

RINAUTIC



RINA MAGAZINE - YACHTING EDITION



THE WORD
from top industry players

NEW MATERIALS
& emerging technologies

SUSTAINABILITY
as a common thread

Welcome to RINAUTIC, our magazine covering the latest trends and developments in the yachting sector.

In this edition, environmental issues are under the spotlight. With green issues moving to the top of the agenda, designers, builders, marinas and brokers discuss how they are achieving more eco-friendly products to meet their clients' needs.

We also discuss the golden age of glass. For so long a key factor in yacht design, its uses are becoming ever more daring, with new technology enabling its application in new and exciting ways.

Could yachting learn something from the car industry? We hear how one builder is taking a leaf out of the Fiat Group's approach when coordinating its team of suppliers. And as lifestyle trends evolve onshore, how will these translate to new demands for leisure activities at sea?

Finally, we will also hear from RINA's experts on the regulatory discussions that will impact areas as varied as recycling, propulsion, and even animal welfare.

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A bigger, brighter future

These are exciting times for the yacht industry: an ever-growing fleet, a trend towards bigger and bigger yachts, and signs that not only are we enjoying a market upswing but also there is clear potential for long-term growth. From this starting point, companies must try to identify the challenges and opportunities they will face in the future.

Looking at the data from the last ten years, we can see the incredible exponential growth in the fleet: from 3,906 craft in 2009, to 5,646 this year, and with 5,789 expected by 2022. And expansion is not just in numbers. The yachts are growing rapidly too, with the increasing size of commissions clearly evident: in 2009 there were 2,626 boats of 30–40 mt, 1,055 of 40–60 mt, 183 of 60–90 m and just 42 over 90 m.

A decade later, we note 3,553 boats of 30–40 mt, 1,649 of 40–60 mt, 355 of 60–90 m and 89 over 90 m.

This move towards larger sizes is the main trend for the next generation of elite seagoing vessels: more and more yachts are now exceeding the 100 m mark, with many heading for supersize status. See interview with Franco Fusignani, CEO of Benetti Yachts at pages 2-3.

Trends in the yacht industry are often slow to emerge, however. With a new build construction time of anywhere between two to three years, it can be hard to know which of the forecast developments will come to pass, and which will remain just talk.

However, the themes for tomorrow's superyachts are starting to crystallize. A raft of industry-wide initiatives have been launched to tackle ocean conservation and the protection of marine life. Yacht brokers are

offering plastic-free charters, while teams of engineers and designers are developing increasingly sophisticated technologies to reduce the environmental impact of yachting.

Environmental issues also underpin trends in the yacht building industry. In the large yacht market, Germany's manufacturers have thrown down the gauntlet with one pioneering project after another. Many of their new designs challenge the traditional superyacht GA in an exciting way. Yards are also developing cutting-edge hybrid propulsion technology.

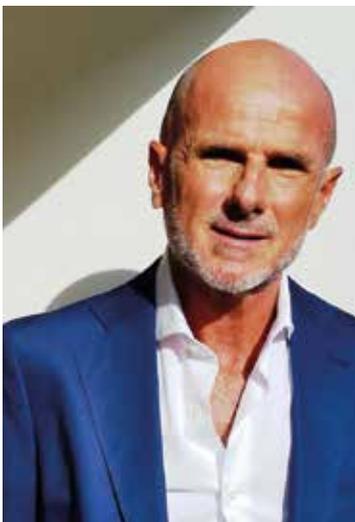
More demanding designs also call for new materials. Exciting technological advances mean glass is now being used in ways and areas that have never previously been explored. Designers are also searching for materials with a smaller environmental footprint. See interview with Mr. Sergio Cutolo, Founder of HydroTec at pages 10-11, and Viraver at page 19.

Meanwhile increasingly adventurous owners, keen to explore new regions, are commissioning more explorer yachts than ever before.

Thus, 2019's yacht trends will see more and more yards and designers answer the call for new and innovative ways to service clients, while also reducing the environmentally damaging aspects of yachting.

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Building for tomorrow



Courtesy of Benetti Yachts

Interview with **Franco Fusignani,** CEO, Benetti Yachts



In the yacht building market there are always new challenges, but we know with challenges come great opportunities. The great challenge we have set ourselves at Benetti Yachts is to deliver the new generation of gigayachts in record time. No shipyard in the world has ever launched more than two gigayachts in a year. Generally, from the launch to the delivery it takes from 8-12 months for repeat orders and 12-16 months for a single order. But in 2019 we will launch three of these mammoth yachts, with less than four months between launch and delivery.

Achieving something like this takes enormous planning. Our strategy has been to split the Livorno's yard into three distinct work groups, plus a fourth work group for mega yachts (50-80 metres). In a sense, we have divided into 4 'shipyards', each dedicated to its own boats. A central organisation supports and coordinates the work, allocating resources and intervening in emergencies, or where there are specific transversal activities.

The opportunity that comes with accepting this challenge is the

incredible know-how gained, which will put to work in future activities. With as many as 70-80 suppliers and at times up to 450 people working on each boat, efficiency in managing work sequences is essential. It resembles a military operation. This is something I learned from my previous experience at the Fiat Group, where the coordination of supplier activities has been a priority for more than 25 years.

Indeed, one of the first things I did on arriving at Benetti Yachts two years ago was a complete evaluation of suppliers, focusing on individual elements: productivity, innovation, capacity, responsiveness, problem-solving. This is a continuous process, and every six months we update the evaluation together with the supplier, with the aim of improving or correcting any negative performance areas. It is also a question of getting the best out of a supplier – every supplier has skills, technologies and innovations that are either underused, or sometimes the contrary, deployed in situations that are too complex.

Today, in terms of look, value and content, I do not see a great

difference between Italian, German and Dutch yacht building, where there is a reputation for organization and discipline. At Benetti, I have insisted on order, precision, and attention to detail, which we try to convey to employees in a clear open way so that they feel part of the organization. We have a precious asset in the Italian yacht industry. Half of all the world's luxury yachts over 24 metres emerge from Tuscany between the coastline of La Spezia to Livorno. Just 2% of these yachts remain in Italy. We have a value that the whole world recognizes and we must make the most of this potential.

The entire yacht building network in the area numbers 18-19,000 professionals. It goes without saying that this network needs to be well organized. There is the potential to improve here, and maximize the capabilities of this network: with common design software; with a financial plan from the government, regions and banks to support the industry; and with greater training for future engineers and designers. The latter is particularly important given the technological advances we have seen in recent years, such as mechatronics, on-board controls, electronics etc.

RINA forms an important part of this overall network, and we have enjoyed an excellent relationship with the society over the years. One of the elements that we appreciate particularly is the extra services developed by RINA beyond standard certification. These other types of consultancy bring us knowledge that we do not have in house.

Sustainability is another key area. We have not yet achieved the recycling rate of the car industry where reutilization has reached over 90%, but we are using many methods to reduce our environmental footprint: recycling materials, and reducing pollution from engines, generators and waste water, particularly through new propulsion systems. I personally believe the electric diesel engine either driven by shaft line or pod for yachts of 70 meters and over is one of the best systems on offer, with enormous economies in consumption of between 15%-25%. Regarding hybrid propulsion, I'm sure that in four or five years, I am sure we will see batteries five times more powerful than those today.

Although I spent most of my career at Fiat, I started my career at the group as a designer of marine engines, and this is my world: the sea, technology, and people.

Going forward, we want to continue to streamline and improve our delivery processes, creating a suppliers' park and integrating designers and architects into suppliers. We also want to work towards introducing common modalities and processes, as well as enhance financial plans, training and education.

In doing so, we hope to create a virtuous circle that benefits the whole industry.

“We want to continue to streamline and improve our delivery processes.”

BIOGRAPHY

Franco Fusignani, CEO, joined Benetti Yachts in 2017 as Director of Operations, bringing with him extensive experience in industrial and commercial management roles at top Italian and international companies including the Fiat Group.

Mr Fusignani was recruited by the Fiat Group in the 1970s and held a series of senior management positions including head of Fiat's Bus Division, head of Fiat's Central American operations, and head of its European Agricultural Commercial activities. Between 2013 and 2016 Mr Fusignani was CEO of Fiat's Iveco Diesel Engine Division.

Mr Fusignani has enjoyed a long and close relationship with the world of yachting, both as an owner and, early on in his career, as the manager responsible for the development of Fiat marine engines, promoting their image in offshore races, world water speed records, and speed and duration records, including the Tour of England, Monte Carlo-Venice and New York-Nassau.

 www.benettiyachts.it



Courtesy of Benetti Yachts

Promoting Italy's dynamic market

Italy's recreational boat industry is enjoying a period of extremely strong growth, in what has been a significant and consolidated recovery for the market. In the four years following 2013, the industry grew 60%, a performance matched by no other industrial sector in Italy. Last year was another strong year, demonstrating again an active and dynamic market.

As the incoming President of UCINA Confindustria Nautica, which represents Italy's recreational boat industries, I am keen to build on this success. There are many projects in which UCINA will be playing an active role.

Following the 59th Genoa International Boat Show in September, which has become a well-established and unique event in the boating calendar, we will be launching a number of projects. This includes work towards implementing the Nautical Code, Italy's adoption of the Passenger Code for superyachts, and promoting the small boating sector. There will also be specific initiatives for Italy's Sea Day on April 11.

We also want to develop the nautical leasing sector, broaden activities supporting internationalisation, and promote both the Made in Italy brand and Italy's boating industry at Dubai's Expo 2020.

At the same time, education initiatives and supporting our member businesses are of course vital ongoing issues.

Although I became president just a few months ago, I have been part of the Association for 30 years. I began as a member of the General Council, before becoming Vice President and, from 2013, President of the Disciplinary Committee.

So I am already very familiar with the Association, and my aim is to dedicate all of my experience to listening to and creating a dialogue within the organisation. I want to unite the industry's companies within the Association: it is important that UCINA represents the entire chain of the pleasure boating industry, from shipbuilding to refitting, and from components to services to tourism. Furthermore, we must encourage

Interview with
Saverio Cecchi,
President, UCINA
Confindustria Nautica



Courtesy of UCINA Confindustria Nautica

adequate national and European policies and support for investment and innovation. Our sector can boast the highest multiplier for marine economies, but this requires support to protect the industry and its supply chain in order to keep it at the highest level of competition. Values are at the heart of the association. UCINA provides a system of principles and a code of ethics which

by boat and yacht producers of eco-friendly systems.

The latter range from cutting-edge antifouling paints and hybrid propulsion systems, to new types of hulls and innovative light-weight materials, plus reduced consumption and technology that optimises a unit's performance, Research into such matters has become fashionable for boat owners,

together with a strong connection to Genoa and its boating community.

The partnership with RINA has also given our Members the opportunity to benefit from training programmes and technical refresher workshops.

BIOGRAPHY

Mr Cecchi was appointed President of Italy's boat industry association, UCINA Confindustria Nautica, in June. He originally joined UCINA's board in 1990, and in the 30 years since then has served as Director, Sector President, Production Manager, Saggi Commission Member, Vice President and, since 2013, President of the Association's Arbitrators.

Born in Limite sull'Arno, the home of pleasure boating, Mr Cecchi has always been passionate about boating and sport. A multi-champion helmsman, he started his professional career at his father's company, B.C.S. S.r.l, producing high quality nautical systems, before founding his own company, Vetus Italia, to sell nautical items from Vetus Oland.

In 1984 he returned to B.C.S. S.r.l as Chairman and CEO. In 2006, he became CEO of the US company Twin Disc which had earlier purchased B.C.S. S.r.l and Vetus Italia. Mr Cecchi is today a board member of GP Yachts, part of the Sanlorenzo Group.

 www.ucina.net

“Last year was another strong year for Italy's recreational boat industry.”



Courtesy of UCINA Confindustria Nautica

every Member is required to agree upon when they join. Only by upholding these values will the Association be able to count on the strength and cohesion needed to face the future challenges, and achieve the objectives set out for our world-leading industry.

UCINA was founded in 1967 and carries with it a long history and know-how, which have enabled it to become a focal point for businesses in terms of institutional representation in Italy and worldwide. Its organisation of the Genoa International Boat Show provides an unparalleled opportunity for business development by the sector's companies.

Going forward, sustainability will be a key subject. The boating industry has always been aware of the needs of the marine environment. Scientific research dedicated to minimising the impact of boats at sea has seen exponential growth over the past few years.

National, European and international regulations have drastically reduced motor gas emission levels at sea, as has the research and voluntary adoption

who are increasingly interested in owning boats and yachts with a keen focus on the environmental requirements.

UCINA is also playing its part and will support and promote a series of initiatives during the Genoa International Boat Show with the aim of raising awareness with regard to protecting the sea and its coasts.

This includes promotions by the Italian environmental association Legambiente and the World Wildlife Fund (WWF), plus marina initiatives, and other promotions by the World Ocean Council's Sustainable Ocean Summit and by the Italian environmental fund FAI.

Over the years we have enjoyed an excellent relationship with RINA. The two companies have operated a framework agreement for many years now, proof of the importance of our collaboration.

Both organisations have an impressive amount of know-how, both on a national and international scale,

Revolutionising sailing yachts

Shipyards cannot just talk about sustainability, we have to build environmentally sustainable yachts.

Sustainability has always been a key value at Perini Navi. Our owners are continually asking us to develop 'greener' systems. And going forward, our entire product range will be offered with the option of hybrid propulsion.

For example, the hybrid propulsion system on the 25m motor yacht Eco-Tender rose out of a request from an owner who already owned a 50m Perini Navi sailing yacht but wanted a smaller craft with hybrid propulsion for exploring shallow waters and protected marine areas without unnecessary noise or vibration, or emissions.

Meanwhile, the 42m E-volution currently under construction is our first sailing yacht that can mount a hybrid propulsion system.

Perini Navi revolutionized the world of large sailing yachts and we are

committed to continuing in this direction.

We are always trying to improve our sail handling systems and our new projects offer previously unseen volumes and ease of access to the sea. Improved performance is also key, because in addition to cruising in comfort, mega yacht racing is also a part of many of our owners' lives.

Mega sailing yachts are a niche market but interest in this smaller market segment is percolating. In the future we want to maintain our leadership in the world of large sailing yachts and consolidate our position in the motor yacht segment. Today we have orders for over 250 million euros and we have six yachts - both sailing and motor - under construction. For sailing yachts, we currently have the largest production over 40m in the world.

We also have three signed letters of intent for prestigious yachts, both motor and sailing. This year's turnover is close to 70 million euros, almost double last year's, and next year we expect to turn a profit. We

Interview with
Lamberto Tacoli,
Chairman and CEO,
Perini Navi





want to continue to innovate, in terms of style, technology and environmental sustainability, offering more and more hybrid propulsion to reduce the carbon footprint of our yachts.

The motor yacht market grew by 7% last year, and Italian shipyards have confirmed their leadership in this sector, building three out of four superyachts produced globally despite the fact that our domestic ownership is just 2% of the market worldwide. This market dominance will continue to have positive effects all along the Italian supply chain.

I foresee constant growth in the coming years. At Perini Navi we are receiving a lot of requests for yachts in the 40 to 60 m range. We are also getting a lot of requests for even larger yachts, which I hope we can talk about more depth soon.

I joined Perini Navi in May 2017, a time when a profound and strategic reorganisation was necessary. That was a challenge, but we put new resources and renewed energy into the shipyard and the market response has been positive. We have focused intensively on innovation, which has always been part of Perini Navi's DNA, and now we see big opportunities in the new projects we are bringing to the market.

We have completely renewed our motor and sailing yacht product range, which has been created by our own design department as well as with some of the most important designers, and we are working on very interesting

new projects like the Maltese Falcon of the future.

Perini Navi has always represented the best of "Made in Italy". It is synonymous with style, elegance and technological innovation. It also has a unique advantage: the power of a brand that is a "style of mind".

"Made in Italy" is not only about passion and beauty, but also the skill of the artisans in each area of expertise. Perini Navi, like other leading shipyards in the Italian nautical sector, can rely totally on this unique and high-level supply chain: this is arguably the real strength behind the Made in Italy nautical sector.

"We have focused intensively on innovation, always part of Perini Navi's DNA."

BIOGRAPHY

Lamberto Tacoli has been Chairman and CEO of Perini Navi since 2017. He entered the nautical world in 1990 when he joined S.M. Italian Yachting S.r.l., as Head of Sales and Marketing. In 1995, he moved on to co-found Custom Line S.p.A., a Ferretti Group company, becoming its Sales and Marketing Director. In 2001, when Custom Line merged with CRN S.p.A., another Ferretti Group brand, he was appointed CEO of both companies. In 2006, Mr Tacoli became Chairman and CEO of CRN S.p.A. until March 2016. In February 2008, the Ferretti Group entrusted him with organising a new Service Division dedicated to after-sales assistance: he became Chairman and CEO of EASEA Yachting Srl. In July 2009, he joined the Ferretti Group's Board of Directors and was also appointed its General Sales and Marketing Manager, until 2013. Between 2004 and 2012, Mr Tacoli held a variety of positions in various companies and institutions, such as Founder and General Manager of Y.Co., General Manager of Pinmar S.p.A. and Vicar President of UCINA. Since July 2015, Mr Tacoli has been President of Nautica Italiana and Vice President of the Fondazione Altagamma.

A 360° view



Courtesy of Burgess

Interview with **Sean Bianchi**, Head of New Construction, Burgess



After 40 years in the business, and the delivery of more than 4,000m of yachts from 23 shipyards in three continents, our aim at Burgess New Construction has remained remarkably constant.

We want to continue providing exceptional levels of support to owners, to ensure they receive the best possible yacht from a shipyard. This means acting as owners' representatives, project managers and technical advisors, and gathering the very best possible team to make this reality.

This also includes staying ahead of the curve when it comes to the latest legislation, rule requirements and emerging technology. We pride ourselves on our participation in many of the regulatory support groups developing and refining the relevant rules and regulations.

Pre contract, Burgess New Construction will always push for a shipyard to engage in a detailed meeting with both Class and Flag to ensure that the pre-contract general arrangement will meet the

rule requirements. It is an ideal opportunity to reach early agreement as to how any unique aspects of the yacht will be considered, lowering the project's risk from both an owner's and shipyard's perspective.

We are also, of course, paying special attention to environmental issues. This has been on our agenda for many years even if it is a relatively new focus of attention for owners. It's never easy to make the maths add up when looking at yachting from an eco-friendly perspective, however there are many things that can be done to minimise the environmental impact.

From the design side we try to ensure that any Class ECO notation is introduced. We are also looking at new technology such as hybrid propulsion, optimised hydrodynamic design and alternative fuels. Burgess is focused on CSR and we have a dedicated team which is assisting all departments.

Being a one-stop brokerage shop also brings advantages to clients. Indeed, many clients use all aspects of the company, from new construction to management, and from sales to

charter, through the lifetime of their yacht.

We can assist in developing new yachts from a clean sheet of paper, guide them through the detailed design and development and oversee the build through to successful delivery. Then we can assist the owner with managing the yacht, sourcing suitable crew and finding the most appropriate insurance for them, whilst also being able to manage charters.

The collaboration between each department is seamless; so if a client asks us, for example, to review a deck

are also continuing to support strong markets in America, Russia, the Middle East and Europe.

Meanwhile, at a time when so much of the industry is talking about supersizing, we also see opportunities in the smaller sized yachts. Generally Burgess New Construction concentrates on supporting large yacht construction from circa 50m upwards.

But we are now investing in the expansion of our services to the smaller yacht market, as we see a demand from these owners for

where you can share your knowledge with shipyards to optimise system design. This is not only from a rules and regulation perspective but also in terms of enhanced safety considerations and through-life operations in respect of ease of servicing and redundancy.

It is always a very proud day when a vessel is handed over to a happy client knowing that you have invested anything from three to six years into that one yacht. Working closely with a client to walk them through a project inevitably results in a long-term personal friendship, and that is particularly satisfying. During a project it is quite normal for an owner to have my mobile number as one of the top numbers on their speed dial list.



“We see many opportunities in the emerging markets.”

BIOGRAPHY

Sean Bianchi joined Burgess in 2005 and has over 23 years' experience, with specialised knowledge of hydrodynamics and high-speed propulsion systems. Sean has worked on several very high profile and complex projects, including Azzam, Dilbar, Sunrays, Al Mirqab, Mayan Queen IV and Slipstream. His knowledge and experience guide pre-contractual design decisions including specification, contracts and general arrangement plans for highly bespoke yachts. Sean is the Head of Burgess New Construction, which comprises a multi-disciplined staff of chartered naval architects, marine engineers and marine electrical engineers.

layout, our comments will cover not just the technical perspective but also sales, charter, management and operations, to give a truly 360-degree overview.

Going forward, we see many opportunities in the emerging markets, with large yacht purchase particularly strong at the moment in the Far East. Burgess has invested heavily in setting up local offices to support this, and has dedicated offices in Thailand, Hong Kong, Tokyo and Sydney. The opportunities in China and the Far East are extremely exciting for us. We

the same support, experience and expertise that we have been providing to the megayacht market.

On a personal level, I have been very lucky to work on many of the most iconic and unique yacht construction projects of recent years, including the Azzam, Dilbar, Sunrays and Jubilee.

I very much enjoy the pre-contract assistance we provide to clients and shipyards when developing general arrangement drawings and specifications. I also enjoy the post-contract design development

Bringing the onshore lifestyle to sea

The yacht market has always been fast-moving, but in recent years we have seen some unpredictable changes. Lifestyle trends are at the root of many of those changes. We see more and more clients enjoying the experience of an unlimited cruising range, and appreciating the ability to spend long periods of time out of the harbour or marina.

In addition, clients are choosing from a wider and wider range of onboard entertainments – they are seeking a larger number of “toys” you might say! This can range from facilities such as onboard diving equipment, to a large dedicated space for their fine wines and spirits.

These lifestyle changes are partly behind the huge success of Explorer yachts. We were among the first to believe in the great potential of this concept. In the last 15 years we have designed about 20 Explorer yachts which are now happily cruising around the world, and we have around a further 10 under construction that are using our design.

So we can say that the emergence of new sailing markets, the aforementioned lifestyle changes, and the new economy are all strongly influencing the yacht market.

One of the main trends as a result has been a growth in demand for yachts up to 500 GT. We believe there is also potential for expansion in the 60-65 m yacht range of tonnage up to 1,000 GT.

Sustainability is also a big issue for the “yacht of the future”. As a designer you cannot move far away from the concept of “sustainability”, and this must include the complete lifespan of a yacht, from construction to the final disposal. We are looking more and more to the automotive industry where even production plants are included in the sustainability process.

For HydroTec going forward, our challenge is to continue to enhance our ability to provide both the technical and creative aspects to yacht buyers and builders, something the company has become recognised for.

Interview with
Sergio Cutolo,
Founder, HydroTec





Courtesy of HydroTec

The launching of the 40 m Explorer Stella di Mare in 2018, of the 80 m Mega yacht Dragon in 2019, both with Naval Architecture and Exterior Design by Hydro Tec, has proven the value of this holistic approach. Taking this concept even further is an exciting challenge – and also a great opportunity - for our company.

To achieve this, the company is growing and building experience all the time. We still have the original team that has been in place for more than a decade, and our plan is to increase both the sales and design teams, the latter to be able to provide even more support to clients.

One of the great advantages of being Naval Architects, Engineers and Designers all at the same time is that it becomes easier to ensure automatic compliance with classification and flag rules. These concepts are built into the entire design process, and even from the first conceptual sketches our designs incorporate compliance, as well as all the technical aspects related to the construction and management of the yacht. Our creativity is often enhanced rather than restricted as a result of being involved at all stages of the yacht.

Our collaboration with RINA is a key part of this. After 35 years in the business, I can observe that many things have changed in the industry during this period. RINA has helped us by always being open to the designer's point of view. And very often we present the design issues directly to

them in order to find the best solution to a rule interpretation.

Meanwhile RINA's approach to key elements in the design and construction (from comfort to environmental issues) is highly appreciated by clients and the industry in general.

And certainly we will need to continue to work closely together. Owners are more and more demanding, and their yachts need to increasingly reflect their lifestyle.

Among other things, the use of glass, and transparency in general, has become a key factor in yacht design. On the one hand, yacht owners want to "explore" on an increasingly wide scale and will not accept restrictions on their destinations. On the other hand, they do not want to compromise their living standards, which means they strive for yachts that are as quiet and comfortable as their onshore homes but with the additional advantage of a full sea view. To achieve such high standards, it is crucial that we all work together on this point.

“Clients are choosing from a wider range of onboard entertainments.”

BIOGRAPHY

Cutolo started his career in the yacht industry with the Baglietto shipyard in Varazze, where he was Director of the Technical Department. Subsequently, he joined the Messina Shipyard owned by the Rodriquez family, owners of Baglietto at that time.

There he worked with Leopoldo Rodriquez and the late Gianpiero Moretti, collaborating on yachts such as the Romantica, Maffy Blue, Colin Alba, Opus and Elsewhere. He has also collaborated with names like Cichero, Giorgetti, Magrini and Bannenberg, plus younger designers such as Paszkowski and Marshall.

In 1995 Mr Cutolo founded HydroTec as an engineering firm, and in 2003 re-launched the company as a full service provider, covering yacht concept, engineering and design. The firm developed Italy's first ever "pocket-size explorer", the Naumachos series.

HydroTec is today one of the few companies in the world to provide an holistic design package, which integrates engineering, naval architecture and design.

Seeking perfect harmony

Interview with
Mauro Micheli



If Officina Italiana had a motto it might be: "Innovation meets tradition". Our goal is to combine the ongoing search for innovation while retaining the unique DNA of the brand, in this case the brand of our long-term exclusive collaborator Riva.

This means maintaining the iconic elements in both the exterior and interior style of Riva's boats, while constantly innovating. So our aim is to pursue a classic style of design, with a touch of modernity. Even with a brand as historic and important as Riva, it is necessary to introduce innovative elements. In brief, we want a unique, unmistakable style in which innovation meets tradition. When it comes to the future of mega yachts, the market appears to be moving towards bigger and bigger boats. We do not know whether this will remain the long-term trend, or how exactly the yachts of the future will look.

and **Sergio Beretta**,
co-founders, Officina
Italiana Design



However, we do know that our personal vision for the design of megayachts is to have elegant, well-balanced and extremely clean lines. We like pure,

austere design. We do not try to dazzle with special effects because special effects may not work over the long term. Rather, we strive to create objects that have a long lifespan and which are not trendy but never go out of fashion either. We hope to create an 'object' which is elegant and understated, like the owner of a Riva. We demonstrated this approach in both the design of Riva's 50m Race, which was launched in March, and the 52m Seven Sins designed for Sanlorenzo (part of a collaboration started in 2014 to design six new models for the yard).

Through these examples you can see that our style is in contrast to the other trend for 'over-designed' yachts. We often use classical and contemporary art as a source of inspiration, and as a way of pushing aesthetic boundaries. Every art work has its own balance and it must be the same in design.

With the entrance of Riva into the sector of the megayachts, the range we are involved with has widened from yachts of 10 meters up to yachts of 60





to 80 meters. It is a good stimulus, and really exciting.

Our main challenge today is the ongoing development of our new Superyacht Division. For the division, we have conceived two different lines using the same platform. One will feature an unusual and unconventional design; the other is more classical and is characterized by traditional and timeless shapes. The latter takes inspiration from Riva's iconic history and from its masterpiece 'Caravelle', conceived by Carlo Riva in 1964.

The new division has given us the opportunity to demonstrate that Italian yacht design can compete on an equal standing with the large North European shipyards in terms of quality and product exclusiveness. The Race is the first model to be launched under the new division and represents the largest yacht ever made by Riva. It also marks 25 years of continuous collaboration between Officina and Riva (or 35 to be precise, as Mauro had already absorbed Riva's DNA 10 years earlier working in the Riva design team).

The Race is certainly a boat with a very different character to its siblings but references to Riva's signature styling are a constant. As with all the other Riva yachts, we paid great attention to the use of glass, giving light to the interior and creating contact with the surrounding panorama. Emphasis was also given to the exterior spaces. It is a true connoisseur's boat. In a nutshell, it is chic. We are very happy with how the

new Superyacht Division is developing. Going forward, we will continue with our established philosophy, although there are always new challenges.

Every year there is usually a new rule or regulation to follow, and it is crucial that we keep up to date and pay attention to them. For example, designing a yacht under 500 GRT requires distinct strategies to remain under this limit. But a quality designer can find ways of interpreting restrictions that will ultimately lead to good design.

Our relationship with RINA is usually through the shipyard rather than directly, and it is the shipyard engineers and technicians who are more involved in the process. However, it would be interesting to have more collaboration in future between designers and classification societies, so that designers could play a role in the discussions about the critical aspects generated by new rules.

BIOGRAPHY

Mauro Micheli and Sergio Beretta are the co-founders of luxury yacht architect and design studio Officina Italiana Design. Established in Bergamo 25 years ago, the studio has longstanding links to the Riva yard, and is responsible for the exterior lines and interior design of all Riva's current range of models. Since 2014, the studio has also designed six new models for Sanlorenzo. The studio's work encompasses interior and industrial design, and it also works extensively in the refitting arena.

Mr Micheli, Yacht Designer, attended the prestigious Brera Art Academy in Milan and joined Cantieri di Riva as an assistant designer in 1984, before leaving in 1994 to create Officina Italiana Design with Mr Beretta. Mr Beretta, CEO, holds a degree in business and marketing, and a master's degree in European Law. He began his career in the aeronautical sector before creating Officina Italiana Design with Mr Micheli.

 www.italianadesign.it

“Our vision is to have elegant, well-balanced and clean lines.”

Creating the marina of the future

Interview with
Carmine Sanna,
 General Manager,
 Porto Cervo Marina

What element makes a marina potentially attractive to users? There is no single answer. Geographical position is obviously a major element, but there are many others: an appealing natural environment, for some people 'glamour', but certainly the level of technical assistance, port security and services.

The difference between a successful marina and a less successful one lies in the quality and execution of the services, and the attention that the personnel pay to providing customers with a high level of service in a familiar, relaxed and safe environment.

External recognition can assist in this. For instance, certifying management and insisting on the training and certification of staff brings added value to the quality of services. In having an outside and standardised rating, it also offers information on quality which can be quickly assessed by customers, particularly those from abroad, who normally rely on the assurances of their hosts.

Our challenge on a daily basis is the continuous improvement of "customer

satisfaction". We pay maximum attention to the quality of services, through the integration of the marina with our adjacent shipyard, and through the other 5-star services offered by the Smeralda Holding group which owns the marina.

This includes striving to provide the best hotel accommodation, high-profile sports and leisure activities including the Pevero Golf Club, and a variety of high quality restaurants. At Porto Cervo, guests experience a complete, across-the-board experience that goes well beyond simply mooring in a marina.

In terms of other challenges, we are of course monitoring the rise in the size of yachts. Porto Cervo today can hold the maximum number of maxi- and gigayachts at any one time in the summer period. It can berth up to 100 megayachts at the same time. It is also one of the few ports in the Mediterranean that can welcome and truly berth units of 160 meters in length.

Clearly the future trend is for an



Courtesy of Porto Cervo Marina

increase in the size of the large yachts, and there will be further changes with the simultaneous increase in the width of the units. We are always looking ahead, and at Porto Cervo we have already launched a study to check the adequacy of the marina's layout in order to assess if modifications are necessary to meet the challenge of the new yacht sizes over the next 25 years.

Despite some attempts to reverse this trend, there does not appear to be a central 'strategic' focus for marinas or tourist ports.

This unfortunately means that in some cases marinas are neglected and underexploited as a potential resource for tourists. I believe that marinas should be seen as an 'access route' to tourism in the region, and as such the

BIOGRAPHY

Carmine Sanna is the general manager of Porto Cervo Marina in Sardinia, one of the top 5 luxury marinas in the world. The marina is owned by Smeralda Holdings and operated by US-based IGY Marinas, a leader in the management of luxury marinas. Mr Sanna is simultaneously general manager of the Porto Cervo Shipyard, also owned by Smeralda Holding.

Prior to joining Porto Cervo, Mr Sanna was general manager and CEO of the luxury tourist marina of Capri. He previously coordinated the activity of three ports in Puglia, and also founded and acted as general manager of the Consortium of Sardinian Port Network, bringing together 18 of the most important port facilities in Sardinia.

Mr Sanna was born in Alghero in the Sardinian province of Sassari, and is a former Navy Officer.

 www.marinadiportocervo.com



Environmental sustainability is rightly the other main theme of the moment, and this will affect everyone throughout the industry. Smeralda Holdings (which owns the marina, as well as the hotels Cala di Volpe, Romazzino, Pitrezza and Cervo, Il Pevero Golf) is heavily promoting energy saving, as is IGY Marinas and our own marina. This includes waste separation, the use of recycled materials and biodegradable products, and water surface cleaning.

The Group, as part of its environmental sustainability practices, has carried out an intensive campaign to clean the seabed and "sea beans" are soon to be installed, which are effectively buckets capable of automatically collecting floating waste and microplastics. Porto Cervo marina is also certified according to the UNI-EN-ISO 14001 standard.

There are also challenges for Italy and how best to develop the country's marinas. Today there is no real 'marina network' in Italy and, in most cases, each tourist port implements its own management strategies and policies.

marinas need to be managed to the highest standards, so that they are integrated into the region's tourism industry.

Today more than ever, managers employed at the facilities should be qualified and even certified, particularly the marine directors. The goal is of course to increase competitiveness and raise standards. Those managing the marinas need to develop a greater sensitivity towards customer expectations, increase the professionalism and qualifications of the personnel employed, and nurture better relationships both between ports and between the port and the region.

During my career, I have turned to RINA frequently over the years. Its specialism in marine has made it perfectly suited to the yacht industry and therefore a 'natural' interlocutor in matters of certification and training. I have particularly appreciated the development of new evaluation criteria which have measured the performance of the facilities under my management.

“Environmental sustainability will affect everyone throughout the industry.”

Enhanced performance for greener seas

In recent years, the International Maritime Organization (IMO) has strongly committed to climate change mitigation and the reduction of atmospheric emissions. Air polluting ship emissions are regulated by MARPOL Annex VI:

Regulation 13 establishes NOx emission limits for engines with a power output of more than 130 kW and introduces a Tier approach:

Tier II is globally applicable to all ships built since 1 January 2011
 Tier III is applicable to Yachts of more than 24 m in load line length, larger than 500 GT, built after 1 January 2016, and operated inside the North American or United States Caribbean Sea Emission Control Areas (ECAs).
 Tier III will also become applicable to Yachts constructed after 1 January 2021 even below 500 GT, when operated inside the Baltic Sea or the North Sea ECAs.
 Tier III compliance requires the installation of catalytic mufflers (SCR) and the use of urea solutions (Adblue); this is quite bulky equipment that

needs to be installed near the engines, thus requiring larger engine rooms. As a consequence, the living quarters, the "payload" of a yacht, suffer a consequential contraction; yards and manufacturers are struggling to organise this equipment in the most space-efficient way, but it seems inevitable that there will be an impact.

Regulation 14 sets sulphur content limits on any fuel oil used on board. Already from 1 January 2015, ships operating inside ECAs are required to use fuel oil with a sulphur content of 0.1% or lower. However, from 1 January 2020, ships operating outside ECAs will also be required to use low sulphur fuel oil (max 0.50 % content), unless fitted with an approved Exhaust Gas Cleaning System (Scrubber). The fuels with a sulphur content of 0.50% or lower are reported to be chemically very different from the present ones, and therefore the switch to a new fuel needs to be carefully managed to address the compatibility of the new fuel with the one already present on board: investigation may be needed into the compatibility of the new fuel

with existing machinery, and attention must be given to fuel viscosity and low temperature properties, since new fuels may require fuel heating equipment if used in cold climates.

From 1 March 2020, it will be prohibited to carry non-compliant fuel on board (except those ships fitted with scrubbers), in order to facilitate enforcement.

Furthermore, IMO has committed itself via a "strategy on reduction of GHG emissions from ships" to reduce CO2 emissions from ships by 50% by 2050 compared to those in 2008. No concrete steps to reach this objective have been made so far, but expectations are high for the next Marine Environmental Protection Committee meeting in 2020, when specific proposals are expected to be presented by Member States.

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Inventory of hazardous materials (IHM)



The EU is pursuing an ambitious policy to make ship recycling greener and safer. The Ship Recycling Regulation No. 1257 adopted in 2013 by the European Parliament and the Council of the European Union aims to reduce the negative impact of recycling ships flying the flag of Member States of the European Union.

The Regulation lays down the requirement that new and existing ships shall have an onboard Inventory of Hazardous Materials (IHM) before going for recycling in order to provide detailed information on the hazardous materials present on the ship. The Regulation applies to all yachts greater than 500 GT.

For new yachts, the IHM shall be developed at the design and the construction stage. This has been mandatory since the end of 2018, and pertains to the hazardous material referred in Annex II of the Regulation. Meanwhile, from 31 December 2020, all existing yachts of 500 GT and above

flying the flag of a Member State or arriving in European ports are required to have on board a valid and verified IHM as per the hazardous material list in Annex I of the Regulation.

The IHM consists of three parts: Part I provides the list, location and approximate quantities of hazardous materials contained in the ship structure or equipment, as referred to in Annexes I and II of the Regulation; Part II contains the list of the waste present on board the ship; and finally Part III contains the list of hazardous material stocked in the ship stores. Part I of the IHM must be properly developed, maintained and updated throughout the operational life of the ship. Parts II and III must be completed only before recycling.

The IHM of all yachts flying the flags of EU Member States shall be subject to a survey regime, either by the flag Administration of the EU Member State or a Recognized Organization authorized by it. After successful

completion of an initial, additional or renewal survey, an inventory certificate shall be issued and supplemented by Part I of the IHM. After successful completion of the final survey, the Administration or the Recognised Organisation shall issue a ready-for-recycling certificate supplemented by the complete IHM of Part I, Part II and Part III.

In this context, RINA is able to support shipowners throughout the process, from the preparation and maintenance of the IHM, through the owner's consulting company, up to the verification and the certification of the IHM, through the owner's certification company.

RINA has adopted a governance model which defines and governs the relationship between the various departments of the Group, in order to safeguard impartiality and prevent conflicts of interest, thereby ensuring compliance with the applicable accreditation and authorization rules.

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Comfort for humans... but not only

What is “comfort” when it refers to noise and vibration? For me, it is to navigate the seas hearing only the waves lapping against the hull, and to walk onboard feeling only the warmth of the teak and no vibration. “Comfort” on a yacht is to have the perception you are running on the sea.

These days, when yachts can reach incredible performance levels and new technology allows for the design of beautiful lines, the real challenge is to build quiet and vibration-free yachts.

But the pursuit of this comfort, whether during the design or the construction stage, is not an easy path. Researching and identifying the best solutions and materials is a challenge for both RINA and our clients.

During the design phase shipyards must pay attention to all the elements regarding choice of machinery, materials, and design solutions; choices must maximize comfort without penalizing the yacht’s appearance, usability, luxury or, of course, technical characteristics.

In order to find the right balance between those characteristics, noise and vibration estimates (based on experience and software analysis) are performed during the design phase.

The same attention to detail must be applied during construction. Materials must be installed to the highest precision, and all machinery must be in the perfect position. The smallest error could invalidate months of work.

Every day we meet shipyards working to produce the most comfortable, beautiful and enjoyable yachts, and they ask for our help to do it. And every day we meet yacht owners who

want the opportunity to enjoy their free time truly relaxing onboard.

For them we developed our Additional Notation, the Comfort Class for Large Yachts, introduced in 2016. This is

standards. This has led us to a new definition of the Comfort Large Yacht Notation, to be introduced in 2020, which will also take into account comfort during overnight navigation.



a complete notation, applicable to yachts up to 40 m, that takes into account both passenger and crew comfort during navigation and at anchor.

However, can this go even further? We know that little details make all the difference. For example, nobody wants to be disturbed by voices coming from an adjacent cabin, or to hear footsteps overhead. For this reason, our notation also guarantees high privacy standards with requirements for bulkhead and deck insulation.

RINA is continuously researching noise and vibration issues, and updating our rules to guarantee the highest

And our research does not stop at human comfort...since 2016 we have also been caring for sea mammals’ comfort, with our underwater noise limit notation, appropriately called Dolphin Class!

Every day our mission is to ensure the most comfortable experience, both onboard the yacht and under the sea.

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A golden age for glass

The marine market has long demanded glass panels capable of satisfying the highest requirements: great mechanical strength, with excellent optical characteristics, high standards of transparency, and an absence of defective or optical aberrations.

Particular attention is given to those panels installed in the wheelhouse or other front positions of the superstructure, or in the main saloons where the purpose is to reduce the distance between the interior and the sea to a minimum.

At the same time, glass is currently living a golden age, being used in complementary applications such as bulwarks, windbreakers, stairs and swimming pools.

To meet the demand for increasingly large glass systems, Viraver has expanded its production facilities with the introduction of new machinery to handle glass panels of up to 8 metres.

Furthermore, new design and construction methods for bending equipment have been introduced, which allow the creation of curved

elements with high development and extreme bending angles (90°).

Last year, Viraver also developed an additional chemical toughened plant designed to carry out continuous treatment cycles to process large-sized elements. The load capacity of this plant is currently the biggest in the world.

The choice of chemically toughened glass in yacht design is driven by the need for transparent elements that are resistant to the strong forces experienced in the marine environment.

Chemically toughened glass is considerably more resistant than the traditionally thermally tempered glass, with almost triple the usual resistance values. Furthermore, the combination of the chemically toughened treatment with the introduction of a more rigid plastic interlayer allows the development of stratified element compositions with reduced thicknesses of up to 30%.

A direct consequence of this improvement is a significant reduction in the weight of the glass

element. This has direct benefits in terms of ship performance including enhanced speed efficiency, reduced consumption, and a smaller environmental impact.

Italian glass maker Viraver was founded in 2000, and is active in a range of sectors including yachting, automotive, industrial and architectural.

The company specialises in developing highly innovative glass products which meet clients' technical, engineering and functional needs, while at the same time maintaining the highest aesthetic standards.

The company works hand in hand with shipyards and designers through the design and development stages to offer the most innovative solutions possible.

New technology used by the company meets yacht designers' needs by being able to produce cylindrical or spherical glass shapes with extreme curvatures, while also offering excellent optical precision with no distortion or undulations on the surfaces. The company has also installed state-of-the-art equipment to meet the demand for large, high-strength chemically toughened glass surfaces.

 www.viraver.com



The world's largest chemical tempering plant - Courtesy of Viraver

The Red Ensign Group (REG) Yacht Code

In 2017, the Red Ensign Group (REG) published a new regulatory framework for yachts titled the 'Red Ensign Group Yacht Code', aimed at consolidating the latest versions of the Large Yacht Code (LY3) and the Passenger Yacht Code (PYC).

The work was undertaken in recognition of the fact that both Codes required updating to reflect regulatory changes that had taken place in the underlying IMO Codes and Conventions, and also to reflect recent developments in design trends and technology.

This review was carried out in close collaboration and consultation with the large yacht industry: industry working groups were formed consisting of REG Members (the group of Flags consisting of the UK and its overseas territories and dependencies including the Cayman Islands and the Isle of Man), Classification Societies, Aviation

specifically address the Large and Passenger Yacht Codes, the carriage of more than 120 Persons on board Passenger Yachts, and Helicopter Landing Areas.

The Code's aim is to further develop the well-established industry standards of the LY3 and PYC, taking advantage of the lessons learned in the twenty years since the first version of the LY3 was published in 1997 and more recently since the first edition of the PYC was published in 2010. The revised text makes better use of industry best practice and international and goal-based standards, with the intention of ensuring that new technologies and innovations in the design and construction of Large Yachts are accommodated in the appropriate manner. To facilitate this, provision for the use of Alternative Design and Arrangements where permitted by the SOLAS Convention are now included.

carrying 36 or fewer guests and up to 200 persons), and constitute an equivalent of the Loadline, SOLAS and STCW Conventions.

Significant changes to the Code include the option to utilise marine evacuation systems as the sole means of abandonment in lieu of lifeboats or davit-launched life rafts for Part A vessels of greater than 85m loadline length and additional requirements for Part B Vessels carrying more than 120 persons.

Both parts of the Code are supported by a set of Common Annexes, the content of which includes requirements for Occasional Workers, the design and installation of Battery Systems, Over-side Working Systems, Fireplaces, Fire Pits and Barbeques, and the carriage of large quantities of petrol.

The Code entered into force on 1 January 2019 and has attracted a significant amount of interest from the industry. Whilst the intention is to adopt a four-yearly amendment cycle in line with SOLAS, regular engagement both within the Red Ensign Group and together with industry will continue, in order to ensure that the Code remains at the forefront of yacht regulation.

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🌐 [Cayman Islands Shipping Registry
www.cishipping.com](http://www.cishipping.com)



Inspection Bodies, Designers, and Builders and Management Companies. Special groups were formed to

Part A of the Code replaces LY3 (vessels carrying 12 or fewer guests), whilst Part B replaces the PYC (vessels

2019 RINA “Green Yachts”

RINA “green fleet” is continuously growing.

In 2019 five new yachts have been awarded with the “Green Plus Yacht” additional class notation. Green Plus is a goal-based voluntary notation committed to environmentally friendly shipping: it is based on an environmental performance index, which covers all aspects of the vessel’s impact on the environment, including carbon emissions.

A warm welcome to:

M/Y “RACE”	50m	RIVA
M/Y “STELLA DI MARE”	40m	CBI NAVI
S/Y “SOLITAIRE OF SURAMA”	32m	CANTIERE BECONCINI
M/Y “AUDACE”	43m	CANTIERE DELLE MARCHE
M/Y “AMER 94 TWIN”	29m	AMER



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