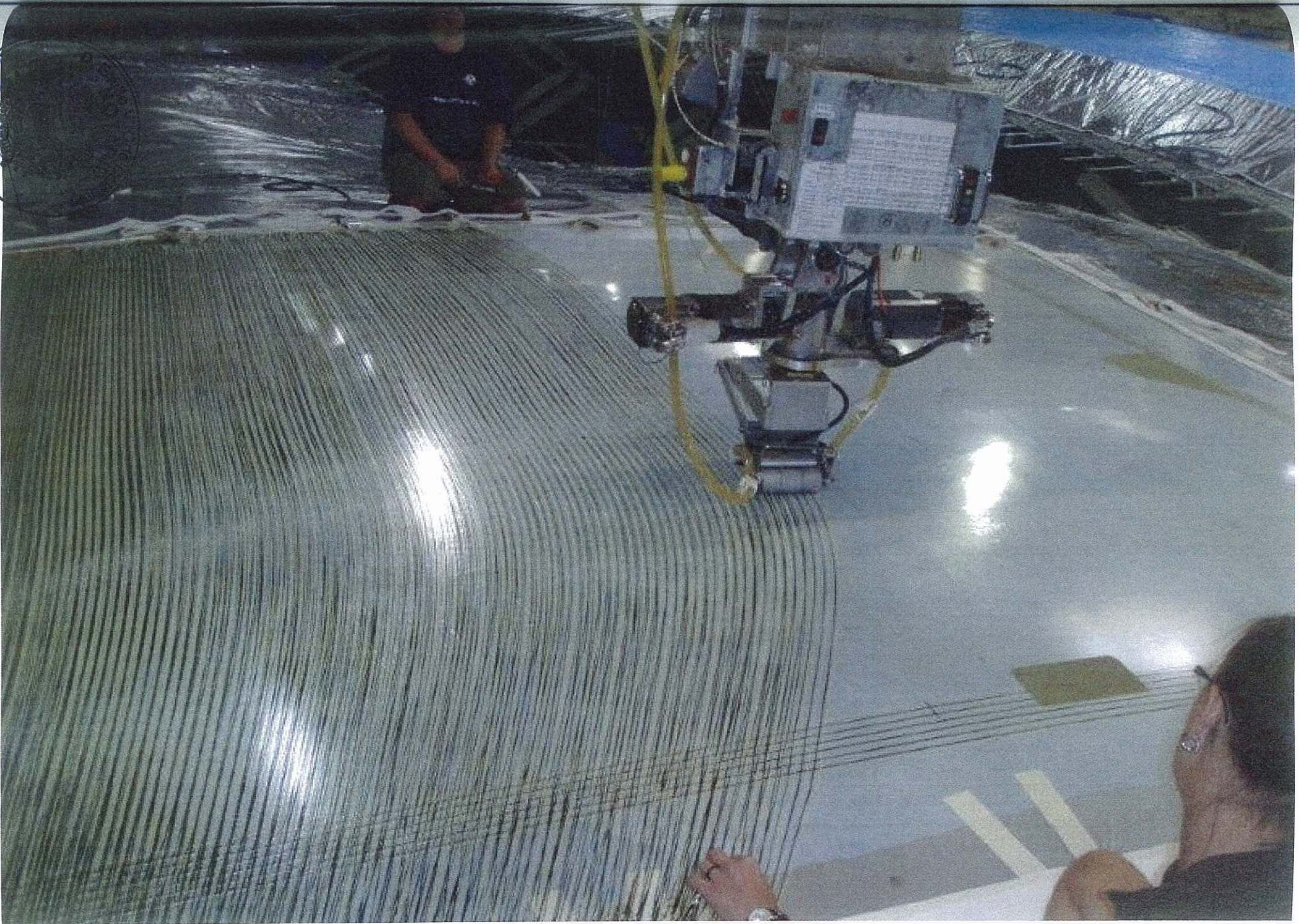
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EXHIBIT B



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EXHIBIT C



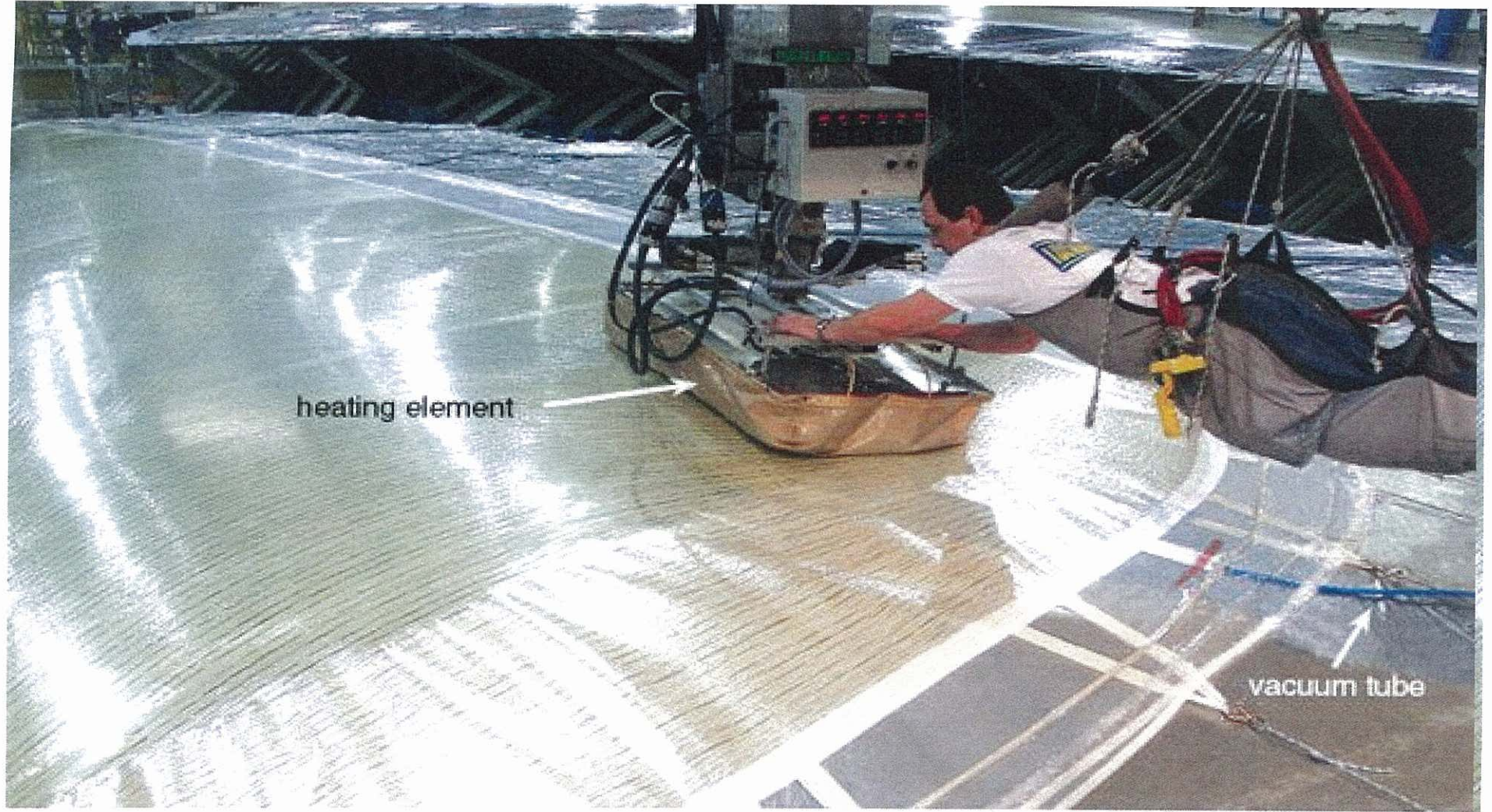
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heating element

vacuum tube

EXHIBIT D



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EXHIBIT E



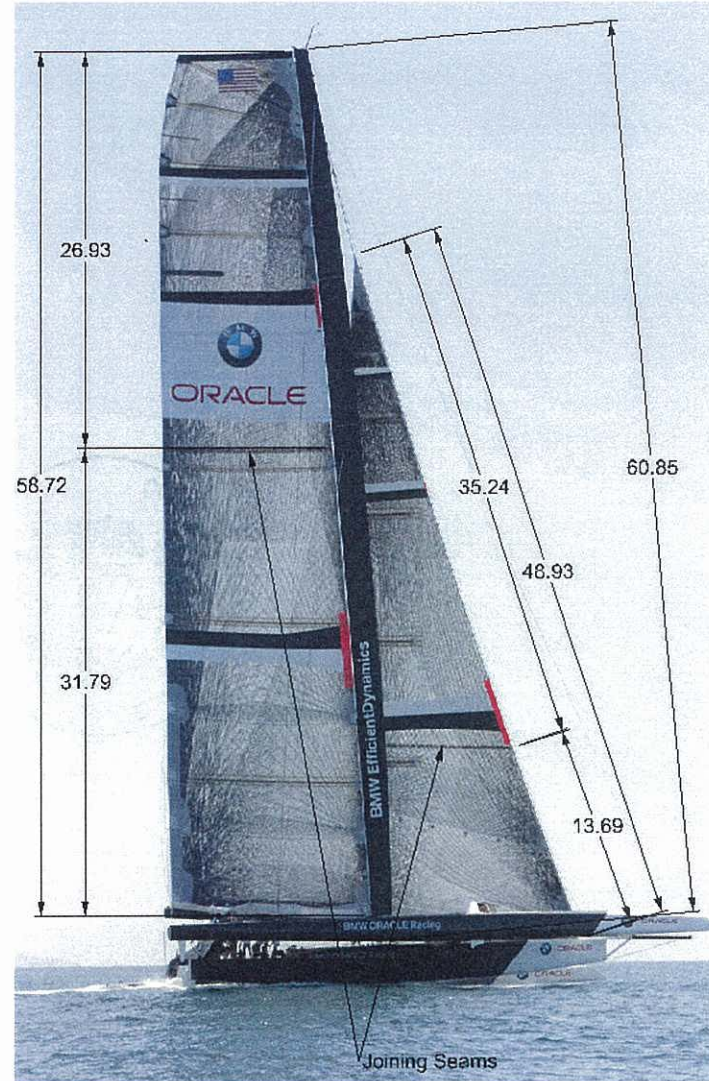
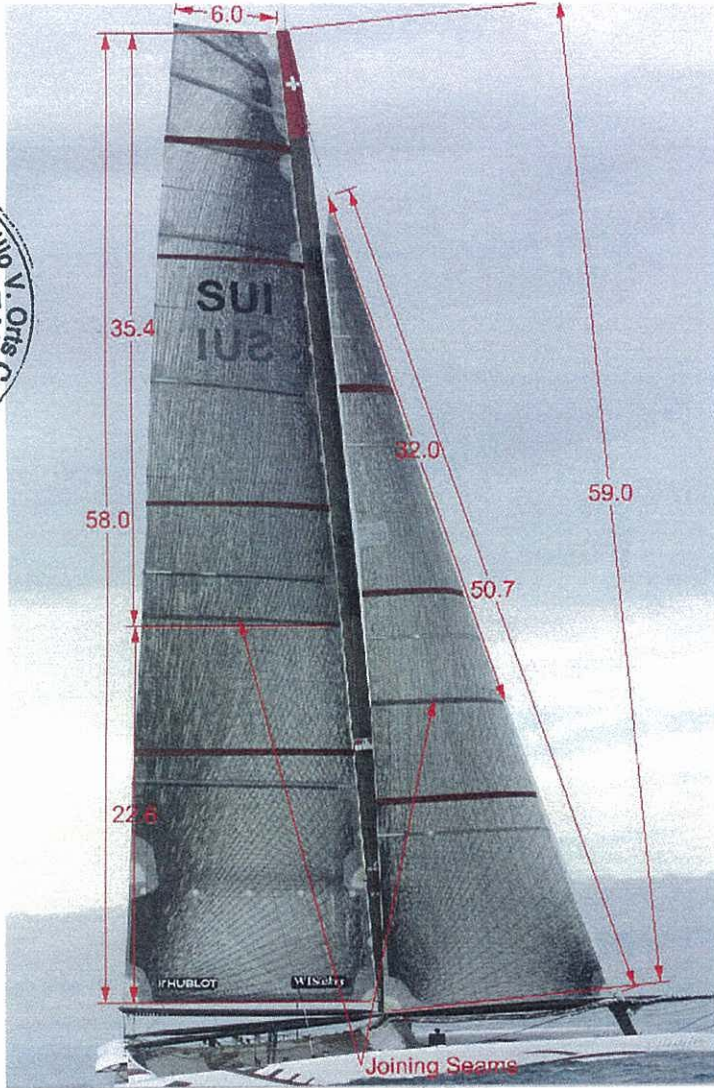
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A5 vs USA Mold Length Limitation



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3DL mould requirements for large head width mainsails demand joining seams – joining seams placed to optimise mould use and design requirements

A5 vs USA – depth limitations



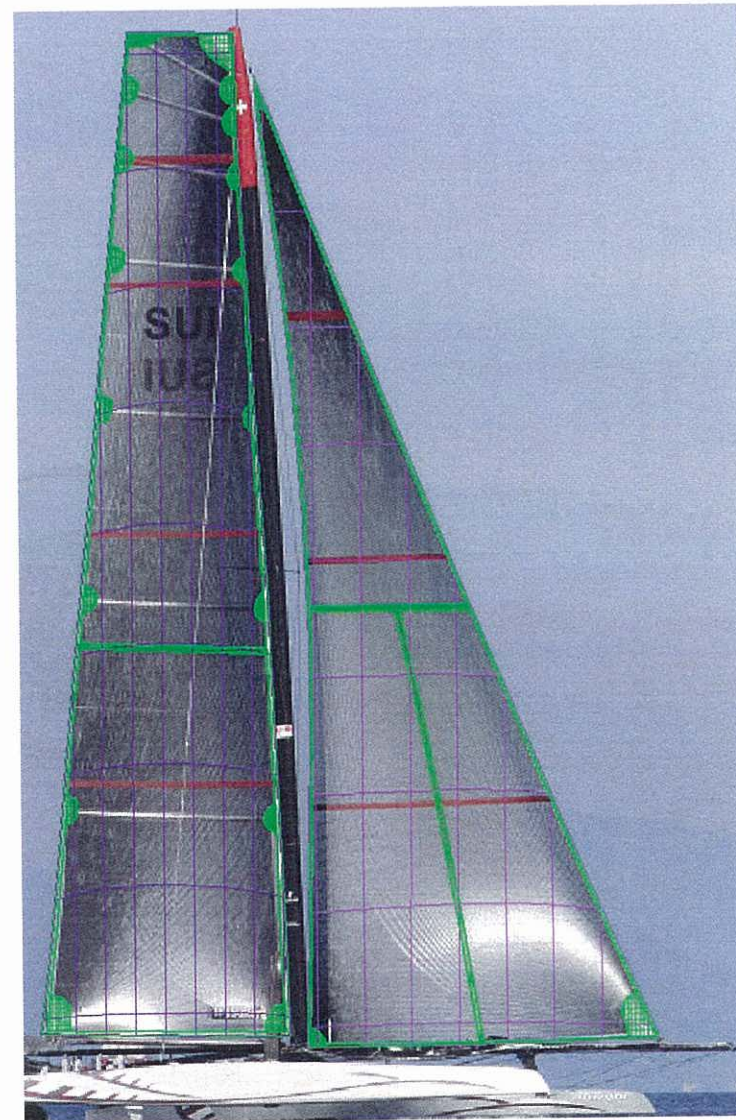
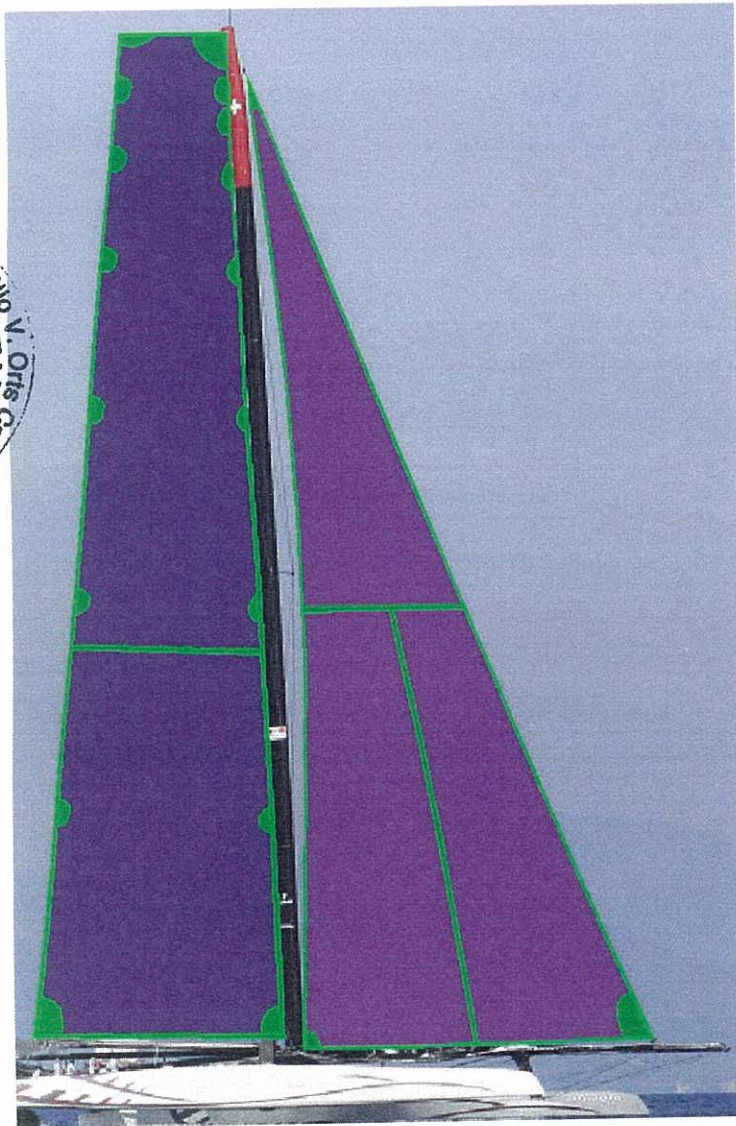
Deep moulds require more joins because of ceiling height at 3DL meaning GNKs are built in 5 pieces



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A5 Mainsail and Genoa % area constructed in USA



Green components "finished in SUI" ~9% Main ~6.5% Genoa (corners and joining seams)

Purple components "constructed in USA" ~91% Main ~ 93.5% Genoa (3DL – "Blanks")



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LEGITIMACION anotada al numero 49 de mi Libro Indicador:

Yo, Emilio Vicente Orts Calabuig, Notario de Ilustre Colegio de Valencia, con residencia en la Capital,

DOY FE:

Que ante me ha comparecido **DON CRAIG ROY PHILLIPS**, mayor de edad, a quien identifico por su Pasaporte australiano numero M7580660, vigente.

Que dicho Sr. Libre y voluntariamente ha estampado a mi presencia la firma que precede y manifiesta que conoce el contenido de este documento extendido en diecisiete folios de papel comun escritos a una cara, y quiere que surtan los efectos que le son propios en USA.

En su virtud LEGITIMO la firma que antecede conforme el articulo 207. 2 del Reglamento Notarial y hago constar que todo lo anterior esta conforme con el Acta numero 392 de mi protocolo de esta misma fecha y que signo, rubrico y sello es diligencia, que anoto en el Libro Indicador, en Valencia a 27 de Enero de 2.010.

SELLO DE
LEGITIMACIONES Y
LEGALIZACIONES



NIHIL PRIUS FIDE

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