RINAUTIC



September 2015



Contents



Welcome to the first edition of RINAUTIC, our new newsletter which will keep you informed about technical and service developments in the yachting world and also profile some of the key players in this exciting and growing industry. RINA is the world leader in certification and classification of pleasure craft of all sizes. Our expertise helps designers and yacht builders to create innovative and exciting yachts and boats which are safe and environmentally-friendly.

Commissioning, designing, building and owning a yacht is an emotional experience. New materials, new power sources, a constant desire for more comfort, for a yacht which is special, all drive our industry forward. We are challenging technological frontiers and the yacht industry is globalising fast. RINA is a constant and reassuring presence, bringing the flair and innovation to get you the best boat possible, combined with the technological knowledge and experience to ensure it is also safe and clean. Read on to see how RINA is helping designers, yards and owners to realise their dreams.

RINA provides global compliance certification



RINA is the first European class society to deliver NMMA certification for boats built in Europe or other parts of the world which are to be sold or used in the USA. This will be grouped with CE compliance so boats can have a new RINA certification called GLOBAL COMPLIANCE. Italian inflatable boat builder Zar Formenti and the Italian Sea Group are the two first companies to benefit from this unified dual certification. Many more companies are now going through the certification process.

NMMA Certification is a programme designed to help boat manufacturers comply with industry safety and construction standards and federal regulations in force in US market. CE compliance is required for all boats made and sold in Europe. RINA now provides certification under both schemes through one global certificate.

All boats sold in the USA must meet US Coast Guard minimum regulations. NMMA Certified boats must also meet the more comprehensive standards set by the American Boat & Yacht Council (ABYC), covering more systems and components than USCG regulations.

NMMA Certified boats undergo third-party inspection to ensure all applicable standards are met. The result is a thoroughly inspected, high-quality boat for the owner and passengers.

Manufacturers of NMMA Certified boats benefit from:

- Assurance their boats meet the industry standards for the United States (ABYC Standards)
- A detailed inspection and verification process
- Improved consumer confidence
- Increased brand respect
- Product liability protection
- Product liability insurance discounts
- Extensive marketing of NMMA Certified boat brands to boat buyers

RINA has entered into an agreement with NMMA to qualify a number of surveyors that can carry out the inspection according to the ABYC Code, making it the only classification society that can perform this activity in Europe.

GLOBAL COMPLIANCE certification will be granted to those boats that will get both CE and NMMA compliance from RINA. RINA can support boat builders by performing an extensive gap analysis to identify the main differences between CE and NMMA certification for a specific project. In this way it is possible to know in advance what modifications are needed and evaluate the costs and feasibility of the project.

GLOBAL COMPLIANCE is an example of how RINA's yacht teams add value and react to the needs of their clients.







Paolo Vitelli

The best of Italian style and craftsmanship

Paolo Vitelli thinks that building yachts and boats is a real growth opportunity for Italy. "Yachts are one of the most iconic products of "Made in Italy". They represent the best in style, flavour, elegance and craftsmanship, he says. "In short, we build yachts which reflect the way of life of Italy. Our boatbuilding industry is one of the largest and most capable in the world. The combination of these four elements assures a continuous expansion in growth and deep appreciation in a world where the number of high net worth individuals is continually growing."

Paolo is Chairman and founder of the Azimut/Benetti group, which is the world's top builder of motor boats and yachts. So he is well placed to feel market trends. "I am quite sure that we have reached the bottom level in the European small boat market and that in 2015 we have already started the recovery," he says confidently. "The recovery of this market greatly depends on improvements in the European economy. The expectations are positive but the small boat market can improve even faster if consumers feel more positive. There is another factor, over the past eight years the fleet has grown old so that will lead to a natural rejuvenation and renewal."

Azimut builds yachts in composites around 24 m long and Paolo sees the main challenge for them is to become more and more a worldwide company. "To become truly global we have to focus on style, technology and service. Azimut is very well placed on these fronts because in terms of style we are recognized as an ultimate expression of Italian style, because our technology is at the forefront, especially with the use of innovative hulls and the best use of space, and because the increasing use of carbon makes our boats increasingly light and so more fuel-efficient," he explains. "As for service we have a worldwide network of technical assistance organized in five geographic areas around the world - North/South America, Europe, Middle East and Southeast Asia - always with a true Italian smile."

BIOGRAPHY

Born in 1947, graduated in Economics and Business, Paolo Vitelli set up Azimut in 1969. This became the Azimut/Benetti Group in 1985 with the acquisition of the Benetti shipyard. Over 46 years in business the company has continued to expand, and today it is the world's number one builder of motor yachts. It is a private company with Vitelli still today the majority shareholder, and has a well-recognised capacity for innovation and technology. From 1998 to 2006 Paolo Vitelli was President of Ucina Confindustria Nautica (Confederation of Italian Industries - Italian Shipbuilding Industry Association). He was awarded the title of "Cavaliere del Lavoro" of the Italian Republic "for having distinguished himself singularly in the shipbuilding industry", and in 2004 he received an Honorary Degree in Mechanical Engineering from the Politecnico di Torino. He has been a Member of the Italian Parliament since 2013 and Honorary Consul for Norway since 1974.



Will Azimut/Benetti move production out of Italy? "We have a facility only in Brazil, to serve the internal market," says Paolo. "We have no production projects for other countries." As for service partners such as classification societies Paolo says, "For our Group, RINA is an important partner. In addition to being our reference for the classification and marine approval it is the third-party body which issued the ISO 9001 certificate of quality for our Avigliana and Savona sites and OHSAS 18001 certification for health and safety of workers throughout the Azimut Benetti Group. We are the only shipyard in the world to obtain this certification on multiple sites. These certifications guarantee a high level of quality and control, key elements for our business."

RINA has recently carried out the external audits for the issue of ISO 9001 certification for the Avigliana and Savona sites and at the same time the audit maintaining OHSAS 18001 certification for the Avigliana, Savona and Livorno sites. "All the results were positive," says Paolo with pride. "Our experience with RINA is certainly positive, and among the most significant attributes there are the transparency and fairness in technical issues and the expertise of its technicians who collaborate with the staff of Azimut/Benetti."

Looking ahead at how the market for superyachts is changing Paolo says that the owners of super yachts require more and more professional service. "Shipyards, or at least some of them, have now reached a high product quality level and with the help of the classification society guarantee high levels of safety," he explains. "Consequently, the client also expects a high level of on-board service. But nowhere in the world is there a sufficient number of professional institutions teaching codes of conduct and service on yachts. It would perhaps be interesting if the classification societies promoted the expansion of these training schools. They could establish professional standards for staff on leisure vessels, and encourage training programmes to implement courses that might prepare young people to meet these standards. Standards that could potentially even be checked and verified by the same classification institution."

Paolo knows what he wants next from class. "I propose that the classification societies extend their precious contribution beyond the setting of construction and products standards to include service standards. I think this is an opportunity for the entire world of yachting that will also ensure the satisfaction of our clients."



Francesco Paszkowski

Francesco Paszkowski Design has built a portfolio of customers and shipyards which appreciate the way his studio blends designers and architects who combine their knowledge to devise design solutions. They are committed to every aspect of the project, both exterior and interior. "Our most recent designs will have their worldwide premiere at the Cannes and Monaco Yacht shows," says Francesco. "The Tankoa S 693, Baglietto 43 Fast, Baglietto 46 displacement, CRN 61 m Saramour and Sanlorenzo Explorer 460 are all new and exciting and now we are working on some yachts which will be launched by end of this year and during next year, and on some new designs."

Francesco trained as an architect but always had a passion for design. "I loved car design, but at university I began to be involved in yacht design. In 1986, when I got a chance to design boats under the tutelage of Pierluigi Spadolini, the desire to express myself was stronger than anything else. For me there is not one most important part of the design process," he explains. "The designer's job consists of several steps. They are all important and necessary. I like it so much, from the very first idea to the last sketch, from the relationship with all the players involved – owner, shipyard, the whole team design - to boat launch."

Francesco has a wide view of the industry as his studio works with owners and some of the most prestigious shipyards all over the world, designing both planing and displacement yachts, exterior and interior, production and custom yachts. His studio is based in the hills around Florence and Francesco himself was born and raised in Milan, but he has a global outlook.

Ask Francesco about classification societies and he smiles. "Certification bodies usually deal more with boat builders and naval architects than with designers," he says. "We just have to comply with their rules. Safety is mandatory while designing a boat."

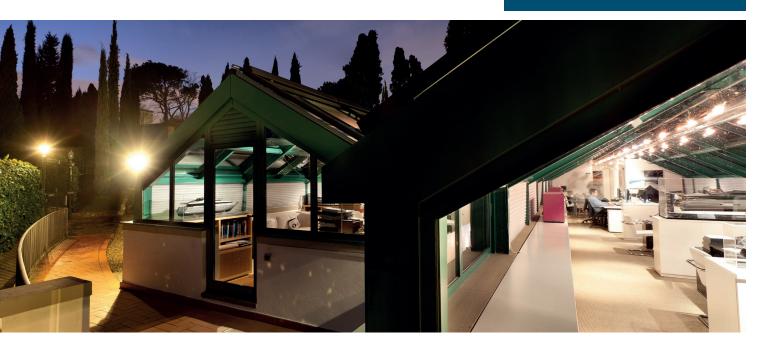
BIOGRAPHY

Francesco Paszkowski set up his own yacht design company in 1990.

At Francesco Paszkowski Design studio designers and architects are capable to follow projects from the beginning until completion - and beyond - to ensure consistency and personal service.

The cooperation with Baglietto started more than twenty years ago and involved the creation of a large number of yachts, while the collaboration with Heesen Yachts dates back to the beginning of the Nineties covering the design of the exterior of Opus II, a 36-metre yacht built for an Austrian owner. Francesco Paszkowski Design further increased the number of his customers by starting to cooperate with Sanlorenzo in 2005. A strikingly wide range of work emerged also for owners and worldwide renowned shipyards such as Turquoise Yachts, and some of the most famous Italian brands such as Canados, CRN, ISA Yachts and Tankoa Yachts.

Paszkowski Design was awarded important international prizes. The success of the yachts designed and the trust boatyards and owners have been showing over the last twenty-two years prove the studio ability to gain an understanding of a client's needs and to design yachts in which form and function are perfectly balanced.





Francesco Paszkowski Design has most recently worked with RINA on the Baglietto 43 Fast and Tankoa S 693. "They will be shown for the first time at the upcoming boat shows in Monaco and Cannes in September," says Francesco. "Our experience of working with RINA is always positive. Their rules compel designers to look at their work from another point of view and take safety and the environment into account as a priority to conceive solutions which combine safety and creativity."

"Of course we have to think about both class and flag state rules and regulations," he explains. "This is one of the most challenging aspects of our job. The final design should be a balance between rules and creativity. Safety rules change over the time and technology develops to find new solutions to both well-known and new problems. A designer can find ways to combine new materials with the latest rules related to safety."

What can class do to keep pace with the speed of the superyacht industry and help deliver the dreams of owners? "It's an interesting question," replies Francesco. "I often think how the owners' dreams affect safety and the engineer's job. Just think about folding balconies, wide windows along the hulls, landing and take-off platforms for helicopters or beach-clubs at the stern...class has always got a role with the designer to solve the challenges which owners' dreams create."

Francesco is humble about his own experience and feels it is never enough. Today one of the most acclaimed designers in the superyachts, he has remained faithful to the principles he learnt during his career. He is firmly convinced that, "in a rapidly evolving domain like boatbuilding one's experience is never enough. The history of the boatyard, the work of all those involved in the construction of a boat, from commission to launch, a close communication with the technical department of the builder, the owner and the design studio are fundamental to design process."

Thinking about the environment and how both owners and shipyards address environmental concerns Francesco says, "North European yacht owners and shipyards have improved more in this area, but now the Italian yacht-building industry and yacht owners are getting more sensitive about that. The RINA Green Plus was a breakthrough. It shows the right direction to be followed. It represents the idea of progress in environmental safety I was mentioning before."

Could RINA do more, be more proactive? Francesco thinks that design is for designers and safety for class. "RINA is one of the most qualified certification bodies, and so far cooperation with RINA has been very satisfactory," he says. "I think everybody has to keep on playing their own roles for further improvements regarding both safety and design. Safety is a top priority and we should not compromise that."



Measuring your environmental footprint

RINA SERVICES is developing a new class notation for yachts that measures the environmental impact of the whole life cycle of the yachts. It will provide a benchmark to measure the yacht's environmental footprint against key indicators such as climate change (Global Warming Potential) and water acidification (Acidification Potential). Life Cycle Assessment (LCA) analysis will be used to calculate impacts for the entire life cycle from raw material extraction to the final disposal of the yacht, evaluating all inputs including power consumption and materials and all outputs including emissions to the air, water and ground and waste production. RINA's LCA notation verifies not only the environmental impacts, but also the social aspects in the shipyard and manufacturing process, such as safety at work, equal opportunities and child labour absence.

Using this analysis the yacht owner not only has the opportunity to account for its environmental impacts but can use the analysis to identify critical environmental points along its life cycle and therefore find ways to mitigate the impacts.

This project, co-ordinated by the scientific research organisation Eulabor Institute in collaboration with the University of Bologna, the Italian VSY shipyard and RINA Services, stems from the fact that shipbuilding contributes significantly to air emissions, especially to the gases related to the greenhouse effect. The greenhouse effect is one of the most important environmental impacts that the Earth has to face and it has a crucial impact on ocean acidification.

The project is beginning now with a sample of some pilot cases which will provide data on which to base the benchmark for the class notation for the climate change impact category.

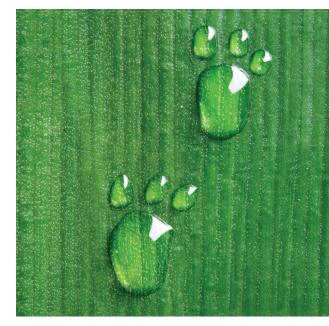
In order to have specific LCA common rules for yachts, RINA, together with VSY, is creating a standard under the International EPD® (Environmental Product Declaration) System (www.environdec.com), the international programme for environmental declarations operating in accordance with ISO 14025.

A dedicated program has been developed that collects all the data and associates an impact index with them.

These data will be useful to shipyards which wish to compare their ability to mitigate emissions for different projects. The evaluation criteria give shipyards a central role in the commitment to reduce emissions. By adopting this approach the yacht building sector is able to set its own sustainability agenda rather than being forced by future international environmental regulations.

Thanks to this project yacht builders have a good opportunity to improve sustainability and ocean responsibility and make yachts more environmentally friendly.

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Innovative Glass Standards



RINA is developing a new standard for dimensioning and designing glass to be used on pleasure craft based on alternative design concepts. The RINA standards are currently in the experimental phase and are intended to retain the safety provided by current ISO standards while opening the way for designers and builders to use glass in more extensive and innovative ways in yachts of all sizes.

The RINA rules will do away with the need to test full size mock-ups, which are very costly to produce and require a lot of preparation time. The formulas to be applied take into account the latest construction techniques and materials used in the industry without having to resort to costly destructive tests.

Yacht designers often ask yacht builders to install large glazed sections in positions other than those traditionally used, to allow greater visibility of the view outside. Currently there are ISO standards (ISO 12216 for yachts < 24 m - ISO 11336 for yachts > 24 m) that establish both the size and position of glazed elements, by applying specific formulas, without leaving any margin for flexibility. The limits imposed by these norms are restrictive. For example, a glazed section may never be bigger than a certain size if located in a certain area. This highly prescriptive approach leaves no space for innovation.

The RINA standards are based on the concept of alternative design. They balance the severity of the requirements in force with alternative technical solutions that are not traditional, but that ensure the greatest respect for safety. This means that the

glazed area can be larger, provided it is stronger and thicker, using an approach that is more engineering-based and less prescriptive. Increasing the thickness of glazed expanses in areas of the vessel that are normally subject to greater pressure makes it possible to overcome the rigorous limit that currently greatly affects its size.

The new RINA standards will call for tests on test pieces of limited size but not costly and destructive tests of full-size mock-ups.

Currently the standards are at the advanced prototype phase and have been shared with leading shipyards and some manufacturers of glass for nautical use. Feedback will help with fine tuning and improving the standards which will be published later this year, ushering in a new era in the use of glass on yachts.

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UK activity strengthens



RINA's UK Yachting Centre has seen an increase in activity for newbuilding superyachts during 2015, both with established shipyards such as Sunseeker International and Princess Yachts in the UK and for projects in the Netherlands and Middle East, for which areas RINA UK manages the plan approval.

RINA has strengthened its team in the UK and appointed a new Yachting Manager, Lewis Northcott. He knows the UK market well as during the last seven years Lewis has supervised over 120 newbuild superyacht projects in UK shipyards as RINA's survey team leader. Before joining RINA in 2008 and going to work in Italian yacht building yards he was technical manager for the Royal Institution of Naval Architects.

RINA UK certifies the entire range of RCD and CE marked vessels for Sunseeker International including the Green Plus Gold notation as standard. This year Sunseeker will be producing three new large yacht models: 95 Yacht, 116 Sport Yacht and 131 Yacht. The second 155 Yacht, the company's flag ship, is also in production with planned dispatch from Poole in spring 2016.

Princess Yachts is building new models this year, the first 35m is nearing completion and currently under test in Plymouth. The first 30m vessel is due for completion this year and the fifth 40m Yacht has just been dispatched to the client, with RINA class. Other interesting new projects include the CE assessment of the Quintessence Yachts AM37 powerboat, under the Aston Martin brand, completion of a SOLAS-approved rescue boat/superyacht tender project with RIB-X and construction of two sistership pilot vessels with Seaward Boats.

RINA UK's portfolio of clients includes many UK-based engineering and manufacturing companies which hold a large market share of the marine equipment supplied to yacht builders internationally.

Based in Southampton, RINA's UK Yachting Centre is located within a maritime hub, in close proximity to the Maritime and Coastguard Agency and the Cayman Islands Shipping Registry, as well as many local designers, consultants and naval architects. Many of the designers, brokers and managing agents involved with superyachts are based in London and the South of England. The close relationship with these key industry stakeholders and ability to offer supporting technical and classification services face to face is of great importance for RINA and for the yachting market internationally.



Improving Marina Management

RINA has built on its MaRINA EXCELLENCE certification scheme by developing a certification scheme and a series of courses and qualifications for marina managers and senior staff. The growth in marinas and tourist harbours has led to the development of a new profession of managing marinas. As a leader in the process, product and personnel certification sector, RINA has developed a certification scheme for professionals in the tourist harbour sector, according to standards covered by ACCREDIA accreditation, and in conformity to the UNI CEI EN ISO/IEC 17024 standard.

The MARINA MANAGER course leads to the certification of professionals tasked with managing tourist harbours. It helps ensure marinas are correctly run and helps marinas distinguish themselves from less professional or unqualified competitors.

The positions covered by the qualification are HARBOUR DIRECTOR, HARBOUR MANAGER (or Deputy Director) and HARBOUR TECHNICAL MANAGER (or Boatswain).

MaRINA EXCELLENCE certification was introduced in 2013 to assess and indicate the quality level offered by marinas and make it possible to see which of the services offered are most suitable for the pleasure boater's tourist needs and expectations. An extension of the scheme, MaRINA EXCELLENCE 24 Plus

facilitates access to and selection of harbours able to able to offer additional services and host maxi yachts, guaranteeing that masters and yacht owners will be able to find services that suit their needs.

MaRINA Excellence certification ensures that harbour and tourist marinas provide a range of benefits including recognition of their commitment to offer quality harbour and tourism services, demonstrating their care in terms of environmental sustainability and safeguarding the surrounding territory, and making it easier for pleasure boaters to choose the harbour most suited to their tourism needs and expectations. It is all based on a rating given for each individual service offered and is intended to improve the marina's image and profile both locally and internationally.

With the internationalisation of tourist harbours and services, MaRINA Excellence is the ideal means of recognising a real commitment to making port services efficient, as well as efforts made to ensure a sustainable approach in the area.

The harbours that have obtained certification from RINA so far are Porto Lotti, Porto Azzurro, Marina d'Arechi, Marina di Villasimius, Marina Cala de' Medici, Darsena dell'Orologio while Marina di Chiavari and Marina di Procida will soon be certified.

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New Green yacht awards



Every year, in collaboration with the Monaco Yacht Show, RINA SERVICES rewards the newly-delivered yachts that have been built and operated with special commitment to environmental protection.

Over recent years, the greenest yachts also had the honour of welcoming Prince Albert II of Monaco on board.

Things are changing a little bit in 2015. Environmental protection is becoming more and more important and society is pressing the whole shipping industry to reduce emissions and waste.

This is a global issue and RINA believes that the green award should not only go to the greenest yacht which has obtained the RINA Green Plus Additional Class Notation.



The evaluation criteria will be those stated in the RINA Green Plus Rules and all candidates can list equipment and solutions applied on their yachts to reduce the impact on the environment.

The award-giving ceremony for the greenest yacht will be held at the Monaco Yacht Show Opening Party.

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RINA classes two new innovative yachts

RINA has recently certified two luxury yacht designs which take exterior, as well as interior, standards to a new level.

The first Franck Muller Yacht design was unveiled recently at the Italian Sea Group Headquarters of Carrara-Italy. The design is a perfect blend of Franck Muller's cutting-edge technology and The Italian Sea Group reputation for the highest quality.

Meanwhile, Aston Martin has released provisional details of its AM37 power boat, which will bring to the water the company's reputation for 'power, beauty and soul' which is synonymous with its production of road and racing cars. The 37ft-long AM37 aims to provide a luxury sports car experience – on water.

The Aston Martin design team has been working with the Quintessence R&D unit on what is described as a hi-tech composite structure, with interactive voice control, and a high-definition touch-screen navigation and multimedia system.

RINA is the leading name in luxury yacht classification, and is proud to be associated with these exciting new designs.

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The first RINA EMC assessment on Tankoa

D'Appolonia; part of RINA Group, has completed an assessment of the electromagnetic environment on the newly-built 69 m Tankoa S693 yacht. Built in Genoa, the Maltese-flag superyacht has been built for charter and features diesel-electric drive. It is outfitted with multiple electronic systems. The task for D'Appolonia's EMC team was to ensure that the electromagnetic emissions from the power generation and supply plant, the radar and the telecommunication systems comply with all applicable standards and rules related to the EMC hazards to personnel.

For the Tankoa S693 D'Appolonia identified the applicable legislation, standards and rules and analysed the configuration of the systems. Teams then monitored the operational condition of the systems during trials so as to perform emission measurements under operative emission conditions. They acquired measurements both cruising at sea and in harbour.

Yacht owners are becoming more and more aware of environmental issues and they also want to be protected from electromagnetic emissions. Electromagnetic emissions are invisible but could rise safety issue for people who are subject to them and compromise the performance of electronic system installed on board. For this reason RINA delivers a set of services aimed at controlling and measuring the level of this type of emission.

RINA can intervene at the very beginning of the project with dedicated analysis which can assess possible interferences between equipment, find the optimal cable routing and mitigate total emission level. It is also possible to measure the electromagnetic emission level on board after construction. This sets a new quality standard for the shipyard and gives recognized evidence to the owner that these levels are below the ones stated by EU regulation 1999/519/CE.

D'Appolonia's EMC team, part of the RINA Group, delivers electromagnetic environment (EME) evaluation services based on its experience over the last twenty years in the field of electromagnetic compatibility in the defence and TLC systems sectors. D'Appolonia, through its strong expertise and advanced instruments, carries out analyses of electromagnetic environments through electromagnetic simulations and validates them through experimental measurements.

It can also provide support in the definition of EMC installation guidelines, cable segregation policy definition, antenna and radar system arrangement and in EMI/EMC troubleshooting during system design and integrated test phases of ship.

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The sea is our profession



Today RINA plays an important role in the yacht industry, offering fast and highly valued services to shipowners and shipyards during construction and while in service. Its special expertise in yachts makes it the global leader in yacht classification and certification.

Come to visit us at MONACO YACHT SHOW 2015 stand number QS72



RINAUTIC

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