



PRESS PACK

H2X – LA CIOTAT

2008



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SHIPYARD PRESS RELATIONS H2X

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EDITORIAL



At the heart of any boat-building project there is always the passion and dedication of a seafarer, the designer and user of the future yacht. Through the unique and complementary encounter between this visionary, an architect and a shipyard, the boat is designed in an engineering office and then starts to take shape in the boat-building workshops.

During 2008, our work included the launch of three new constructions (Nahema 120, Equation 50 and Levant'in), a remarkable refit project (TENEO) and the construction of tenders . This year also gave us the opportunity to carry out or complete the refit of three motor yachts and a sailing yacht, but also to create models of the future AC 90 monohull for Team French Spirit.

We want to tell you about the work that is currently ongoing within the H2X yard – our new-build projects and refits – along with the projects carried out during 2008.

We want to introduce you to our new production facilities, including a composites workshop and 5-axis digital machining centre. These are our new investments for the construction and redesign of your boats.

We hope that you enjoy reading this report,

Press relations team, H2X

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EPOXY RESIN INFUSION



During 2008, H2X started using an innovative new procedure for some of its boat-building operations – a composite material formed by epoxy resin infusion.

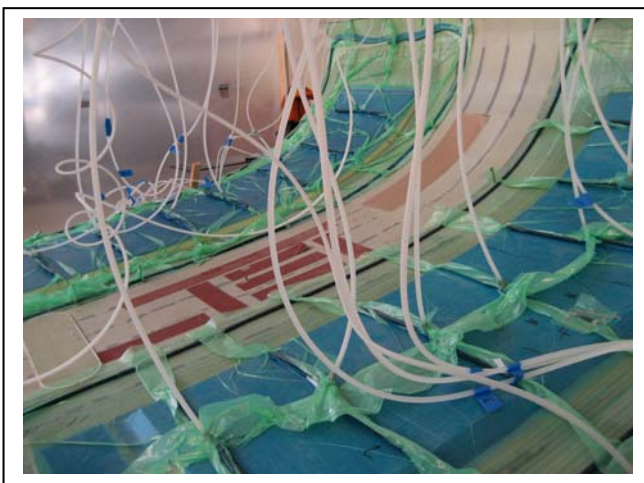
PROCESS

In a hollow mould that can be used to cast other examples, the various structural fabrics (glass fibre etc.) and all the structural reinforcements are laid up. These various fabrics are then compacted in a vacuum before the infusion process begins. The epoxy resin is drawn into and onto the mould surface by vacuum suction.

BENEFITS

This is a complex process when used with epoxy resin, but offers a range of benefits:

- A **high-quality composite**. The glass-fibre fabric layers are compacted and the fibre/resin proportions are optimised (35% instead of 60% with a direct application process). These proportions are very close to those used for aeronautical components and products.
- **Improved productivity** through significant time savings, particularly with large parts.
- **Improved working conditions** for shipyard staff and **a further step forward as part of the sustainable development** policy in place at the yard. The technique does not release any volatile organic compounds (VOCs). It contributes to improving the working environment for shipyard staff and reduces production waste.



Epoxy Resin Infusion

EPOXY RESIN INFUSION



A 35m hull produced through epoxy resin vacuum infusion.

H2X is currently building the first in a range of new catamarans in its workshops, the S/Y NAHEMA 120.

On 22 September 2008, the mould of the port side of the hull was unveiled as it left the H2X composites clean room (an exceptional facility of 50m in length). The hull was removed and then placed on a cradle.

This first 10-tonne composite sandwich hull (made of Glass/Epoxy, PVC Foam and Glass/Epoxy layers) was produced with an epoxy resin vacuum infusion.

In addition to the excellent mechanical qualities achieved, the hull weight is kept under control, which in turns means optimal boat speeds.

This success illustrates the capacity to innovate that **H2X** boasts, and its ability to integrate new technologies into its production process. The major investments made over the last few months, in particular in high-tech, state-of-the-art production facility, put the company in a position to meet the high market demand for larger and higher-performances yachts.



The hull is out of the composites clean room

The Nahema's hull is removed



5-AXIS DIGITAL MACHINING CENTRE



Make: BELOTTI
Entered service: January 2008
Dimensions: 12.8m X 5.6m X 2.5m
Precision: 2/10

SCOPE FOR USE

- Producing direct single-use moulds.
- Producing direct production moulds.
- Mould preforms.
- Cutting and machining composite parts – i.e. machining preforms or direct moulds then producing the part; the part itself can then be machined to provide unrivalled finishing (trimming, burr removal, machining of supports and edges, drilling etc.).
- Unrivalled precision in finishing with composite parts produced from preforms and/or moulds, which themselves are produced using the machining centre.

CUSTOMERS

Customers include pattern makers, boat manufacturers but also all manufacturers of composite parts requiring moulds, regardless of the industry (automotive, aeronautical, nautical industry etc.).

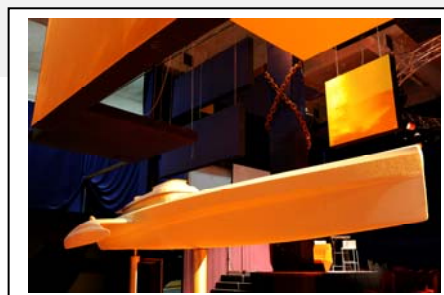
BENEFITS OF USING THIS MACHINE

- Manufacturing costs and lead times are controlled and reduced, leading to improved response times for the production of moulds and composite parts and reduction in the number of labour hours required on these parts, due to the ability to machine the parts after lamination.
- This machine, alongside H2X state-of-the-art design office, running CATIA V5 Dassault System software, further enhances our innovative edge in terms of manufacturing processes; this has always been our company's guiding strength.

REALIZATIONS

- Moulds for the construction of boats (hulls, decks, equipment)
- Models for the 34th America's Cup race
- Model for a sonar
- Decors for the theatre

The first few months have already shown how right we were to make this investment. Every day, we are pushing the limits in terms of the complex parts that can be produced, whilst continuing to optimise production times and costs.



NAHEMA 120

NAHEMA CATAMARAN



DATA SHEET

The Nahema 120 is the first in a range of new catamarans.

The Nahema range has been designed by architect Gilles Vaton, and is characterised by very pure, fine lines throughout the design.

Sailing this vessel will be a peerless sensation, combining speed (17 knots motor speed and at least 20 knots sailing speed), glide and safety.

The level of comfort is due to a perfect behaviour at sea, unique stability when anchored and very gentle movements when sailing.

The luxurious interior design is a perfect marriage between spaciousness and luxury, drawing together the very best of seascapes and landscapes.



SPECIFICATIONS

Length: 120' – 35 m

Width: 46' – 14.32 m

Min draught: 5.9' – 1.80 m

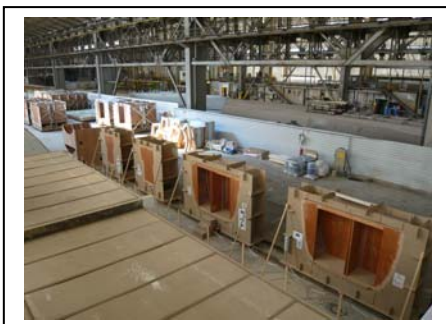
Max draught: 14.8' – 4.50 m

Engines: 2 x 500 HP CUMMINS

Architect: Gilles VATON

Designer: Frank Darnet

The Nahema 120 hull was successfully removed from its mould on 22 September.



The internal fittings for the Nahema 120 are manufactured as separate modules and fitted in the boat, cabin by cabin, once the finishings have been completed. The interior design and the order of the various fittings are defined in advance by the design office.

EQUATION 50

50' MONOHULL CRUISER



DATA SHEET

This sailing yacht is the first example of a range designed by the Groupe Fauroux architectural firm with the aim of creating a sporty racing/cruising crossover design.

The high-performance hull design provides perfect balance in steering the vessel, whatever its list and a high level of comfort at sea.

The high-quality lightweight riggings, with a carbon mast and boom reduce the boat's list. The distribution of the total sail area facilitates manoeuvres.

The boat speed can reach 20 knots with a wind of 25 knots.

The manufacturing process uses top-of-the-range materials and processes to ensure that the whole boat is solid and durable.

EQUATION 50 was built in seven months due to a parallel construction process of the hull and of the internal fittings modules.

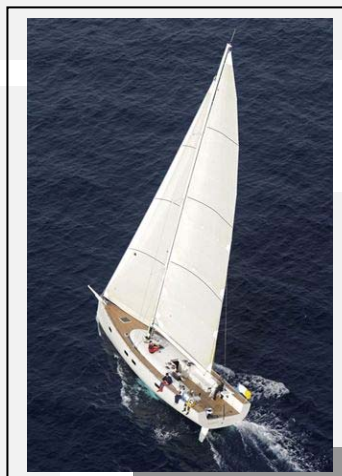
The hull and the deck are made of a composite material glass fibre epoxy; the hull has a core sheet in red cedar and the deck in foam.

The interior fittings have a modular design, making them easy to remove and change, so as to redesign the boat's interior coating to its use for racing or cruising.

SPECIFICATIONS

Length overall:	15.25 m
Waterline length:	14.99 m
Max beam:	4.68 m
Draught:	2.49 m
Light displacement:	9 tonnes
Loaded displacement:	12 tonnes
Performance:	9.7 knots

Naval architect: Groupe FAUROUX
Construction method: Composites



SAIL AREA

Mainsail:	80.30 sq m
Genoa jib:	59.70 sq m
Code 0:	93 sq m
Asymmetric spinnaker:	215 sq m

GF 50' IN BRIEF:

- High-performance, fun racing/cruising crossover
- Features: speed, ease of manoeuvre and comfort.
- Built-to-measure
- Top-of-the-range materials
- Modular fittings
- Carbon rigging



The first model NON TI FERMI MAI was launched 23 September, 2008.



Construction of a 25m sailing catamaran for day outings

This catamaran was designed for a day excursion programme.

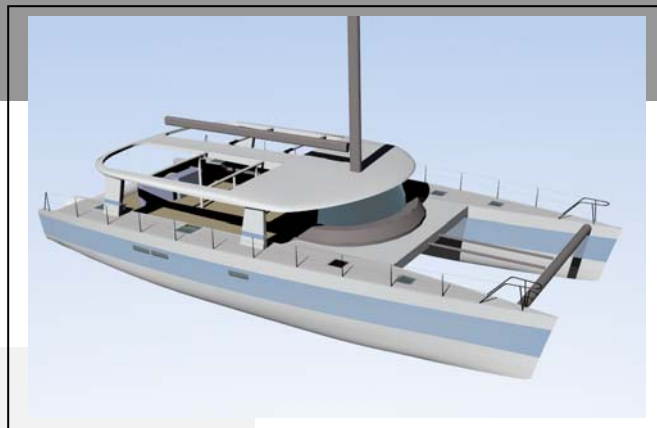
Its capacity will be large; its raised up freeboard ensures extra comfort under strong wind conditions

Passengers' safety is utmost which makes sailing a no-risk adventure.

The deck exterior lay-out allows comfortable and fluid movement or standing anywhere on the ship.

Technical solutions have made the exploitation of the ship simpler, more reliable and less costly.

In short, this ship will undoubtedly highlight the capacity of H2X to produce a new form of safe and sound vessel used for pleasurable day trips out.



SPECIFICATIONS

Length overall:	25,00 m
Max beam:	12,00 m
Draught:	1,50 m
Genoa jib:	155 m ²
Max capacity :	96
<i>(sitting places)</i>	

Construction method: Composites
 Naval architect: Gilles VATON





DATA SHEET

TENE0 is the new name for the SEAWORLD II, a passenger transport vessel flying the French flag. This boat was originally a Gilles VATON 32.80m design, built by the HESARO shipyard in Morocco, and finished in France at the Marseille shipyard (formerly Bigouin Shipyard).

Work started on the TENE0 in December 2007 and will be completed in **June 2009**.

1st phase: sheet metal work

- Modifying the superstructures
- Extending the vessel by approximately 4 metres
- Creating a rear tipping trusum door
- Adding new diesel and freshwater storage tanks
- Etc.

2nd phase: interior fittings, systems, equipment and launch

- Full design and production of interior fittings (saloon, owner cabins, guest cabins; wheelhouse; kitchen; crew quarters)
- Electrical wiring, navigation electronics and communication systems, insulation, piping, ventilation, painting, glazing.
- Building a teak deck and on-deck equipment (anchor, windlasses etc.)

SPECIFICATIONS

Hull: aluminium

Superstructure: aluminium

Initial length: 32.80 m

Final length: 36.55 m

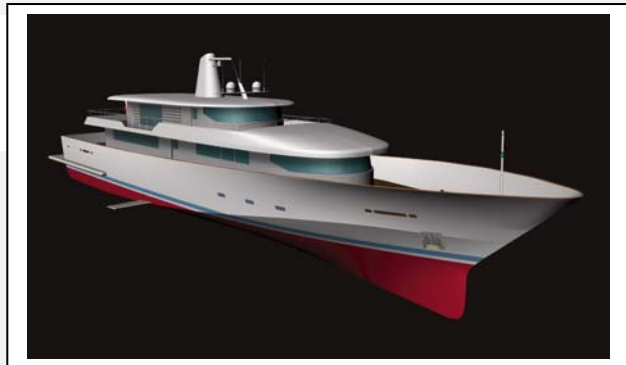
Width: 8.06 m

Draught: 2.10 m

Engines: 2 MTU 16V2000

Original design architect: Gilles VATON

Refit project designer: Vincent DUCHATELET





H2X and TENE0 – the story of a remarkable refit

Seaworld II was a 33 m aluminium passenger ferry built in 1999 that shuttled passengers between St Tropez, Monaco and Cannes for 3 years. The boat was designed by Gilles Vaton and was then bought by a private owner who fell for its modern design and its sea-going attitude. The aim was to transform it into a “cruising yacht”, by extending the boat by nearly 4m and carrying out a full interior refit. New equipment will be installed inside the yacht and the outside decks will include a bathing pool and leisure area.

The designer Vincent Duchatelet was therefore tasked with reinventing the vessel, both its exterior lines and its interior fittings, in order to change the volume of the living area. H2X has extensive expertise in working with a stripped-down vessel, and the customer chose our services in order to carry out all the work required.

Our in-house H2X teams manage almost all the trades necessary for the refit operation. When this work is completed the owner will have a vessel that is perfectly designed to meet the needs expressed, within a reasonable, managed budget and a much shorter timescale than would have been the case for a new-build project.





LA NATURALLE DEE

In 2009, the two 5,70 m tenders of the M/Y Naturalle Dee will be completed.

They will be the replicants of the existing tenders.

To build them, H2X has relied on a series of high tech facilities, equipments and methods: digital machinery, Catia software, a clean room.

Planned as a full in-house project, the construction of the first tender will be completed in May 2009.



12th SENS

Starting in December 2008, H2X has been commissioned to complete 3 tenders for the naval company 12th Sens.

The first 2 tenders are 8 meters tenders, of the 7000 series, for 52 and 62 m motor yachts under construction.

The third tender is a 10 men 8000 series limousine for a 62 motor yacht under construction.

The tender is due in April 2009.



KOGO

Commissioned by 12th Sens, H2X is also conducting refit and maintenance works for the limousine of the M/Y Kogo.



REFITS

A few examples of current refit operations conducted by H2X



M/Y AKULA (formerly known as ELANYMOR)

AKULA is a 60m research vessel transformed into a private motor yacht. Its new owner has selected H2X to launch a first phase of refit and transformation works which includes any other orders boilwork on the superstructures.

S/Y FOUR DEVILS

FOUR DEVILS is CNB 76 23 m sailing yacht.

Currently in the shipyard for complete remodeling of its teak deck. Additional work will include hull and superstructure painting, as well as engine and generator revision.



M/Y SOJA

SOJA is a 26m motor yacht make of composite. Urgent preliminary works was executed in the summer of 2008. A major second plan will include works on the rear deck of the vessel.



M/Y NANOU

NANOU is a 30m motor yacht.

First docked for conventional wintering in November 2008, other works will be delivered which will include engine and hull revision and the construction of a custom bimini. The works will last no less than 4 months.





Two AC 90 type models will be produced, in line with the rules for all craft entering the 34th America's Cup.

DATA SHEET

Marc Pajot is a seasoned sailor who has already taken part in the 1987, 1992, 1995 and 2000 editions of the America's Cup. He is Chairman of Team French Spirit and has commissioned the shipyard H2X to produce two AC 90 monohulls. This is the new required format for the 34th America's Cup race. The design of this type of boat is an enormous challenge for future teams in terms of design and development. It is a larger design (27.4 metres) with a 300 sq m mainsail (30% larger than the current Class America design for the same weight).

In order to meet this challenge and work with the most skilled French and foreign architecture and ship building experts, Team French Spirit has planned an architectural competition involving eight specialised firms (6 French and 2 firms). The competition panel will use highly sophisticated digital speed prediction tools in order to make their selection. It was in this setting, given the development of these tools, that two very different configurations of models were ordered from H2X, having been designed by the Fauroux architecture firm.

The models, built to very strict specifications, were delivered to Team French Spirit in the presence of Marc Pajot. Testing has been underway since 7 July, 2008, in facilities owned by the French Army in Val de Reuil, Normandy.

The shipyard H2X was selected because of its high level of technological experience, and in particular its 5-axis digital machining centre, which is highly effective, flexible, fast and accurate. The shipyard is well-known for its excellent management and production processes.

This new collaboration with Marc Pajot and Team French Spirit not only provides an acknowledgement of H2X's expertise in the demanding America's Cup environment, but also opens the way to a whole world of high-level sports yachting.



WHO WE ARE

H2X



- **We are a high-profile shipyard, specialising in pleasure yacht building and refitting, both monohulls and catamarans, and in professional vessels.**
- **We are a dynamic company born out of the merger of H2O Yachts and iYard, with nearly 20 years experience in the field.**
- **We have excellent experience in top-of-the-range/luxury yachting, enabling us to provide professionals and dedicated seafarers with a full, integrated service based on state-of-the-art technological equipment.**
- **We are the largest employer in the La Ciotat dock area, with nearly 100 employees, covering almost the whole production process.**

