THE REPORT

The Magazine of the International Institute of Marine Surveying

DECEMBER 2015
ISSUE 74

NEW PROFESSIONAL QUALIFICATIONS

VALUING SECOND HAND SHIPS

2015 REVIEW

THE APPLICATION OF TECHNOLOGY IN MARINE SURVEYING

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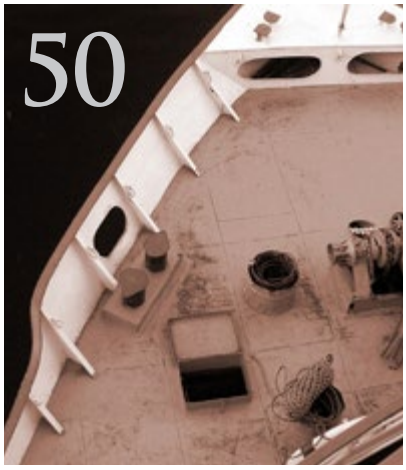

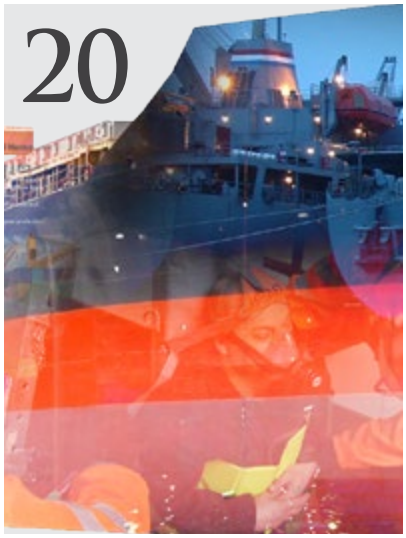

Editor's Letter

Welcome to the December 2015 issue of the Report magazine.

And so with this Editor's letter, it brings the curtain down on what has been a very absorbing, satisfying and rewarding year. Just where the year went is hard to fathom. The International Institute of Marine Surveying has made very significant progress on many fronts. I have tried to encapsulate as much of this roller coaster of a year as I can in my *Review of the Year* - see page 20.

As we prepare to head into 2016 and begin to celebrate the Institute's 25th Anniversary and Silver Jubilee, (a genuinely worthwhile reason for celebration), it is fitting that Capt Allen Brink, who was present at the very first gathering back in 1991, is the subject of *'A day in the life of...'* (see page 60).

Two presentations at the IIMS London Conference in September sparked interest amongst those who were present to hear them. So I have taken the opportunity to invite both speakers to expand their original presentations into more detailed articles. The Hull Vane® system is an interesting innovation, initially developed for superyachts, but now with a much broader appeal and potential use. You can read Bruno Bouckaert's article from page 36. Dr Risto Talas spoke passionately about the use of technology in marine surveying both in the form of drones and utilising a paperless system. He expands his thoughts further in *The Application of Technology in Marine Surveying* (see page 44).

This year has presented many opportunities for members to meet and network all over the world, perhaps more than in any previous year. So, it was fitting that the glittering UAE Branch Conference, held in Dubai, should bring the meeting year to an end. There is a full report including photos on page 17.

How do you go about valuing a second hand ship? The article on page 50 entitled *The valuation of a second hand ship* by P.K. Bhattacharyya will be of great help to you.

The latest IIMS member news and round up of marine industry news completes what I hope you will find to be an excellent issue of the Report magazine.

In keeping with the changes and developments I referred to, there are two articles about the new Professional Qualifications in Yacht & Small Craft and Commercial Ship Marine Surveying awarded by IIMS and the new series of seven recently published self-help handy guides - see pages 24 and 28 respectively.

One of the buzz phrases this year has been surveyor competency. It has cropped up everywhere and often too as a discussion topic. I feel sure that you will be hearing more about this subject in 2016! So, it only remains for me to wish you on behalf of the IIMS head office team and myself all the best for the forthcoming holiday period and a prosperous 2016.

Mike Schwarz
Chief Executive Officer
International Institute of Marine Surveying

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The President's Column

COSTA CONCORDIA: A special anniversary is coming up - or - State of human factor management in the shipping industry

For years our institute has been involved in the human factor management in the maritime industry. We have been pioneers in providing ISM specialist training courses since 2000.

After more than 20 years of human factor implementation in our industry with the only objective to reduce maritime accidents, we can finally start to take stock of the situation. First analysis. In percentage terms the number of accidents has reduced, but surprisingly the COSTA CONCORDIA disaster came in contradiction to these results with dramatic effect. How is it possible a century after the TITANIC and almost 30 Years after the HERALD of FREE ENTERPRISE that such a tragedy can happen?

We have nevertheless tried to apply the SOLAS and STCW conventions in a safety management process with numerous recommandations coming from our industry as the ISM code requires.

Apart from some poor vessels, old or badly managed, which have been in the news, suddenly on the evening of Friday 13th, 2012, a splendid cruise liner full of happy people, has been opened up like a tin of sardines on a well known rock close to the holiday island of GIGLIO off the Italian Mediterranean coastline.

And here is the surprise. The causes of the accident are all down to the human factor ; the quality and behaviour of her Captain and his very bad application and implementation of the ISM and STCW codes! A question for you. The modern decision making process aboard, the human resources training courses (crisis management, human behaviour and crew resource management) all of these proved to be useless ; but why?

Here is a strange fact. ISM training is starting only today to develop globally. The initial error has been to forget to include from the beginning a mandatory training in the code in 1993. In our job it is true we don't like to admit our own errors and finally the ISM training still does not appear clearly as mandatory.

Even in the commercial aviation industry, or in the merchant marine, the human factor management under an international format, has tangible results and remains a fantastic objective. Very often improved by IMO by taking into account the feedback and also the real cost of implementation, the ISM code is one thing you cannot avoid and finally be able to manage all safety/security and marine environment protection from the smallest passenger ship up to these giant 10,000 persons passenger ships including the 20,000 containers box ships

In a world where business is GOD, the loss of ships because of the human factor is not acceptable today.

To reach the acceptable level, the Maritime Authorities in charge of control (FSC and PSC) need to show great determination and this is where the problem lies. There are less and less maritime flag inspectors with less and less practical knowledge ; on the other hand private organisation inspectors are on the increase but do they really have enough experience?

Regarding the salaries they offer it is far from certain.

Amen

Capt Bertrand Apperry *President*
International Institute of Marine Surveying
FMIIMS, AFEXMAR President ISM/ISPS specialist

IIMS Organisation & Structure

Directors of IIMS and Management Board Members

Capt Allen Brink, Regional Director
Capt Bertrand Apperry, President
Capt Chris Kelly, Chairman Professional Assessment Committee
Mr Fraser Noble, Chairman Certifying Authority & Finance
Mr John Heath, Technical Response Team
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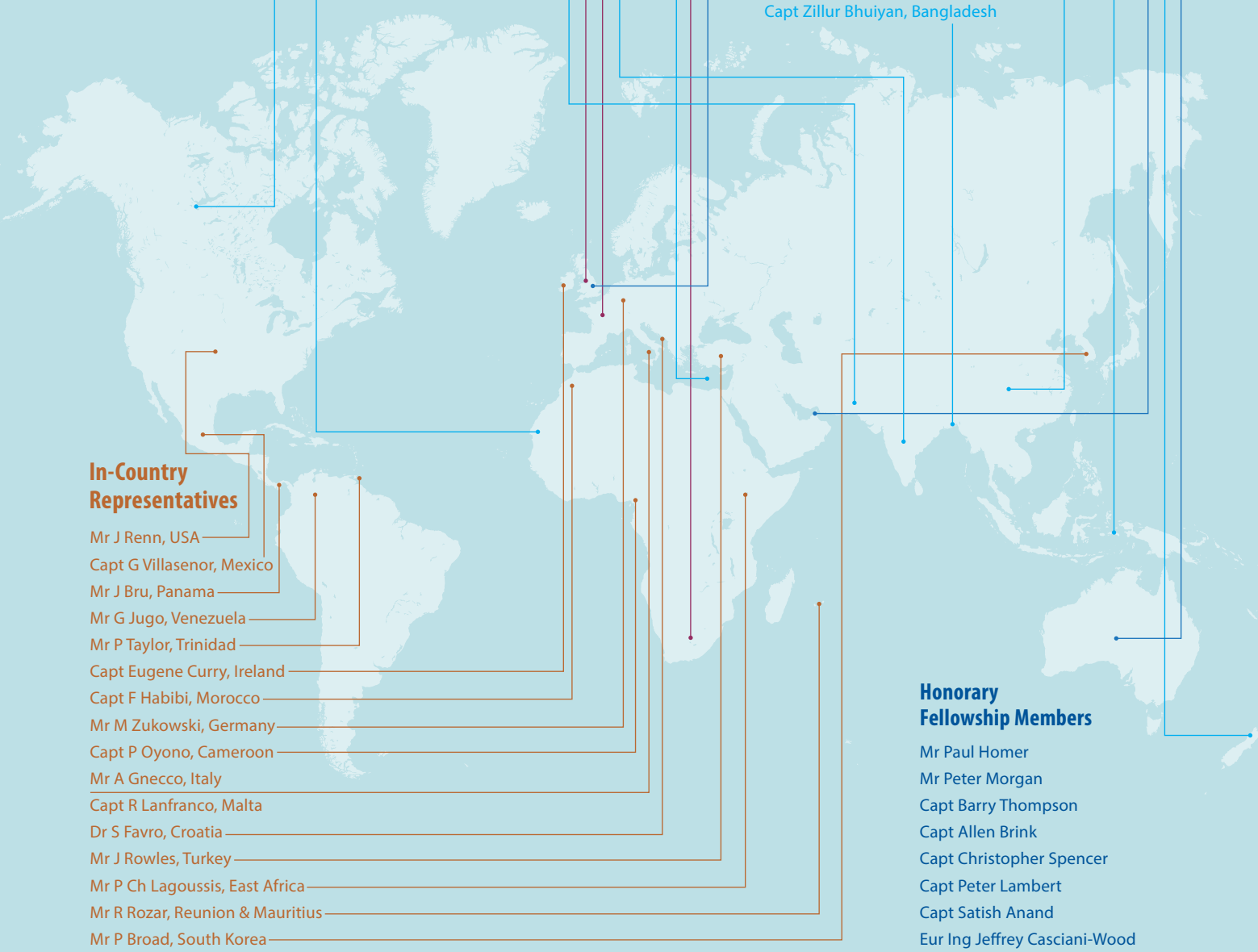

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Marine News

OCEAN SIGNAL RECOGNISED FOR WORLD'S SMALLEST MAN OVERBOARD DEVICE

The innovative rescueME MOB1 made by by British company, Ocean Signal, has been nominated for a prestigious DAME Design Award.

Developed by UK communication and safety at sea specialist Ocean Signal as the world's most advanced Man Overboard locating device, the rescueME MOB1 has been selected by the DAME Awards Jury in the 'lifesaving and safety equipment' category.

The MOB1 incorporates both AIS and DSC technologies within the most compact product on the market at 30% smaller than similar products. The easy-to-use device has been designed to integrate into a life jacket, ensuring the best chance of rapid rescue for an MOB in extreme conditions.

Celebrating its 25th anniversary this year, the DAME Design Award was initiated to recognise the best-designed products at the METSTRADE exhibition and successfully highlights the importance of design for all marine products every year. The DAME Jury considers the expected impact on the marine industry of entries, their suitability for intended purpose, the level of innovation, the cost effectiveness and environmental impact.

The MOB1 is compatible with even the most compact inflatable life-jackets. The MOB1 is intended to be installed within the life-jacket and will activate automatically on inflation, sending the fi rst alert within 15 seconds. The integrated strobe light ensures maximum visibility in low light conditions.

The MOB1 communicates with the vessel you have been separated from and other vessels in the vicinity (up to 5 miles range dependent on conditions). To alert rescue authorities, an alternative product the rescueME PLB1 communicates directly via a dedicated search and rescue satellite network.

In an emergency rescueME MOB1 provides 2 methods of rapidly communicating your position, accurate to a few metres, back to the vessel, plus providing visual indication via its built in strobe light.

Ocean Signal has been recognised for world's smallest man overboard device

Bunkering ship concept accepted by Bureau Veritas

BUNKERING SHIP CONCEPT ACCEPTED BY BUREAU VERITAS

GTT, the world leader in the design of membrane containment systems for the maritime transportation and storage of LNG (Liquefied Natural Gas), announces that it has received a second Approval in Principle (AIP) for its 4,000 m3 Bunkering Ship concept, using Mark III Flex Cargo Containment system and operating with a vapour pressure of up to 2 barg. Following one delivered by Lloyd's Register, this new AIP was received from the classification society, Bureau Veritas, after several months of a joint research and innovation program.

As a reminder, increasing the upper limit on the pressure up to 2 barg gives more operational flexibility. It allows a more flexible Boil Off Gas (BOG) management during loading and bunkering operations. Thanks to the pressurized membrane tank, the duration of bunkering operations are also optimized by increasing loading flow rates. Lastly, during voyage and stand-by mode, the time before gas pressure reaches the upper limit is longer. This improves the holding time when there is no BOG consumption and reduces the use of any possible reliquefaction plant, thereby diminishing costs. GTT is now working on studies based on NO 96 technology and also for applications on LNG Fuelled Vessels.

Philippe Berterottière, Chairman and CEO of GTT commented: *"Obtaining a second AIP for this 2 barg application is a great success. GTT is in a constant search for novelty in order to help its clients in maximizing their operational flexibility. This new development in the application of our membrane containment systems is an important milestone for the LNG as marine fuel market and we look forward seeing the concept come into practice".*

GREEN SHIPPING PROJECT SET TO BE LAUNCHED IN NORWAY

The shipping industry is in a state of transition as it adjusts to increasingly strict emissions standards set forth by regulators. The European Parliament recently stated its aim to reduce emissions by more than 40 percent by 2030. The International Transportation Forum has also proposed reducing emissions by more than 50 percent by 2080, as well as taxes on those who exceed regulations.

And with the U.N. Climate Change Conference on the horizon, it is possible that emissions regulations will only get more stringent. Government officials

and industry leaders are scrambling to innovate to stay ahead of new rules. In a joint program with the Norwegian government, Oslo-based DNV GL recently launched the Green Coastal Shipping Programme which aims to create the most environmentally-friendly vessels in the world.

The program is comprised of five pilot projects which chiefly use LNG and batteries as energy sources.

"We envision a fleet of offshore vessels, tankers, cargo, container, bulk and passenger ships, ferries, fishing and aquaculture vessels, tugs and other coastal vessels, run entirely or partly using batteries, LNG or other green fuels," said DNV GL's Narve Mjøs, who is the program director for the Green Coastal Shipping Programme.

The first project is a cargoferry plug-in hybrid which targets the development of cost-effective and profitable short-sea box ships that are powered by a hybrid LNG and battery propulsion system.

The second project is a green shuttle tanker project which utilizes batteries. The third project is a hybrid farming vessel project aimed at optimizing a hybrid propulsion system for more efficient energy operations.

The fourth project converts a cargo ship into a hybrid battery and LNG carrier. Converting existing vessels into LNG carriers has been seen as cost-effective to many small operators. The final project involves developing a low-energy consumption green port with a minimal carbon footprint. Some of the technologies being employed to achieve this include electric heavy-duty vehicles and cranes. The green port will also be equipped with smart gates, offer cold ironing services and charging stations for plug-in hybrid ships. While the project appears promising, it is unclear if and when such infrastructure will be commonplace worldwide. However, Norway's leaders appear to believe that the shipping industry is in position to blaze the trail towards an environmentally-friendly future.

"The shipping industry is very well equipped to lead the way in the green shift. This can contribute to exports of good, future-oriented and environmentally friendly solutions," said Monica Mæland, the Minister of Trade and Industry.

Norwegian Government and DNVGL join to launch a new green shipping project

Ultrasonic Antifouling has launched the UltraSystem PowerPlus

ULTRASYSTEM POWERPLUS LAUNCHED BY ULTRASONIC ANTIFOULING

Ultrasonic Antifouling Limited, market leaders and pioneers of the original hull and sea chest clearing technology, has launched the UltraSystem PowerPlus. The PowerPlus – which is the latest development in the company's 'Ultra' Series – is the result of 3 years of research, development and comprehensive testing and is twice as powerful as the Series II which has been the company's flagship product for the past 5 years. The new product has been specifically designed with larger yachts and superyachts in mind.

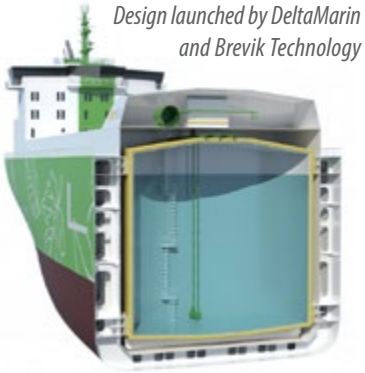
The PowerPlus combines ultrasonic antifouling's intelligent and unique software with their advanced digital control program (ADCP) to deliver a higher concentration of ultrasound. This prevents bio-fouling on hulls and sea chests, increasing performance whilst at the same time monitoring temperature, voltage and output loads. PowerPlus uses a wide range of key frequencies between 20 and 140 KHz, which is unique to the UltraSystem, and utilises high quality 50w multi-frequency mounted piezoelectric crystal transducers.

Ultrasonic's Managing Director Nick Griffin says; *"We're delighted to be using the 2015 SBS to launch the UltraSystem PowerPlus, a revolution in the field of ultrasonic antifouling. The product represents a significant advancement in this technology and takes ultrasonic antifouling to whole new level as it can deliver output to 3 and 4 transducers simultaneously, something no other product in this field can do".*

"The PowerPlus is generating a massive amount of interest and we're excited to reveal that it has been selected by the country's largest luxury boat builder to protect the sea chest of its flagship yacht."

Since Ultrasonic first introduced Ultrasonic Antifouling Technology to the boating market in 2007, it has developed into THE most effective way to maintain hull performance, save fuel and increase the time yachts can spend in the water.

The use of ultrasound is an innovative and advanced method for protecting your hull and sea chest system from fouling using low power, high frequency sound waves to destroy algae and prevent weed and barnacle growth. It works by emitting a unique range of specific and scientifically researched, low powered, pulsed ultrasonic frequencies via transducers that are installed on the inside of the hull or onto the sea chest pipes, filters and manifolds.



Design launched by DeltaMarin and Brevik Technology

REVOLUTIONARY NEW MULTIGAS CARRIER DESIGN LAUNCHED

Deltamarin Ltd and Brevik Technology AS, a VARD affiliate, have joined forces by developing a novel multigas carrier design, which is expected to change the nature of the gas carrying industry. The concept combines in unprecedented way the successful design of Deltamarin's B.Delta and the new-generation patented cylindrical gas tanks by Brevik Technology.

By combining the readily available and proven B.Delta design and separate cylindrical gas containment tanks, a cost-efficient and easy-to-build solution is now available to the gas carrier market. The design can be utilised for LNG, LPG, LEG and ethane carriers.

"Up to now gas carriers have been complex and expensive to design and construct. This is not the case anymore as Brevik Technology has developed cylindrical steel tanks, which are separate from the vessel hull", explains Brevik Technology's Managing Director Øystein Kristoffersen Sæther. Based on Brevik Technology's extensive research and development a unique independent gas carrying method has been created to challenge the traditional and expensive way of building the vessel and the tanks as one entity. The patented containment design has already been approved by classification societies.

The cylindrical tank design allows the tanks to expand in all directions without putting stress on the vessel hull. The independent containment system, which can be built into a vessel as is, results in better possibilities to utilise the existing well-proven ship design. *"This is where the ship owner can get significant benefits by choosing a readily available and highly efficient B.Delta hull design already proven in operation"*, says Deltamarin's Managing Director Mika Laurilehto. The design based on the B.Delta is actually a bulk carrier design equipped with cylindrical tanks for the gas cargo. *"As a bulk carrier, the vessel is easier and cheaper to build compared to a traditional gas carrier, and there may be many new potential yards capable of constructing such a vessel"*, continues Laurilehto.

A highly competitive economical and easy-to-build product is now available for the market for smaller-scale gas carriers of 31,000 m3. In future, it is planned that medium- and larger-scale vessels will also be provided with a similar design. Along with newbuilds, the design will also be available for retrofit vessels such as the conversion of a bulk carrier to gas carrier. *"Gas transportation needs are constantly growing along with increasing gas utilisation. We are very proud to boost industry development by offering ship owners a cost-efficient solution and making the construction of gas carriers easier"*, say Sæther and Laurilehto.

SINGAPORE SEEKS TO ATTRACT 1,200 NEW MARITIME EMPLOYEES

Fresh measures to attract and help Singaporeans deepen skills and advance their careers in seafaring and shore-based sectors will soon be rolled out. These include bringing various SkillsFuture programmes to the maritime sector and introducing new measures to support Singaporeans' careers in seafaring. In addition, a new national-level initiative – the Maritime Singapore Connect (MSC) – will give Singaporeans easier access to maritime job openings, and information on maritime education and training options.

Mr Teo Chee Hean, Deputy Prime Minister, Coordinating Minister for National Security and Minister for Home Affairs, announced these initiatives at the Singapore Shipping Association's (SSA) 30th anniversary gala dinner today.

These initiatives were drawn up by the Sectoral Tripartite Committee for Transport (Sea) led by the Maritime and Port Authority of Singapore (MPA). Comprising two taskforces, the committee aims to address current gaps and recommend new initiatives to strengthen manpower development efforts for both seafaring and shore-based sectors. In the next five years, they hope to attract more than 1,200 Singaporeans to join the maritime sector as seafarers and port operations officers. Funding for these initiatives will be drawn from the Maritime Cluster Fund and the national SkillsFuture budget.

In drawing up the initiatives, the committee focuses on three main areas; namely profiling and promoting maritime careers highlighting the multiple entry points and good career progression pathways; growing a pool of maritime talents through structured training programmes; and encouraging skills deepening and mastery. Initial measures that will be rolled out are aimed at encouraging more Singaporeans to take up key positions in seafaring and in the port operations sector. Measures targeting other maritime sub-sectors, such as shipowning/ operating, shipbroking, shipmanagement and ship agency, will be rolled out when ready.

Mr Andrew Tan, Chief Executive of MPA, said, *"The maritime industry offers many exciting and rewarding opportunities to Singaporeans looking for challenge in their careers. The maritime sector is global in nature and in need of good talent. MPA is committed to working closely with our industry stakeholders, associations, unions and other government agencies to attract more Singaporeans into both the seafaring and shore-based sectors. This local core will support the growth of Singapore not only as a premier global hub port, but also a leading international maritime centre that offers a wide range of maritime services including chartering, broking, ship management, finance, legal and insurance."*

The Sunseeker 155, one of the craft helping to rev up the British superyacht sector

RESEARCH SHOWS RISING REVENUES AND JOBS GROWTH IN THE BRITISH SUPERYACHT SECTOR

New industry statistics released by industry trade body Superyacht UK, show that the British superyacht sector is riding the wave of economic recovery. The research, for the year 2014/15, is launched as global visitors travel to watch British companies showcase their best at this year's Monaco Yacht Show.

The key findings include: Industry revenue has grown by +10.2% year-on-year, to £542 million 48% of those surveyed reported an increase in profits. The sector now contributes £304 million in GVA to UK GDP An increase in demand has also led to an increase in work load, full time jobs and more valuable order books:

The industry now employs 4,000 full time employees (+6.9% year on year) 62% of those surveyed reported a higher workload 60% have experience a high value of the order book. Whilst 2014's report showed that new builds accounted for the majority of revenue, this year it is refits that are accounting for more: 48% of superyacht business occurred in new builds, and 52% in refit over the last 12 months.

The survey shows the most positive outlook for the industry for 8 years, with 74% of the industry feeling positive about the next 12 months. This compares with 69% in last year's survey.

Mike Carr, Chairman of Superyacht UK and Joint MD of Pendennis Shipyard, said: *"It's been another great twelve months for the superyacht sector as domestic and international demand for UK products continues to grow. We are delighted to see the sector employing hundreds more people and that our members are making a noticeable contribution to the UK economy. The success is testament to our long standing heritage in the British superyacht sector combined with the breadth of areas in which the UK has continued to excel."*

BUREAU VERITAS CLASSES FIRST ETHANE POWERED SHIPS

JS Ineos Insight is the first of a series of eight 27,500m3 ethane powered ships and multi-gas Dragon-class vessels being built at Sinopacific, China, for Denmark's Evergas. The vessel is configured for transport of ethane, LPG or LNG. It has options for ethane, LNG and conventional diesel power.

"The ability to burn ethane as well as LNG to power these vessels is a major step forward in the use of clean fuels. It means the vessels can use cargo gas during transits to provide a clean and clear commercial and environmental advantage. We have worked with Evergas and the Danish Maritime Authority to verify and ensure that the use of ethane is at least as safe as required by the IGC and will not impair the engine compliance with MARPOL Annex VI," said Martial Claudepierre, business development manager at Bureau Veritas

The Dragon vessels were originally designed with a dual-fuel LNG/diesel power utilising two 1,000m3 LNG tanks on deck powering two Wärtsilä 6L20 DF main engines with a total of 2,112 kW power and two shaft generators with total 3,600 kW power. The ability to also burn ethane was added to allow use of the cargo gas as the vessels are destined initially for transport of ethane from the US to the UK Ineos refineries.

Claudepierre said, *"Using ethane required extra engine room ventilation and additional gas detection, plus modifications to the main engines including a lower compression ratio, different turbocharger nozzles and de-rating of the engine to cope with the lower knocking resistance of ethane. But the gains in not carrying an additional fuel and in environmental performance from being able to burn clean fuel throughout the voyage are significant."*

IMO WARNS ON BAUXITE LIQUEFACTION DANGERS

The International Maritime Organization (IMO) has taken action to warn ship Masters of the possible dangers of liquefaction associated with carriage of bauxite, following consideration of findings from the investigation into the loss of the 10-year-old

Bureau Veritas classes first ethane powered ships

The Bulk Jupiter which sank carrying a caro of bauxite with the loss of 18 lives

Bahamas flag bulk carrier Bulk Jupiter, which was carrying 46,400 tonnes of bauxite when it sank rapidly with 18 fatalities in January 2015.

A circular approved by IMO's Sub-Committee on Carriage of Containers and Cargoes (CCC), meeting this week at IMO Headquarters, warns ship Masters not to accept bauxite for carriage unless:

- the moisture limit for the specific cargo is certified as less than the indicative moisture limit of 10% and the particle size distribution as is detailed in the individual schedule for bauxite in the IMSBC Code; or
- the cargo is declared as Group A (cargoes that may liquefy) and the shipper declares the transportable moisture limit (TML) and moisture content; or
- the cargo has been assessed as not presenting Group A properties.

The circular notes that while bauxite is currently classified as a Group C cargo (cargoes that do not liquefy or possess a chemical hazard) under the International Maritime Solid Bulk Cargoes (IMSBC) Code, there is a need to raise awareness of the possible dangers of liquefaction associated with bauxite. If a Group A cargo (cargo which may liquefy) is shipped with moisture content in excess of its transportable moisture limit (TML), there is a risk of cargo shift, which may result in capsizing.

The mandatory IMSBC Code requires Group A cargoes to be tested, before loading, to determine their TML and their actual moisture content. The testing should confirm the cargo is below the maximum moisture content considered safe for carriage.

The Sub-Committee was informed of the marine safety investigation into the loss of the Bulk Jupiter, which has uncovered evidence to suggest liquefaction of cargo led to loss of stability. Ongoing research to evaluate the properties of bauxite is being carried out by Australia and Brazil, while an ongoing research project in China suggests that bauxite has various behaviours, based on the parent rock and how the materials weather.

The Sub-Committee also established a correspondence group to evaluate the properties of bauxite and coal (some types of coal may liquefy) and consider any necessary amendments to the IMSBC Code.

Liquefaction occurs when a cargo (which may not appear visibly wet) has a level of moisture in between particles. During a voyage, the ship movement may cause the cargo to liquefy and become viscous and fluid, which can lead to cargo flowing with the roll of the ship and potentially causing a dangerous list and sudden capsize of the vessel. Special consideration and precautions should be taken when loading a cargo which may liquefy.

VOLVO PENTA HAS UNVEILED ITS NEW FORWARD DRIVE (FWD) DUOPROP CONCEPT

Ten years ago, Volvo Penta revolutionised leisure boating with its Volvo Penta IPS forward facing propulsion system. Now the company is opening up a new realm for recreational water sports with the new Volvo Penta FWD. The system's patented design — forward facing dual counter rotating props and adjustable trim drive — pulls the boat through the water rather than pushing, with an undisturbed water flow to the propellers.

The clean and efficient FWD propulsion system delivers superior responsiveness, acceleration, fuel economy and versatility, and is ideal for water sports that take place behind the boat, including wakeboarding and wakesurfing — a sport rapidly gaining in popularity in North America. Similar to wakeboarding but without the use of a rope and handle, wakesurfing provides a surfer with a perpetual wave in the wake of a boat for a much longer ride than in traditional surfing.

With the FWD, drivers are able to customise the wake for different watersport ability levels and feel the difference in tighter high-speed turns, as well as more responsive slow-speed maneuvering and docking. Additionally, the forward facing Duoprop, with counter rotating propellers, offers a unique and industry first symmetrical wakeboarding wake and equally shaped wave on your side of choice.

"'Les sports de glisse,' while not central to the French or even the European boating experience, are certainly of high importance and growing quickly, especially for younger generations — who are Volvo Penta's future customers," says Pascal Jamet, Volvo Penta's vice president of marine engines for Region Europe. *"As these sports are gaining in popularity, the FWD is arriving at just the right time, conducive to the needs of water sports enthusiasts, while delivering excellent power and efficiency."*

But since its release in February 2015, the FWD has also proved appealing to a wide variety of customers — not just

The new Duoprop concept has been unveiled by Volvo Penta

fans of water sports — for its versatility. *"The FWD is far from being a single purpose system,"* says Ron Huibers, president of Volvo Penta of the Americas. *"Customers have been calling their dealers to say how fun and responsive their boats are with FWD installed — in addition to raving about the low emissions and quieter ride."*

Volvo Penta says FWD reduces noise and vibration, and virtually eliminates exhaust fumes on deck since engine exhaust is expelled underwater beneath the boat. The adjustable tilt makes it easy to trim the boat for optimum flexibility, fuel efficiency and comfort when cruising. When at rest with the drive trimmed down, the forward facing propellers are inboard of the boat, making activities like fishing and swimming more practical astern of the boat.

The proven Volvo Penta Duoprop system promotes better efficiency, with two propellers eliminating side forces, improving handling and reducing cavitation. Tested and developed with several key boat builder partners, the Volvo Penta FWD provides higher speeds and better performance with a smaller, lighter engine. High speed turns are tighter, and slow-speed maneuvering and docking are more effective than with a traditional inboard motor.

Dealers and boat owners will benefit from the commonality of parts across the full range of engines and drives. Most importantly, the builder, dealer and customer have the peace of mind that comes with a fully integrated helm-to-prop solution designed, built and supported by a single manufacturer. The new Volvo Penta FWD is also covered by Volvo Penta's industry-leading warranty with five years of factory protection.

Members' News

THE WORLD MARITIME DAY 2015

The World Maritime Day 2015 Seminar and Celebration was held on 30th September 2015 at the Pearl Continental Hotel in Karachi about 200 delegates attended Chief Guest was Mr. Abdul Malik Ghauri, the Director General of Ports and Shipping Pakistan.

The Seminar welcomed delegates from various parts of the world, among whom were Captain Robert McCabe (FNI) President of the Nautical Institute. London, U.K. and Professor Dato' Abd Radzak Malek (FCILT) from Malaysia, International Vice President of CILT.

The Seminar and Celebrations ended with a lavish dinner hosted at the Pearl Continental which was attended by many high dignitaries among which were Chairmen of Karachi Port Trust Vice Admiral Shafqat Javed and Commandant Pakistan Marine Academy Commodore Akbar Naqi.

BELOW: Capt. Syed Khalid Humail, Chairman IIMS Pakistan Branch with Captain Robert McCabe (FNI) President, Nautical Institute and others speakers

BELOW: From right to left 2nd Ms. Nasreen Haq (Ex. Chairperson KPT), 3rd Professor Dato' Abd Radzak Malek (FCILT) from Malaysia, International Vice President of CILT, 4th Captain Robert McCabe (FNI) President, Nautical Institute. London, U.K, 5th Mr. Abdul Malik Ghauri, Director General, Ports and Shipping Pakistan, 6th Capt. Samadani (Ex. Director General Port & Shipping), 7th Capt. Ajmal Mahmoodi (Hon. Secretary Nautical Institute), 9th Commodore Akbar Naqi, Commandant Pakistan Marine Academy, 10th Capt. Syed Khalid Humail, Chairman IIMS Pakistan Branch

IIMS REACHES OUT TO NIGERIAN SURVEYORS

IIMS Chief Executive, Mike Schwarz, accepted an invitation that had been given to him by IIMS Nigerian members at the London Conference in September to present the inaugural Annual Public Lecture in Lagos. The lecture, given on behalf of the Centre for Marine Surveyors Nigeria, took place on Friday 27 November at the Lagos Chamber of Commerce & Industry.

The Centre for Marine Surveyors Nigeria was borne out of the need to sanitise the profession and to provide a platform for self regulation about those who are practising surveyors. In 2011, a group of interested parties in the marine surveying business came together to form the Centre. The mission of the Centre is 'Commitment to enhancing knowledge while providing and expanding opportunities for growth and also regulation of professional marine surveying standards and practices'.

In his address to a large audience that filled the Chamber to capacity, which comprised two parts, Mike spoke about the opportunities that membership of IIMS brings to surveyors worldwide. He then moved on to speak passionately about why standards and accreditation are becoming increasingly important in an ever changing maritime world. He considered how best the industry might look to attract the next generation of younger surveyors, as well as ensuring that those already engaged in the profession continue to enhance and improve their skills.

1. IIMS member, Monday Ogadina, makes a point

2. A delegate registers at the conference desk

3. Prince Bambo in conversation with Mike Schwarz

4. Prince Bambo thanks chairman, Admiral Okanlawon Oni

CONTINUING PROFESSIONAL DEVELOPMENT

It is now readily accepted that all professionals in whatever field of expertise commit themselves to a Continuing Professional Development (CPD) programme. It is realised in today's world that people are considered to be more competent through extending their knowledge by following a programme of development, learning and updating.

How the IIMS CPD system works

Members will be required to achieve a minimum of twenty four points accrued over a fixed three year period. For example January 2014 to December 2016. This means that every three years the system will be reset back to zero.

The programme will be managed through the Head Office Administration team and all questions can be answered by contacting them by email.

Members will be sent a record sheet and guide on accruable points with their subscription form. Or use the link at the bottom of the page to view the CPD points table.

NB. There will be members who are semi retired, or retired, who wish to maintain their membership but who are unable to accrue adequate points. Dispensation will be awarded on submission of a written application. Each application will be reviewed by the Director of the Professional Assessment Committee and considered on individual merit.

CPD recording process

YEAR 1
Members will complete the record sheet during the year and submit the completed document at the end of the first year. HQ will log the accrued points. Members recording a nil points, or who do not return their results will receive a reminder from HQ that they must participate.

YEAR 2
Members submit their record sheet at the end of year. The points are then tallied and it is expected that a minimum of 16 points should have been accrued by this stage. Those members scoring less than twelve points will be sent a reminder letter alerting them to the shortfall and reminding them that they must do more to ensure compliance with the programme.

YEAR 3
Members who have not attained the required twenty four points will be sent an advisory letter that they must do more to ensure continual development during year three. Failure to require the necessary CPD points could put your membership of the Institute at risk.

CPD is the responsibility of the Director of the PAC committee and the Director's decision on all matters concerning CPD is final.

BRING YOUR CPD POINTS UP TO DATE NOW

IIMS members are reminded that 31 December 2015 marks the end of the current three year CPD cycle. If you have yet to bring your points up to date, it is vitally important that you do so at your earliest convenience. If you have any queries about your CPD record, or the points you are permitted to claim, please email Jan Cox on membership@iims.org.uk

Activity	1	2	3	4	5	Comments
Work shadowing (signed off by a member)	✔					1 point per day (maximum 10 per year)
Presenting a paper at a Members Meeting or Training day	✔					1 point per paper
Subscription to a marine publication, journal or magazine	✔					Maximum permitted 5 per year
Marking of Assessor Marked Assignments	✔					Points awarded for each Unit authored each year
Visiting a technical exhibition, boat show or other maritime related show	✔					Each show visit
Purchase of an IIMS handy guide		✔				1 point per handy guide purchased
Purchase of a single education unit from the IIMS education programme		✔				1 point per single unit purchased
Researching a technical subject - computer, literature search, or seeking advice on technical helplines		✔				Verification and/or endorsement will be required
Submission of a survey report		✔				Maximum 2 per year
Preparation of a Assessor Marked Assignment		✔				Points awarded for each Unit authored each year
Appointment as a Director of a Marine Institute or other Professional Organisation and attendance at Board meetings		✔				Per meeting (actual attendance)

IIMS CPD Points Table from 1 January 2016

Activity	1	2	3	4	5	Comments
Attendance at a non-IIMS seminar or training session			✔			
Participation in any Institute Professional Qualification			✔			3 points for each Unit passed
Preparation of technical reports for insurers, litigation or arbitration purposes				✔		Maximum 3 per year
Participation as an expert witness (court or arbitration appearance)					✔	
Attendance at an IIMS organised or recognized seminar or training session					✔	
Publication of an article in a marine related Journal or newsletter (including The Report)					✔	Per article published not per magazine published
Authorship of a Unit for IIMS Professional Qualification programme					✔	
Award of a recognised qualification					✔	Details and dates of award will be required
Attendance at the IIMS AGM					✔	
Ad Hoc CPD for items not in the above table. Submission to be reviewed and approved by PAC					✔	Details to be submitted by candidate

Interview with the first IMCA CMID Accredited Vessel Inspector under the IIMS scheme

At the IMCA Seminar in Abu Dhabi held in the fantastic surroundings of the Jumeirah at Etihad Tower Hotel, Chris Baldwin (IMCA Technical Adviser) was very pleased to see Mr Peter Solvang of DP & Marine Assurance and took the opportunity to ask him about the whole process of being accredited as one of the very first Vessel Inspectors under the recently launched International Institute of Marine Surveying (IIMS) CMID AVI scheme.

Chris (CB) started by asking what Peter's (PS) background was in the marine industry and found out that he had started out in the Royal Fleet Auxiliary (RFA), where he received his initial further career training up to 2nd Mate. The RFA as it is better known is the government owned supply and support arm of the British Royal Navy, manned entirely by Merchant Marine officers and crew. From there he went to one of the first dynamic positioning (DP) fitted four point mooring Diving Support Vessels (DSV), the Kommandor Therese. In fact he eventually became Master of this DSV at a young age and in Peter's own words he was too young. He was quite happy therefore to go back to sea as a 2nd Mate again in what he describes as a 'proper DP' vessel and remained in DP throughout his career at sea again reaching the position as Master. He came ashore when his last ship was sold and became involved in the marine vessel inspection world. Since 2006 he has completed well over 100 CMID reports. CB then asked him some more questions about his views and experience of the scheme.

CB "Peter why did you decide to enrol in the Scheme in the first place, you were already well established as an inspector with your own company and a nice client portfolio?"

PS "I had been doing CMIDs for years and we had developed our own reporting template to provide some quality assurance but I heard about the scheme on the IMCA website and I was curious as to how it was going to work. So as I was looking on the website it was an easy step to follow up with an application."

CB "So what do you feel are the advantages of being in the scheme?"

PS "It definitely adds credibility to both myself as the inspector but also the company. I'm afraid to say that there are some cowboys out there, like in every industry, and this scheme was needed. I take a lot of pride in what I do and to be honest the reputation of everyone who does a good job as a CMID inspector can be absolutely wrecked by those few people who don't have the ability or knowledge to produce good reports. There is no policing out there and I've heard from some vessel operators that guys will tell them to just take a few photographs of the ship and send these to the supposed inspector who will provide them with a report based on just these photos."


Peter Solvang of DP & Marine Assurance

CB "What do you see as the main value of the CMID report process?"

PS "Well the main value is without doubt one of safety. I can't tell you how many times I have been onboard a ship and pointed out something that was just being completely missed by the crew. I guess it's that fresh set of eyes, that you can spot things that people have just become immune to through familiarity."

CB "What would you wish to see changed in how the CMID process works?"

PS "Oh, it's got to be the speed of report delivery. I would really wish to see this being made much quicker."

CB "Do you know that the new CMID Version 9 has an automatic report production function built into it now, so that reports are automatically live after 30 days of being uploaded. The Vessel Operator can still add comments after this time and they receive email alerts at 21 days about it."

PS "Actually no I didn't know that but it sounds exactly what I was hoping for."

CB "Following on from my last question what do you think should be the next stage for CMID?"

PS "I would love to see it being integrated with the OVID [offshore vessel inspection database] this would be the logical step forward and would help everyone in my view."

CB "Ok, can I ask you how you found the accreditation process for the scheme?"

'Peter gives a wry smile'

PS "To be honest it was all pretty straight forward but my only criticism or rather comment would be the number of reports that you have to send in to get the endorsements for the vessel types. This does seem a bit excessive but I can understand that the IIMS needs to get proper evidence of competence and experience in the particular vessel types. My ID card took a bit of time to arrive as well but I do have everything now and in fact I have already made use of it and it is something that my customers have been very interested in."

CB "How did you feel about the way the scheme is being run?"

PS "As I said I have made a point of using the fact I am in it in our company PR material, so I am really pleased to be one of the first AVIs. It will be good to get enough AVIs in body to make it an industry standard and so that clients will only use an accredited inspector and if it forces the cowboys out then great. It is really good that IMCA is recognising the scheme and I am looking forward to the CMID workshops when they start running again."

CB "Well we are intending to get a CMID workshop programme to start in March 2016 out soon and IIMS will also be running CPD [continuous personal development] activities as well which we will make sure we co-ordinate to maximise opportunities and make best use of time and resources. Peter thanks very much for giving us your time and views as the very first AVI."

For more information about the CMID AVI scheme run for IIMS by subsidiary company, the Marine Surveying Academy, see **www.cmidvesselinspectors.com**

IIMS Dubai Conference
24th and 25th November 2015

1.

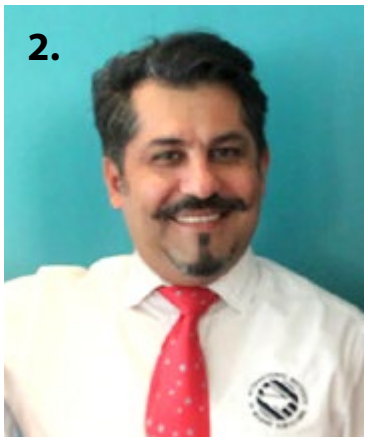
Held at the stunning Jumeriah Beach Hotel, the two day conference was a great success and very much enjoyed by those who attended and listened to some thought provoking presentations. A flavour of the Conference is shown in the coming pages through pictures.

1. A novel use of the IIMS logo to welcome delegates to the Conference

2. IIMA UAE Branch Regional Director, Capt Zarir Irani

3. Ms Bharati Bhangariand Capt Peter Valles (Treasurer and Vice Chairman) UAE Branch

4. A group photo of Conference delegates


2.


3.

4.

5. *IIMS Regional Director, Milind Tambe*

6. *Sheridan Steiger from Stephenson Harwood*

7. *Patrick Murphy, Clyde & Co*

8. *Capt Nick Sloane, who presented 'Parbuckling the Costa Concordia'*

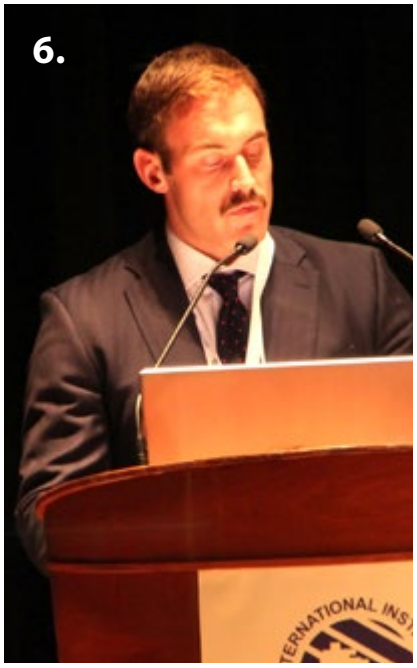
9. *Shridath, winner of the Most Courteous Surveyor Award*

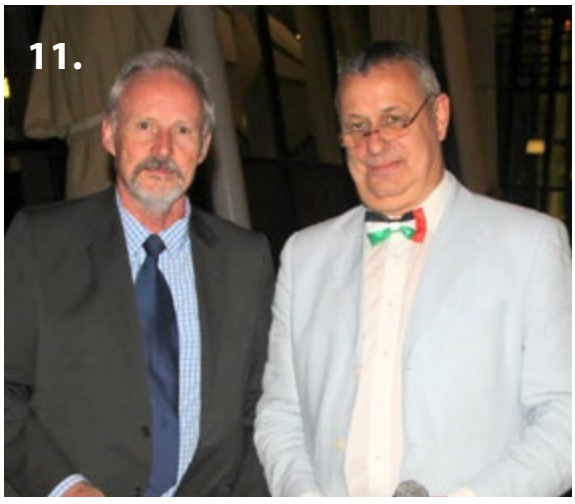
10. *Tammy Potter, winner of the Lady Surveyor of the Year Award*

11. *Pat Cannie picks up the Lifetime Achievement Award on behalf of Graham Ellis*

12. *Bridget Hogan (NI), Capt & Mrs John Noble and Capt Allen Brink*

13. *Simon Stonehouse from Asia Capital Reinsurance*





14. *Capt Andreas K. Efthimiades, DGS Marine*
15. *Capt Nigel Moniz, DGS Marine Group*
16. *Uday Moorthi, Branch Chairman and Capt Peter Valles, Vice Chairman*
17. *Ton Vos, HMC BV, is presented with a gift*
18. *IIMS Past President, Capt Satish Anand*
19. *Capt Zarir Irani makes a point to Ton Vos*
20. *Students who met for the training course following the Conference*

2015: A YEAR OF GROWTH AND DEVELOPMENT

Mike Schwarz, IIMS Chief Executive Officer, gives a frank and honest review of 2015, including assessing the challenges and opportunities that have faced the Institute during what has been an eventful year.

If 2014 proved to be the year of consolidation and business turnaround for the IIMS, which indeed it was, so 2015 has been the year in which significant progress and growth has been made in a number of areas. So without dwelling on the more distant past, let me focus on the last 12 months specifically.

In my opinion, there comes a time in every organisation's life when it has a real opportunity to change, evolve and grow exponentially, making its mark on its industry sector in the process. I believe that time is approaching for IIMS. I say this partly because as we are soon to enter 2016, we start a year of celebrations as we revel in our Silver Jubilee, proof that as an organisation we have stood the test of time. The next twelve months provides us with a great opportunity and solid platform from which to drive our organisation forward for the next 25 years and beyond. And of course we will shout to the world about our Silver Jubilee.

Remaining relevant to members in far flung parts of the globe is, for me, one of the biggest challenges for the Institute and is our 'raison d'etre'. Of course marine surveyors are bonded together by a common purpose and aim, no matter where in the world they operate; but standards vary across the world, as do regulations, local customs and practices too. So the challenge remains to transcend national boundaries and to ensure IIMS is as relevant and important to members in the UK as it is in Australia, Singapore, Mexico, Germany, Nigeria and even Vanuatu and Reunion – yes Vanuatu and Reunion! So, how should we do that?

My answer is:

- To ensure that we stay true to our roots as a membership organisation that appeals equally to yacht and small craft as it does to commercial ship marine surveyors
- Stay focused on what we do best
- Develop new and appropriate services for members
- Make sure we remain the leading body for marine surveyors in the world
- Share industry best practice
- Develop and improve surveyor standards through CPD, education and training
- Share industry news and knowledge
- Become recognised by our peers in the marine industry as being the best at what we do.

The last year has seen us make steps in the right direction to achieve these goals.

MEMBERSHIP

Let me start my review by looking at the strength of our membership. We have continued to grow strongly during 2015 with new applications coming from all parts of the world, although the Far East and parts of West Africa have been particularly noticeable. At the time of writing, IIMS now has more full members than at any other time in its history. Long may that continue.

Our work through the Marine Surveying Academy has exposed us to new market sectors, including the superyacht coatings and offshore sectors. Already we have seen new applications for Technician membership (and expect more) from those who are actively engaged in inspecting and surveying coatings as well as from those conducting CMID audits. All very encouraging.

MEMBERSHIP COMMUNICATIONS STRATEGY AND SOCIAL MEDIA

We have worked tirelessly at head office to develop a more coherent and comprehensive mechanism for communicating effectively with members, also enabling us to cascade news and information fast and efficiently.

The concise electronic news bulletin issued at the start of each month from head office is well received and appreciated by those who open and read it. Yet still about 50% of members choose not to open it. Although the open rate is very high, this is something to be worked on.

The quarterly Report Magazine for members has developed well and goes from strength to strength. In 2015, we have published some thought provoking articles that have been commented on. More and more we start to commission articles and this is reflected in what I believe to be an enhanced publication.

Our social media presence has grown strongly in the past 12 months. Why does this matter? It matters simply because members choose to take their information in a number of different ways and as an organisation we need to be active and accessible on the main channels. Our LinkedIn group is popular and used often by 300 or so members. Our number of followers on Twitter has grown rapidly this year and is now well beyond 600. The IIMS YourTube channel now hosts in the region of 60 videos and more will be added following the recent UAE Branch Conference. This is proving to be a most valuable and well watched resource.

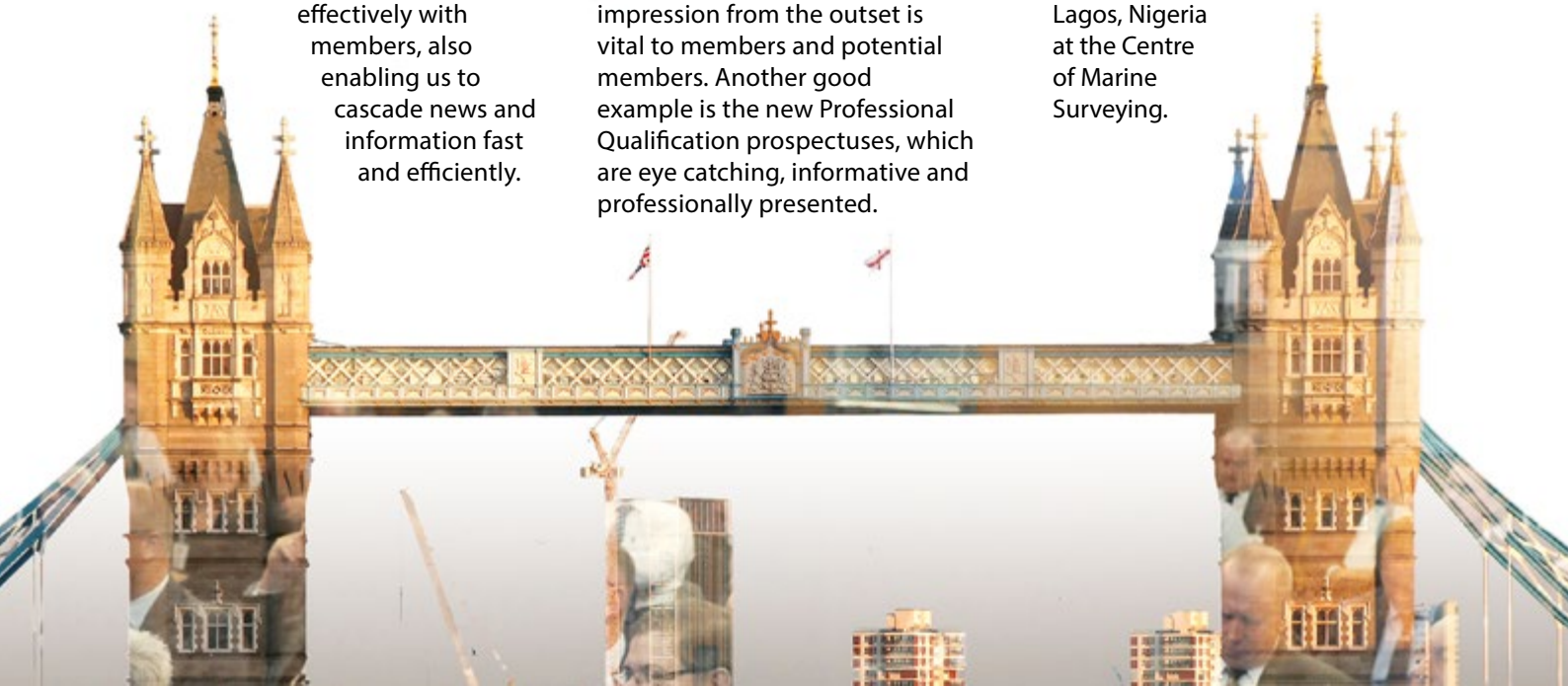
We have worked hard on our marketing collateral. Our information brochures and membership packs, for example, have all had a makeover and look splendid. Making the right impression from the outset is vital to members and potential members. Another good example is the new Professional Qualification prospectuses, which are eye catching, informative and professionally presented.

NETWORKING OPPORTUNITIES

There have been more networking opportunities for members in 2015 than perhaps in any other year around the world, some of which I have been lucky enough to have been involved with personally. On the UK front we ran three highly successful Small Craft Working Group, as well as two good Certifying Authority training days, which have been well attended. A great training day was also held for small craft surveyors in Palma in May.

James 'Randy' Renn ran a first class Technical Conference in Baltimore in April. This was followed by a similar such event organised at Adelaide in June by the Australian Branch, the first such event in that country for a while. Next up was the formal amalgamation between the Association of Marine Surveyors British Columbia with the IIMS. A gathering was held in Vancouver in July to celebrate the amalgamation and, as a result, nearly 30 surveyors from west coast Canada will join IIMS.

The London Conference was held in September and attracted one of the biggest crowds for what turned out to be an excellent event. Dinner on board HMS Belfast close to Tower Bridge in the city of London proved to be a highlight. The final two events took place late in the year. The UAE Branch Conference attracted a large number of delegates as well as some attractive speakers too. And finally, I accepted an invitation to address an audience in Lagos, Nigeria at the Centre of Marine Surveying.



So all in all the Institute has been highly active this year, both through head office activities but also via the branch network too. For 2016 I have challenged the branches to organise an event locally as part of our Silver Jubilee.

EDUCATION PROGRAMME

The subject of assessing competency and raising surveyor standards has been a recurring topic this year in various areas. It is something that the Institute is keen to embrace and to lead the way on. I myself am also keen that this becomes a key goal as we develop.

Overall I have to report a good year for the education team in terms of those joining and completing our courses. Our latest intake in October attracted a record intake of students to study what became the last HNC/HND course. Earlier in the year, our education partner, Pearson edexcel, announced that they would no longer support smaller customised courses such as ours. This decision, taken on commercial grounds, left other organisations in the lurch too.

The IIMS education committee met a couple of times to discuss how to handle this shock news. But it was not long before the committee was of one mind. It is accepted that the current course units and modules are already of the highest level. This was no appetite to 'dumb down' the content. The decision was made to repurpose the current course content (with a few amendments), but to split the programme in to two. The new IIMS Professional Qualifications in Yacht & Small Craft and Commercial Ship marine surveying were therefore born. Two brand new prospectuses were issued in October and already there is considerable interest from potential students to join the next intake in January 2016.

http://iims.org.uk/education/iims-professional-qualifications

We also continue to make available individual course units. These can be purchased on a one off download basis via the web site. Not everyone wants to study for a formal qualification; nor do some surveyors have the time to commit. But for surveyors who want to brush up on, or learn a new skill, this is proving to be highly popular.

'HANDY GUIDE' PUBLISHING PROGRAMME

This is one of the projects I am most proud of in 2015 for bringing to fruition. It is always satisfying when a vision becomes reality. At the end of last year, I challenged some of our experienced members to write a self-help handy guide on their chosen specialism. The result is 30 plus manuscripts offered to the Institute on a whole range of subjects of interest to marine surveyors. The series is titled, 'What a marine surveyor needs to know about' … There are now seven handy guides published and available to buy. A further half dozen are in production. This is a rolling publishing programme, so as new titles become available they will be added to the list. In addition to hard copy format, we are making the handy guides available as downloadable e-books from the web site and electronically via Kindle too. The handy guides are inexpensively priced so that they are affordable by the majority and not the minority.

DIRECTORS AND OFFICERS

There have been a few changes this year amongst the IIMS Directors and Officers.

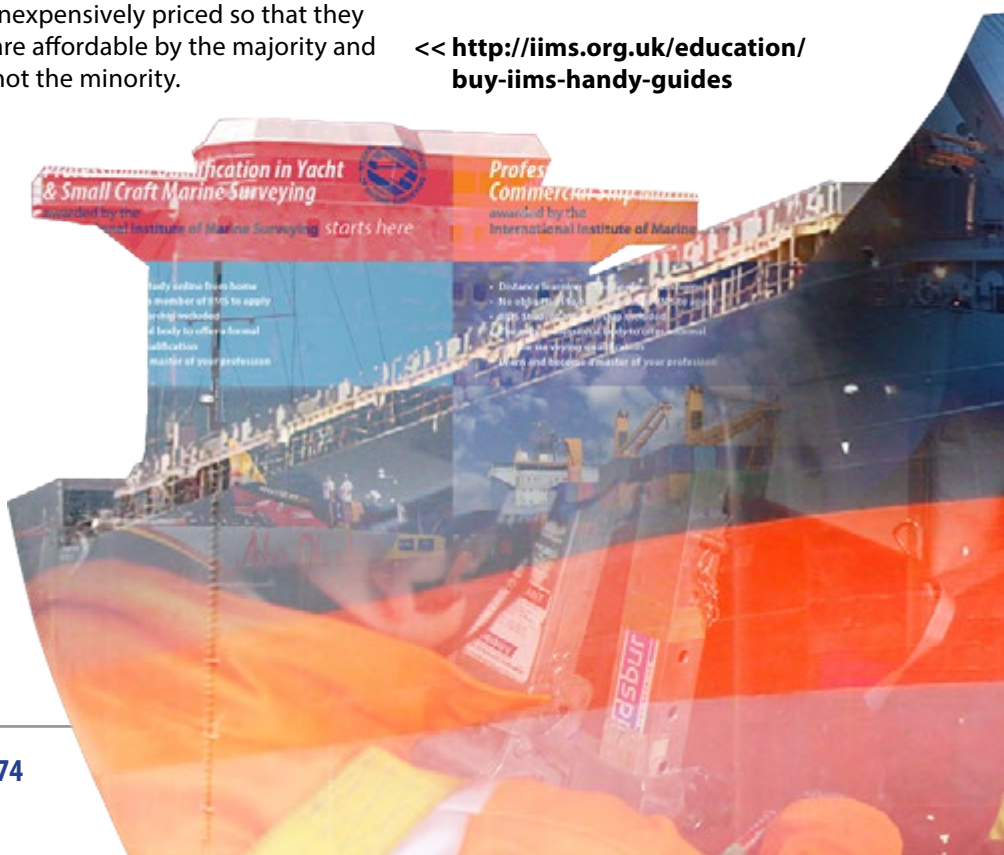
Tony McGrail stood down as a member of the Certifying Authority committee after many years' service. Indeed he is a former Chairman of that committee. The Institute thanks Tony for his contribution over the years.

Earlier in the year Geoff Waddington resigned as Chairman of the Education committee to devote more time to his business interests. Capt John Noble has taken over as his successor.

Past President, Peter Morgan, stood down as a member of the Management Board in September. The Institute would like to thank Peter for his service to the organisation over many years.

It is also important that on behalf of IIMS members I thank all the Directors and Officers of the Institute. They do a first class job, much of it unseen by the membership, and devote a significant amount of their time, sometimes on a non-paid basis, to help with the day to day management of your organisation.

<< http://iims.org.uk/education/buy-iims-handy-guides



CHANGES AT HEAD OFFICE

There have been some changes at IIMS Head Office during 2014. Carol Allen left as Certifying Authority administrator earlier this year and has been replaced by Tania Bernice, who has slotted into the role well.

Our two education team members both left IIMS this year. Anne Liversedge departed for pastures new seeking a fresh challenge after nearly eight years with us. Chloe Bruce left on maternity leave. Elle Hardham has joined to run the education programme, a role she says she is very much enjoying. Elly Bryant started work with IIMS in September and is providing administration support to both Elle and Hilary.

Hilary Excell joined the organisation in February in the part time role of Business Manager with the responsibility for managing the activities of the IIMS subsidiary, the Marine Surveying Academy.

I salute the work of the IIMS head office team. As a unit we continue to punch well above our weight and I applaud them for their dedication and commitment to the Institute and for the first class service they provide to its members.

MARINE SURVEYING ACADEMY

One of the areas of business that has taken up most management time and has presented the biggest challenge is the IIMS subsidiary business, the Marine Surveying Academy (MSA). Little more than a fledgling business a year ago with insignificant revenues, MSA has developed rapidly under the guidance of its Business Manager, Hilary Excell and is on its way to becoming a flourishing business.

MSA started off by providing examinations for the International Registered Marine Insulation Inspectors programme by Wood Group Kenny. This business has been curtailed this year to the problems facing the oil industry.

On the back of a successful pilot course in late 2014, MSA rolled out several courses for the Registered Marine Coatings Inspectors standard. Aimed specifically at those involved in surveying and inspecting superyacht coatings, this has opened the Institute to a new audience. There are now over 50 qualified RMCI inspectors.

2015... a memorable year.

But presenting an even bigger challenge for MSA was the development and implementation of the 5 year contract awarded by the International Marine Contractors Association (IMCA), awarded at the end of 2014 to run and manage the scheme to assess and verify the competency of CMID inspectors.

To meet the launch deadline of May meant many late nights. Just developing a suitable form that would enable applicants to provide objective evidence of their suitability and competency to audit a specialist vessel from a list of available vessel types proved to be a tough call. Then there was the need to assemble a pool of suitable assessors and trainers too. But we made it. I look back now and wonder just how we made it, but we did. The CMID Accredited Vessel Inspector scheme was soft launched on 1 May and formally rolled out on 1 June. At the time of writing we have passed the 150 application mark with well over 100 already accredited. How big is this project? Well neither IMCA nor IIMS really know just how many CMID inspectors there are operating worldwide, but it is felt there could be as many as 3,000 operating. Of course it is impossible to know how many will come forward to seek formal accreditation. But what is very encouraging is that the offshore industry is rapidly embracing the standard. Several organisations have already said they will not entertain audits being carried out by non accredited CMID inspectors. So if this is your bag, you know what to do!

http://cmidvesselinspectors.com

So to sum up. 2015 has been a memorable if exhausting year. We got things more right than not in all we have done. The Institute has made significant financial progress in the right direction. I have enjoyed meeting members and handling the many challenges that have come my way. I look forward to 2016 with the same passion and relish.

The IIMS launches two new Professional Qualifications

"Education costs money, but then so does ignorance"
Claus Moser

The IIMS has been formally educating and training marine surveyors for over 15 years and is seen as a leader in the area of marine surveyor education and training. Over the years, the Institute has honed its education material and it is now recognised as not only current, but to be of the highest standard too. In recent weeks, IIMS has rolled out its two new prospectuses, one for the Yacht & Small Craft Marine Surveying Professional Qualification and the other for the Commercial Ship Marine Surveying Professional Qualification.

The Institute is the only professional body of its kind to offer and award such qualifications in marine surveying and manages and maintains the top quality education programme on a distance learning basis.

IIMS is dedicated to developing the next generation of marine surveyors, as well as current surveyors, by offering quality education and qualifications that are recognised throughout the maritime world. Both IIMS professional qualifications are equivalent to a level 4/5 education qualification and can be studied on a distance learning basis. All you need is access to the internet.

Having gained their professional qualification, students may choose to upgrade to an Advanced Professional level too.

Here's how the qualification works. To achieve either professional qualification, students will be required to pass the four CORE units, plus four additional SPECIALIST units of their choice. There is two years study time in which to complete the work. Units can be taken in any order. To upgrade to an Advanced Professional Qualification, it is necessary for students to pass a further four SPECIALIST units of their choice and a further one year's study time is granted. There is no examination to sit, but there is an assignment to be completed for each unit that is then marked and assessed.

STUDENT **COMMENTS**

Read what students who have studied with IIMS have said.

'Many thanks for the feedback and all your support over the duration of the course. To say that I am delighted is an understatement as I am over the moon with delight'.
Mr J O'Sullivan

'I would like to thank all involved in the very valuable and excellent course. I certainly lived up to my expectations and more'.
Mr G Parrotte

'Thank you for the opportunity to take part in the course. I have really enjoyed completing the assignments. It was a very thorough and well thought out introduction to the marine surveying profession'.
Mr K Butterfield

If you have any questions or queries about the IIMS professional qualifications, please email Elle Hardham at education@iims.org.uk

SOME FREQUENTLY ASKED QUESTIONS ABOUT THE **PROFESSIONAL QUALIFICATIONS:**

Why should I study this course over others?
IIMS has a proven track record in helping hundreds of students to gain formal qualifications in marine surveying over many years. The course material is current and accurate – and is regarded as the most comprehensive study material of its kind at this level. Experienced authors, markers and assessors. Less expensive than other comparable courses. The only professional body to offer a formal marine surveying qualification.

Where is the Professional Qualification in Marine Surveying recognised?
The IIMS is recognised and respected worldwide and the Institute has 1,000 members. The qualification is accepted by the maritime sector, insurance companies, the small craft and commercial shipping industries in most countries.

What qualifications do I need to apply for the course?
You need at least a Senior school education to include two or three A-levels in appropriate science subjects, a Level 3 Diploma qualification or an equivalent are necessary. Some experience of the marine environment either leisure or commercial would be an advantage. English is used throughout the course and you should be able to communicate both verbally and in writing in English. Each Unit has an assignment is technical in nature and must be submitted in English.

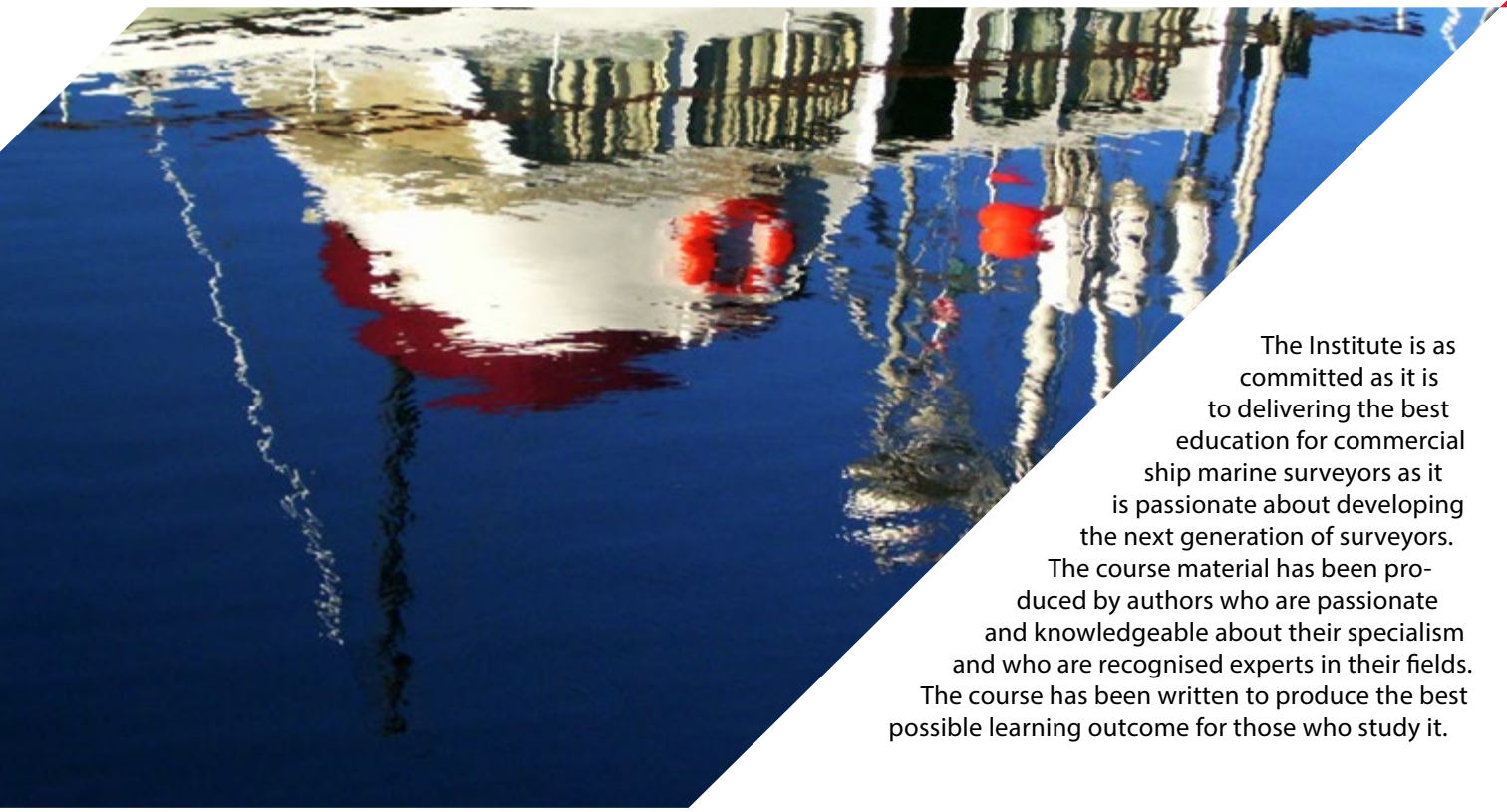
How do I study if I am not in the UK?
Our course is delivered online by distance learning and all students are given a website area to download the course material. As long as you are able to access the internet you can study the course.

How do I submit my assignments?
Once completed, you submit your assignments by email. When it has been marked it will be uploaded to your web area and an auto-mated email will inform you that it is there.

What happens if I do not pass an assignment?
If you do not pass an assignment you are given the opportunity to resubmit. The marker will give you guidance as to where you have gone wrong.

How much does the course cost?
The cost of the course is £2,500. If you wish to upgrade your qualification to an Advanced Professional qualification, the cost is an additional £1,000. Hard copies of the course unit incur an extra charge. There is a payment plan to help students spread the cost. Course fees are VAT exempt.

Do you have a payment plan?
Yes we understand that some people choose not to, or are not in a position to pay in full for their course so we have payment plan options available for students. Please email for details.



The Institute is as committed as it is to delivering the best education for commercial ship marine surveyors as it is passionate about developing the next generation of surveyors. The course material has been pro-duced by authors who are passionate and knowledgeable about their specialism and who are recognised experts in their fields. The course has been written to produce the best possible learning outcome for those who study it.

THE YACHT & SMALL CRAFT
PROFESSIONAL QUALIFICATION
IN MARINE SURVEYING

To achieve the qualification you are required to study and pass four CORE units plus an additional four SPECIALIST units of your choice from the ten that are available. Students have two years to complete the course. It is then possible to upgrade your qualification to an Advanced Professional Qualification in Yacht & Small Craft Marine Surveying. This means a further one year of study and an additional four SPECIALIST units to pass.

The benefits of studying with the Institute are that you become a Student Member of the Institute whilst training and you can therefore participate in all the Institute activities, including one day training courses, seminars and conferences.

One of the most beneficial factors of distance learning study is that you apply your learning immediately. So, as the course progresses you can apply the knowledge, skills and expertise gained to your work.

THE COMMERCIAL SHIP
PROFESSIONAL QUALIFICATION
IN MARINE SURVEYING

To achieve the qualification you are required to study and pass four CORE units plus an additional four SPECIALIST units of your choice from the twenty two that are available. Students have two years to complete the course. It is then possible to upgrade your qualification to an Advanced Professional Qualification in Commercial Ship Marine Surveying. This means a further one year of study and an additional four SPECIALIST units to pass.

If you travel, or spend time at sea, you can take the units with you to continue studying and make good use of your travelling time.

The benefits of studying with the Institute are that you become a Student Member of the Institute (if you are not already a member) whilst training and you can therefore participate in all the Institute activities, including one day training courses, seminars and conferences.

Professional Qualification ***in Commercial Ship Marine Surveying***

The CORE Units

Core Unit 1: **Introduction to Marine Surveying**
Core Unit 2: **Materials & Corrosion** (Unit has two parts)
Core Unit 3: **Stability**
Core Unit 4: **Report Writing**

The SPECIALIST units

Specialist Unit 5: **Draught Surveying**
Specialist Unit 6: **Surveying Dry Bulk Cargoes**
Specialist Unit 7: **Surveying Chemical Cargoes**
Specialist Unit 8: **Petroleum Products, Crude & Refined Products**
Specialist Unit 9: **The Carriage of Refrigerated Cargoes**
Specialist Unit 10: **Surveying Containers & Cargoes in Containers**
Specialist Unit 11: **Surveying Bulk Vegetable, Animal Oils & Fat Cargoes**
Specialist Unit 12: **Heavy Lift & Project Cargoes**
Specialist Unit 13: **Transportation of LNG & LPG Cargoes**
Specialist Unit 14: **Surveying General Cargo**
Specialist Unit 15: **Surveying Large Vessel Main Engines**
Specialist Unit 16: **Surveying Large Vessel Auxiliary Systems**
Specialist Unit 17: **Electrical & Electronic Engineering Surveying** (Unit has two parts)
Specialist Unit 18: **Marine Incident Investigation**
Specialist Unit 19: **Classifications, Statutory Surveys & Inspections**
Specialist Unit 20: **The International Safety Management Code**
Specialist Unit 21: **Marine Coatings**
Specialist Unit 22: **Warranty Surveying in the Offshore Industry**
Specialist Unit 31: **Maritime Law & Insurance**
Specialist Unit 32: **Hulls & Machine Damage Claims**
Specialist Unit 33: **Cargo Damage Claims**
Specialist Unit 34: **Helidecks & Equipment**

Professional Qualification ***in Yacht & Small Craft Marine Surveying***

The CORE Units

Core Unit 1: **Introduction to Marine Surveying**
Core Unit 2: **Materials & Corrosion** (Unit has two parts)
Core Unit 3: **Stability**
Core Unit 4: **Report Writing**

The SPECIALIST units

Specialist Unit 18: **Marine Incident Investigation**
Specialist Unit 21: **Marine Coatings**
Specialist Unit 23: **Inspecting Yacht & Small Craft Engines**
Specialist Unit 24: **Surveying Small Craft Systems & Mechanical Installations**
Specialist Unit 25: **Surveying FRP Craft**
Specialist Unit 26: **Surveying Steel & Aluminium Alloy Small Craft**
Specialist Unit 28: **Inspecting Small Craft Rigs & Sails**
Specialist Unit 29: **Surveying Wooden Craft**
Specialist Unit 31: **Maritime Law & Insurance**
Specialist Unit 32: **Hulls & Machine Damage Claims**

It is recommended that each unit and assignment takes about 60 hours to complete, so factor this into your planning. For some busy surveyors, IIMS knows this is too long. So, the Institute has also made the units available to purchase singly for those who want to pick, or brush up, on a particular area of surveying. Any of the thirty plus units may be bought singly. For full details see the website: **http://iims.org.uk/education/buy-unit**

The growing series of self help handy guides...

WHAT A MARINE SURVEYOR NEEDS TO KNOW ABOUT

What started as a bit of a 'crazy notion' is now resulting in the publication of an excellent series of self help handy guides that will be of great benefit to newly practising or long standing, experienced surveyors alike.

At a time when publishing paperback books seems to be a rather old fashioned pastime, IIMS is turning back the clock! Well that is true in part, but the expanding series of new IIMS self help handy guides is also soon to be available to download in e-book format as well as electronically via Kindle. But as early sales are proving, there is still room for 'old fashioned' paperback books too!

The concept of developing a range of handy guides was born in December 2014. Just before the Christmas break, IIMS Chief Executive Officer, Mike Schwarz invited a selection of experienced members of the Institute to write a book, based on their area of expertise and specialism. He perceived there to be a gap in the market for what he called 'reasonably priced books' on marine surveying. The result was that by mid January, in the region of 30 manuscripts had been offered to IIMS for publication.

'Knowledge has to be improved, challenged, and increased constantly, or it vanishes'.

Peter Drucker

The principle aim of this publishing programme is to make information available on specialist marine surveying topics at a cost which is affordable by the majority and not the minority. This goal underpins the project and that is reflected in the cost which typically varies between £20 and £30 per handy guide (less if purchased electronically). The handy guides themselves are published in an A5 easy to handle size. Content wise, the handy guides are as relevant to more seasoned surveyors wanting to brush up or refresh their knowledge on a specific area of marine surveying, as they are for those with less experience who desire to learn and enhance their skills and knowledge base.

The first four handy guides finally rolled off the press just in time for the London Conference in early September. Since then a few more have been added to the series and a further half dozen, or so, are in production and being prepared for launch in 2016.

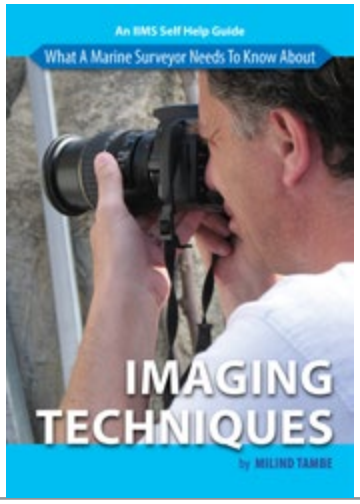
The full series of handy guides currently comprises:

What a marine surveyor needs to know about imaging techniques

In *Imaging Techniques*, Milind Tambe sets out to explain the science and aesthetics of photography which would benefit a marine surveyor. His aim is not to teach photography, but to help surveyors understand their cameras better and then create better images, and if possible artistic ones that speak for themselves of the situation and condition that the surveyor has seen on board the ship or boat.

Milind is an established marine surveyor with a strong interest in photography and practices this as an art form for pleasure. He is a Fellow of the International Institute of Marine Surveying and a Life Member of The Photographic Society of India.

Author: Milind Tambe FIIMS
ISBN: 978-1-911058-02-1
Size: 96 pages
Published at £27 in paperback (less if bought electronically).



What a marine surveyor needs to know about small craft metal hulls and ultrasonics

Hull survey methods are the means and procedures necessary to detect defects and damage at an early stage in order to prevent failure and/or breakdown. They are, therefore, not only a comprehensive means of detecting such deficiencies and/or monitoring the vessel's structural condition, but also defining schemes for inspection between the last overhaul and before the occurrence of failure.

In *Small Craft Metal Hulls & Ultrasonics*, Jeffrey calls on his 70 years of practical, hands on experience as a surveyor to write what is an easy to read and understand book for small craft surveyors with any level of experience.

Author: Jeffrey Casciani-Wood
ISBN: 978-1-911058-03-8
Size: 64 pages
Published at £25 in paperback
(less if bought electronically)

"The principle aim of this publishing programme is to make information available on specialist marine surveying topics at a cost which is affordable by the majority and not the minority."

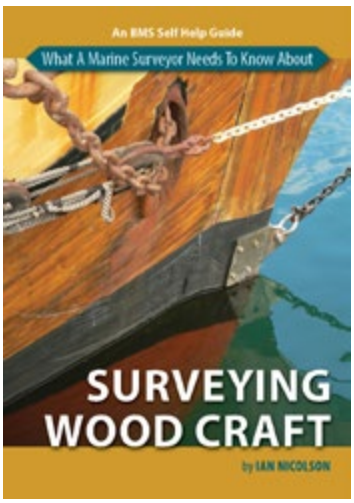
What a marine surveyor needs to know about working in enclosed spaces

As Martine Wesen, who wrote the introduction to this handy guide following the sad loss of her husband in an enclosed space incident said, 'Every surveyor should read this publication'.

It is generally accepted that the definition of 'an enclosed space' is a space which has limited openings for entry and exit and it not intended for continuous worker occupancy, which inevitably leads them being hazardous environments.

Too many surveyors (and other maritime crew and workers) have come to harm because of a lack of knowledge about how to operate safely in enclosed spaces. In *Working in Enclosed Spaces*, the authors Capt Michael Lloyd and Adam Allan, (who are both highly experienced in this field of operation), have written a concise, technical reference for surveyor personnel involved in entering enclosed spaces for inspection purposes.

Authors: Capt Michael Lloyd and Adam Allan
ISBN: 978-1-911058-00-7
Size: 68 pages
Published at £25 in paperback
(less if bought electronically)



What a marine surveyor needs to know about surveying wood craft

In this book, Ian Nicolson covers the nature of wooden vessels... he likens them to animals... "The backbone of a boat is the keel, with the stem, stern post and horn timber.

The frames and beams are the ribs, while the skin is formed by the planking and decking. This analogy goes further. Just as with an animal (or a human) damage to the skin is seldom serious even when quite extensive, so it is with a boat..."

What a marine surveyor needs to know about Surveying Wood Craft explores backbones, frames, floors, planking, stringers, beams, knees, decks, cabin tops and deck houses, to list a few.

The written words are further enhanced by a series of a dozen, beautiful and intricate, hand produced drawings and diagrams by the author himself. These diagrams depict where to look for potential issues in a wooden craft such as rot, as well as showing how a vessel made of wood is constructed.

Author: Ian Nicolson
ISBN: ISBN 978-1-911058-04-5
Size: 60 pages
Published at £25 in paperback
(less if bought electronically)

What a marine surveyor needs to know about small craft, ship and boat-building terminology

For 70 years Jeffrey Casciani-Wood has been 'messing about with and on boats and ships' as he likes to put it. He has devoted a life time to his profession and craft as well as to the art of marine surveying.

This unique and remarkable book is the culmination of the author's 70 years' knowledge and experience built up in the boat and shipping industry. In *Small Craft, Ship and Boatbuilding Terminology*, Jeffrey has pulled together a glossary of terms for literally hundreds of words relating to wood and steel boats, timber, fibre reinforced plastic boats, rigid inflatable and ferro-cement vessels in what must surely rank as one of the most comprehensive publications of its kind ever published. This book is quite simply an essential resource and guide for marine surveyors, no matter what their level of experience, or where in the world they live and practice and will become a constant source of reference.

Author: Jeffrey Casciani-Wood
ISBN: 978-1-911058-01-4
Size: 148 pages
Published at £30 in paperback
(less if bought electronically)

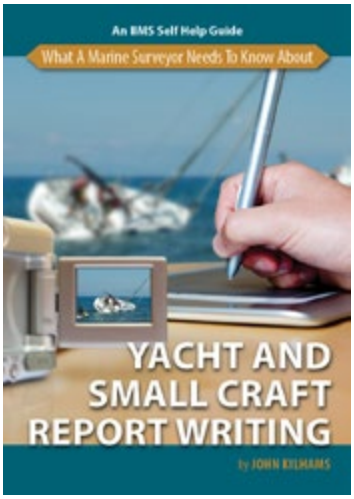
What a marine surveyor needs to know about yacht and small craft report writing

Marine surveying requires that a report is provided to the client on completion of the survey. This is the most important part of the job and it is absolutely vital that it is produced correctly. If the report is good and provides an accurate account of the condition of the vessel at a given point in time, with precise details and recommendations, it will lead to more work and a happy relationship with the client. Get it wrong and at best the client will not be pleased; and if it goes really wrong the surveyor could end up having to defend his/her position in a court of law.

This handy guide sets out to provide a basic set of rules to assist surveyors on how best to approach writing reports and how to handle what can be a daunting task.

The author, John Kilhams, was a practising marine surveyor for a number of years. Now retired, he still runs the occasional Report Writing course that the IIMS puts on for members and is a member of the Institute's management board.

Author: John Kilhams
ISBN: ISBN: 978-1-911058-05-2
Size: 60 pages
Published at £25 in paperback
(less if bought electronically)



What a marine surveyor needs to know about knowledge management

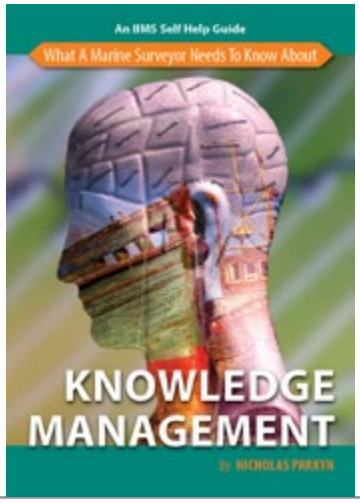
Nicholas (Nick) Parkyn has an extensive background in both the Marine and Information Technology (IT&T) disciplines. His work in the marine industry includes marine surveying, yacht and small craft design and marine software development.

Today we have a challenge that our ancestors did not have: the "general" knowledge base doubles every four to five years, making knowledge management essential.

Knowledge management is an essential activity and key differentiator for professional services providers like marine surveyors. These are people-based businesses whose service delivery and value is intimately linked to the knowledge and skills of the practitioners (those delivering the service).

This publication is a practical guide to Knowledge and Knowledge Management. It provides a background to the subject and a practical insight into what is required and how to setup a computer based Personal Knowledge management solution.

Author: Nicholas Parkyn
ISBN: 978-1-911058-06-9
Size: 60 pages
Published at £20 in paperback
(less if bought electronically)



Marine Installation Safety Training 2015

BY **PETER COLLARD**
Sales Engineering Manager,
Eberspächer (UK) Ltd

AND **ROSS WOMBWELL**
Technical Manager at
British Marine

History

For over 40 years diesel fuelled heating has enjoyed a faultless safety record within the marine industry. This has been achieved despite being largely ignored by most regulating bodies.

So why are we writing this? Heaters are safe right? Well, yes, if installed and maintained correctly, diesel fired heating is still one of the safest forms of heating you can use.

Unfortunately, in recent years a worrying trend has started to develop, fuelled by a glut of cheap second hand vehicle diesel heaters and dubious internet knowledge.

If we turn the clock back a few years, heating systems for both the boat builder and private boats were fitted by trained, experienced engineers who were employed by registered dealers. This was the same for all heater manufacturers not just Eberspacher. Only occasionally would someone fit a second hand heater and if ancillary parts were required they were generally purchased from an authorised dealer who would advise on the correct marine parts to use.

Today it's far more common to buy a new or second hand vehicle diesel heater online and seek advice from internet forums and blogs. Unfortunately the sheer volume of "misinformation" on the internet is staggering. There is little understanding about the sort of temperatures that can be achieved by certain components, and there is almost no understanding of what happens in an overheat situation.

With the do it yourself installations our engineers are seeing today it's clear we must do something before there is serious injury or a tragic accident.

As there is no current boat safety inspection for sea going boats, an owner is at liberty to fit whatever he wants however he wants. Unfortunately the people who fit their own heater don't generally contact qualified trained engineers to assess their handiwork.

Recently Eberspächer UK, took the initiative to launch a nationwide accreditation program for their entire dealer and sub-dealer network. Each engineer is assigned an accreditation number on completing an intensive and mandatory training program. They are fully aware of what to look for and the consequences that could follow a poor installation. However as stated, our dealers don't often get to see the average DIY second hand heater installation.

So as part of our ongoing effort to ensure the safe operation of our equipment Eberspächer UK with the help and support of British Marine (formerly the British Marine Federation) have launched a second initiative to help examiners and surveyors become more aware and familiar with critical points of a diesel fuelled heater installation and able to spot the dangers. With the help of inspectors, surveyors and the press we can educate people on the dangers of fitting a heating system without the knowledge or equipment to do so safely. A surveyor could inform any potential new owner that the heating system is not in a safe serviceable condition.

The auxiliary diesel fed heater used for heating a lorry cab or pre heating a vehicle engine is the same or very similar to the heater used to heat a boat by either warm air or water. This is a fact that has not gone unnoticed by the DIY enthusiast. Often a heating system will be removed from a vehicle and advertised as a complete kit, however to fit the same heater into a boat safely you would need several marine specific parts.

Above right is an example of a typical marine kit compared to a typical vehicle kit.

Marine Kit

Metal beaded fuel line to ISO 10088, 7840 & BSS

Stainless steel fuel hose clips to ISO 10088

Fire retardant rubber fuel line joiners to ISO 7840

Double lagged exhaust 2m in length

Two Stainless exhaust clamps

Stainless steel exhaust stand-off brackets

Stainless steel twin wall skin fitting

In-line gas tight flexible exhaust silencer

Combustion air silencer sea marine kits

Stainless steel heater bracket

Longer looms with external sensor wire

Stainless steel screws

Ducting, outlets, branches and fittings

Marine installation manual

Vehicle Kit

Nylon smooth fuel lines

Zinc plated fuel hose clips

Standard Rubber fuel line joiners

Un-lagged exhaust (typical 500mm long)

Single stainless exhaust clamp

No exhaust stand-off brackets

No exhaust skin fitting

Unsealed exhaust silencers

Generally no combustion air silencer

No heater bracket

Shorter looms (possible no external sensor)

Zinc plated screws

No duct or duct fittings

Vehicle installation manual

Hopefully after reading this it will be easier to spot the obvious dangers, although it won't always be so easy to spot sub-standard or incorrect parts.

What to look out for...

1. HEATER LOCATION

Most diesel heaters are not designed to be installed in the accommodation area where hot components could come into contact with people or animals.

Ideally a heater should be tucked as far out of the way as possible so as not to interfere with storage. If a heater has been installed in a locker, lazarette or similar storage compartment, flammable items in particular fuel canisters, oil cans, spray cans, gas cartridges, fire extinguishers, cleaning rags, items of clothing, paper etc. must not be stored or transported on or next to the heater. This can normally be achieved by a simple partition, shelf or box. However if flammable vapour is possible the source should be removed.

If fitted in an engine room or machinery space the heaters intake ducting for the air to be heated must come from a clean, fume free source.

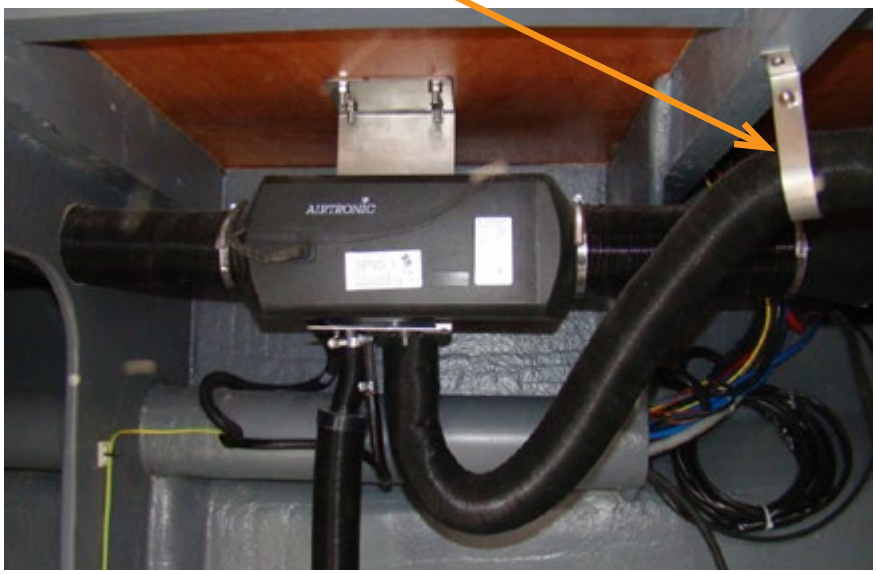
The heater must not be fitted in any compartment containing a petrol generator or any engine room containing a petrol engine or petrol generator.

The heater must not be fitted in any petrol tank space or any other space containing flammable vapours. The heater must be secured on a metal or non-flammable bracket or mount.

2. EXHAUST

A diesel heater uses a dry exhaust and therefore will produce relatively high temperatures when the heater is in use. All manufacturers use some form of lagging to ensure the exhaust is safe during normal operation. When checking a heaters exhaust, firstly ensure that it is actually lagged with a suitable material; look for cracks or splits and general condition of the stainless flexible pipe. If the exhaust is touching anything that could be flammable or heat damaged i.e. the hull or bulkhead etc. move the pipe to ensure no scorching or charring is taking place. Check behind any heat shielding or external insulation (if possible) to ensure no charring or heat damage has occurred.

Using exhaust stand-off brackets is Eberspacher UK's preferred method of securing a heaters exhaust system. Other manufacturers may vary.



Unfortunately it's not unusual for people to use hose clips or similar to secure the exhaust to the heater or hull fitting. These clips are generally not powerful enough to crimp the exhaust onto the fitting and ensure it cannot fall off or be dislodged.

It's common for people to buy vehicle exhaust silencers online as they are, for good reason, considerably cheaper than the marine equivalent. These silencers are specifically designed to be fitted under a vehicle, not in a boat. They are NOT gas tight or insulated.

A twin wall exhaust hull fitting must be used on fibreglass, wood or composite boats to ensure excess heat is not transmitted into the hull or transom.

3. FUEL SYSTEM

Apart from the Inland Waterways Boat Safety Scheme, who specify, all heater fuel pipes in the engine room must be of metal construction, there is no other current regulation stating the material a heaters fuel line must be made of in an un-coded recreational craft up to 24m. Heaters do not currently come under the scope of ISO 10088 as it's specifically written for engines and outboards. This will change in the next few years with the introduction of the up dated standard ISO 14895.

The fuel system should be in serviceable condition. Look for fuel leaks, perished hoses or joiners etc. It is very common for a DIY install to tee into the engine fuel line. We do not advise tapping into the engine fuel system as it can increase the chance of air or fuel leaks. This may lead to engine failure or fire. Fuel pipes should be secured at least every 500mm.

4. COMBUSTION AIR

Combustion air must not be taken from any living accommodation area. Combustion air is separate from heating air; it's drawn into the heater and used to burn the fuel then expelled through the exhaust. Ventilation requirements are taken into account during the design of a vessel and any additional ventilation air requirements, poor on board ventilation or owner blocked off/ closed ventilation points may result in the depletion of available air in that compartment. Combustion air must not be contaminated with any flammable vapour or gasses.

5. HEATING AIR DUCT

Occasionally you may find unsuitable ducting has been fitted to an air heater. This can be hard to spot as several different types of duct are used by different manufacturers. If a plastic duct has been used and shows signs of heat damage it should be noted, plastic can also emit noxious fumes if heated above its design specification.

Intake ducting should not be smaller than the diameter of the heaters air intake, this could lead to overheating due to lack of intake airflow.

Check that the heaters intake is taken from a clean, fume free source and does not compromise the water integrity of the boat.

150 YEARS OF INNOVATION SINCE 1865

Eberspächer

BRITISH MARINE

In truth it's extremely hard to put the right combination of stupidity or misfortune together in just the right way to cause a serious issue but the more people who are looking out for mistakes the safer boating will be.

...the more people who are looking out for mistakes the safer boating will be.

matrix

INSURANCE SERVICES LTD

PROFESSIONAL INDEMNITY INSURANCE SCHEME FOR IIMS MEMBERS

This specialist marine surveyor's professional indemnity scheme has been set up specifically for members of the Institute and its benefits include:

- Automatic £2 Million cover for third party death or bodily injury under professional indemnity section
- No claim discount scheme
- Cover for handling and operation of vessels available
- Tools cover available
- 365 days a year commercial advice helpline for UK business law excluding employment matters staffed by qualified barristers and solicitors
- MCA Code of Practice and Boat Safety Scheme limits of liability available
- Third Party Non-marine Liability extensions available
- Low policy excess unless otherwise requested
- Claims handled by professional claims staff
- Libel, slander and many other insurance covers included

We are able to arrange insurance cover for all types of marine and commercial risks in addition to the IIMS Surveyors Professional Indemnity Scheme. For further information about this scheme contact us by telephone on 01892 724060 or fax 01892 724058 or email at enquiries@matrix-ins.co.uk Certain countries legislation may require you to access our scheme through a local broker. Our website is located at www.matrix-ins.co.uk

Matrix Insurance Services Ltd is an independent insurance intermediary regulated by the Financial Conduct Authority (FCA registration no: 439075) located at Matrix House, Orchard Business Park, Furnace Lane, Horsmonden, Kent, TN12 8LX. The scheme is underwritten by Travelers Underwriting Agency Ltd with 100% security provided by Travelers Syndicate 5000.

INTERNATIONAL INSTITUTE OF MARINE SURVEYING

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IIMS CORPORATE TIE

£7.00

excl. VAT

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IIMS HIGH VISIBILITY VEST

£6.00

excl. VAT

was £9.00

IIMS POLO SHIRTS

£5.50

excl. VAT

was £8.50

The ties are made of 100% silk and features the motif from the IIMS logo.

Please visit iims.org.uk/merchandise-sale/ to see the full availablity and how to purchase.

INTERNATIONAL INSTITUTE OF MARINE SURVEYING

Enhancing performance and efficiency through technology...

BY **BRUNO BOUCKAERT**
Sales Director of Hull Vane®
and Marine Surveyor

The Hull Vane® looks like a hydrofoil, but it has a completely different goal than the typical hydrofoils

...introducing Hull Vane®

Fuel saving devices for ships, sometimes called energy saving devices, are considered as something new, but some of them have been around for quite a while. Perhaps the most wide-spread and well-known fuel saving device is the bulbous bow.

The protruding bulb on the bow was first applied in the late nineteenth century, and gathered wider acceptance in the 1920's. On ships sailing at an appropriate draught and speed-to-length ratio, the bulbous bow is said to reduce resistance by 10 to 12 percent. These days, it's hard to find a containership, large ferry or cruise ship without a bulbous bow.

A bulbous bow

WAVEMAKING RESISTANCE

The bulbous bow works by creating a wave in front of the bow. When the through of that wave coincides with the ship's own bow wave, they both cancel each other out. The result is that the ship creates a smaller bow wave and therefore has less wave making resistance. The frictional resistance is increased because of the added surface area. That's why we see the bulbous bow only on ships with a relatively high speed-to-length ratio. Large tankers and bulk carriers sail slower and have predominantly frictional resistance, therefore there is rarely a bulbous bow applied to them.

Over the past century, a lot of hydrodynamicists have wondered if a something like the bulbous bow could also be used at the stern of the vessel. The US Navy has done model tests with a stern bulb for a naval cargo ship and for a destroyer with promising results. A different approach was invented by Dr. Peter van Oossanen, a Dutch naval architect and hydrodynamicist. The device has been developed over the years and is now patented and successfully brought on the market as "Hull Vane®". Instead of a bulb, the Hull Vane® looks like a hydrofoil, but it has a completely different goal than the typical hydrofoils used on fast passenger ferries and recent foiling sailing yachts.

HISTORY

Like a lot of improvements for regular cars that are initially developed for Formula 1 cars, the Hull Vane® has its roots in high-performance sailing. It was over the course of research for three America's Cup campaigns, spanning 20 years that the idea gradually grew into the current design. In 1983, Peter van Oossanen was working for the Marin research institute and was part of the team which developed the winged keel for Australia II. After he set up his own naval architecture firm in the same town in 1991, Peter's first assignment was the design

Dr. Peter van Oossanen, the Dutch naval architect and hydrodynamicist.

of the hull, keel and rudder for another America's Cup team. He had calculated that winglets on the rudder should result in forward thrust, and this was confirmed in model testing. In 1996, Peter devised a horizontal wing for the motor catamaran Nieuwe Maze, which is still sailing every day in the Port of Rotterdam with the wing between its hulls. In 2002, Peter was involved with another America's Cup campaign, and this was the first time that model tests and full scale trials were done with a separate freestanding Hull Vane® on a monohull. Both the model tests and full scale trials showed good results, including a resistance reduction of 8% under 20 degrees of heel, but the rules required that an appendage could only be attached to the centreline. This construction proved too weak and the Hull Vane® was not used in the competition. The focus then shifted to commercial shipping, and several research projects done with

FSIV Karina III Shipyard De Hoo

model testing at the Marin research institute showed the potential and helped the understanding of the Hull Vane®. Van Oossanen invested early on in high-end Computational Fluid Dynamics software (Fine/Marine), which really gave the development a big boost.

Defi Areva

CFD AS DEVELOPMENT TOOL

Not only does CFD allow alterations to be done at an affordable cost, it also provides insight in the exact flow at a distance from the hull, and this without scale effects. In the towing tank, corrections have to be made for the excessive viscosity of the water at model scale, but CFD simulations are done at full scale. The CFD software helped to optimise Hull Vane® further and this lead to a contract in 2011 for a Hull Vane® with Heesen Yachts, a Dutch builder of superyachts. The Hull Vane® was integrated into the design of a 42 m motoryacht, which was launched in 2014 and proved during the speed trials that the performance predictions were correct. The Hull Vane® leads to a resistance reduction of 20 to 23%, making the yacht extremely fuel efficient. At the same time, another Dutch shipyard showed interest in the Hull Vane® for their new range of 55 meter Fast Intervention Supply Vessels. Shipyard De Hoop wanted to offer the Hull Vane® as an option on their vessels, and in July 2014 they decided to carry out full-scale trials with and without Hull Vane®. The shaft power and speed were recorded by an independent third party, showing the exact result. At 12 knots, the Hull Vane® reduced the power by 10% and this percentage quickly rose to 13-14% until it topped out at 15% at 21 knots. As the fuel consumption is very closely related to the main engine power, these percentages are also valid for the fuel saving. Van Oossanen Fluid Dynamics also optimised the bulbous bow for this vessel, and it's remarkable how few waves are generated, even when sailing at high speed. The fuel efficiency of the 55 m FSIV is unparalleled in the industry for this size, speed and loading capacity. Various research projects over the years showed that the Hull Vane® is equally suitable for larger vessels, where the benefits are even greater as propulsion power is more expensive on larger engines.

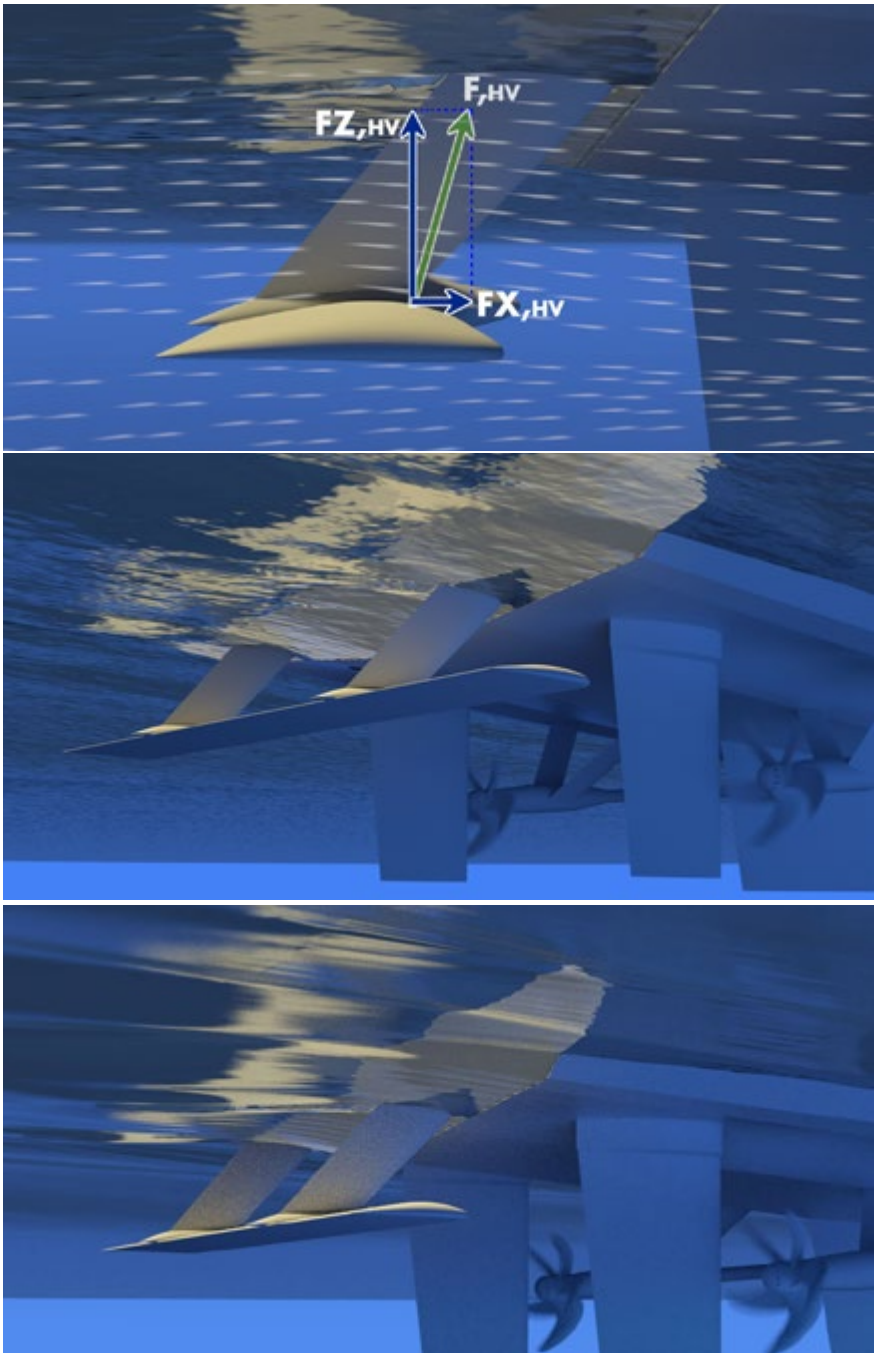
SO HOW DOES IT WORK?

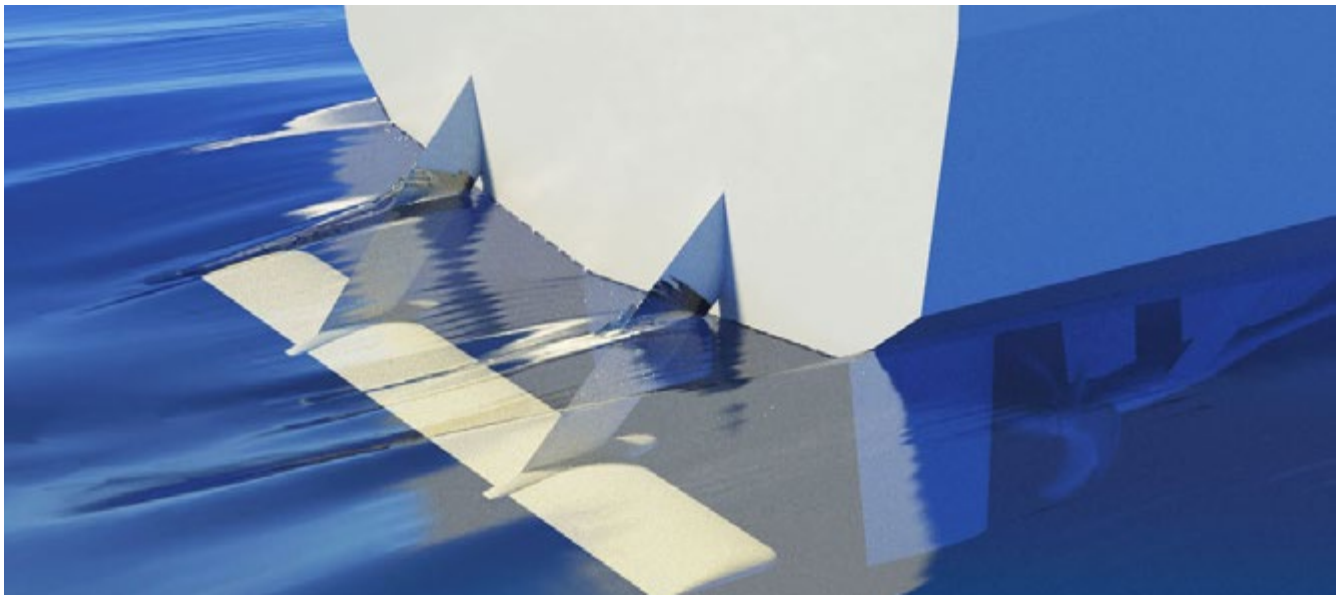
The performance of the Hull Vane® is linked to four different effects.

First of all, the wing develops a forward thrust force out of the upward flow under the aft ship. This can easily be understood by looking at a glider plane: the wings of a glider plane see an upward flow and develop a lift force which is angled upward and forward, giving the glider forward speed. The same happens with the Hull Vane®.

The second effect is more similar to the bulbous bow. Unlike stern flaps, trim tabs or interceptor, the Hull Vane® has an upper surface, on which a low-pressure region is created. This low pressure reduces the stern wave produced by the ship, and therefore the ship has less wave making resistance. Due to the interaction with the pressure on the hull, the Hull Vane® requires a careful design using CFD.

The third effect resides in the vertical component of the lift: it lifts the stern and keeps the bow down at high speed. This is similar to the effect of other system developed for this purpose, such stern flaps, trim tabs, trim wedges or interceptors .





The fourth effect is again unique for the Hull Vane®, and is only relevant for ships sailing in waves: as the Hull Vane® is a big surface with a high flow velocity located far from the centre of the vessel, the Hull Vane® dampens the pitching motions and therefore also reduces the added resistance. Model tests and CFD simulations on the 42 m and 55 m show a reduction in added resistance – due to pitching - of around 30%. Apart from pitch damping, the Hull Vane® also dampens the rolling motion (as the wingtips have a lot of added mass when rolling), the heaving motion and the yawing motion. The yawing (rotation on a vertical axis) is reduced because the course stability is improved by the struts, similar to the application of course-keeping fins or keels. Because the struts are a high aspect-ratio surface with a high flow velocity (they are usually in the wake of the propellers), and because they are placed very far aft, they have a substantial course-keeping effect for their surface area.

SEAKEEPING

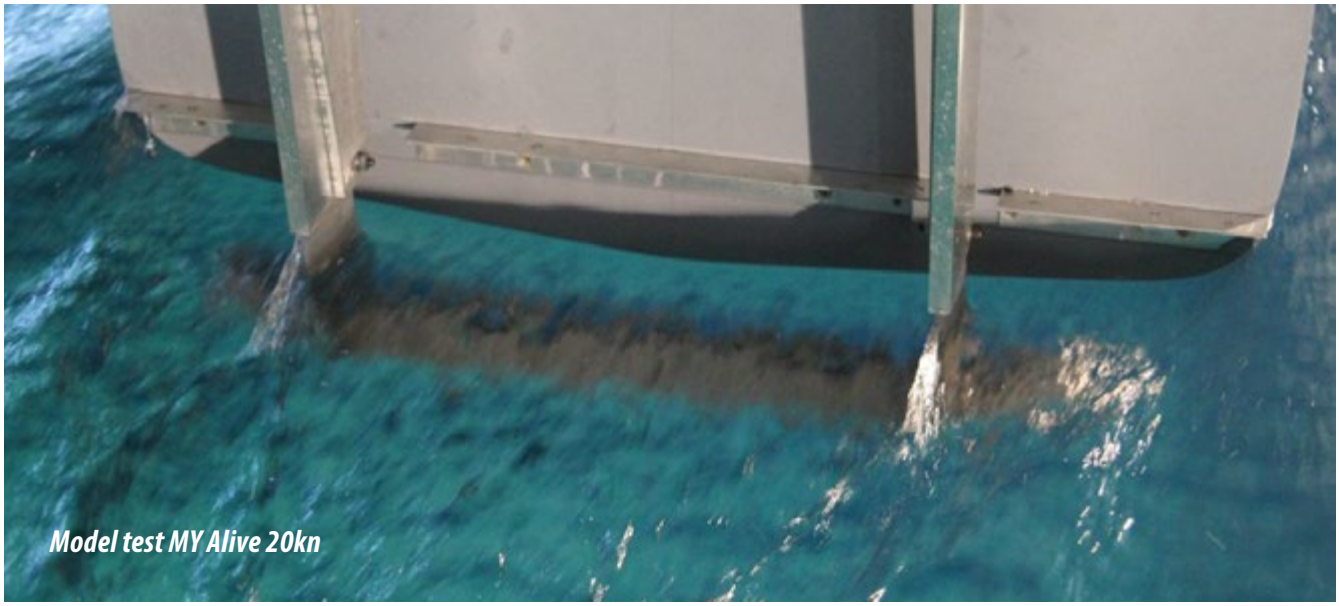
The reduction of pitching, heaving, rolling and yawing is not only a matter of fuel saving. This effect has gained a lot of attention from owners with vessels operating in severe weather. Both the vertical and horizontal accelerations are reduced, which not only reduces the likeliness of seasickness – particularly important to passenger vessels and superyachts – but it also makes certain operations on deck safer. For example navies and coastguards often use helicopters from the aft deck, whereby the operational limits are dictated by the measurements of an accelerometer on deck. It is therefore not surprising that the most interest in the Hull Vane® comes from the naval/coastguard, the offshore and the passenger shipping sectors.

APPLICABILITY

These are incidentally also the ship types on which the Hull Vane® is most applicable, as they combine a steel or aluminium hull and significant displacement (for seakeeping) with a relatively high service speed. While many large container vessels have resorted to slow steaming, the ships transporting high-valued goods and passengers still maintain a high service speed. This includes roro-ships, ferries, naval ships, patrol vessels, superyachts, medium-sized cruise ships and certain offshore vessels. The lower limit for application of the Hull Vane® is defined by a Froude number of about 0.2, which corresponds with a speed of 9 knots for a 50-metre vessel, 12 knots for a 100-metre and 17 knots for a 200-metre ship. Apart from the speed, the hull shape is also important. A wide, U-shaped stern is preferable to a very narrow V-shaped stern. The Hull Vane® and its savings percentage are different for each ship. The design requires a CFD study, which gives a very accurate performance prediction, as has been confirmed both by model tests and full scale trials.

RETROFIT OR NEWBUILD?

The Hull Vane® can be easily retrofitted to an existing ship, as it requires only a minor amount of internal reinforcements. The biggest benefits can be obtained on a newbuilding, as the hull lines can be optimised in conjunction with the Hull Vane®, leading to a better overall result. The advantage is also that the propulsion power and shaftlines can be adjusted to the lower power requirement. On large, high-powered ships the saving on propulsion power often exceeds the investment cost in the Hull Vane®. For typical retrofit installations the payback is often in the range of 1 to 3 years at current (low) bunker costs, depending of the savings percentage, the amount of sailing time per year and the type of fuel used. Because the resistance is reduced, the Hull Vane® is a future-proof investment. Regardless of the fuel used – whether it's HFO, MGO or LNG, the savings percentage will still be the same. For newbuildings, the Hull Vane® can usually be incorporated within the length of the vessel, but for retrofit installations, some protection above the waterline is advisable. This can be for example a simple bulbar construction or a small platform on the transom.



Model test MY Alive 20kn

CERTIFICATION

As the Hull Vane® is an external appendage, it is not subjected to class approval. However, classification societies do require an evaluation and drawing approval of the internal strengthening at the connection points, to make sure that the forces acting on the hull do not damage the ship's structure.

OBSTACLES

While the design is high-tech and requires specific expertise, the construction of the Hull Vane® is fairly simple, and can be compared to a rudder. The Hull Vane® is usually built of steel and has no moving parts, and therefore no maintenance or replacement costs. In this respect, it can again best be compared to the bulbous bow or the bilge keels: a relatively small additional investment in the beginning, leading to a lifetime of fuel savings or added comfort respectively. The construction itself is similar to a rudder. From the CFD calculations, all the loads in the structure are known, and the Hull Vane® is designed to avoid vibrations and fatigue issues, a.o. by using Finite Element calculations.

ADOPTATION

If Hull Vane® works so well with no risks, why did the development and market penetration take so long? Bruno Bouckaert, sales director of Hull Vane® explains:

"There are many reasons. One of them is that people are simply too busy with their day-to-day work to take time to look into this. Many in the shipping and shipbuilding world are risk-averse, without taking the time to properly evaluate the risks, so anything new is received with scepticism, often for good reasons. Many professionals have had negative experiences with inflated claims of fuel savings, which is why we are conservative in our estimates, unless they are backed up full-scale trials."

"Another issue is known as split-incentive: ship owner, technical manager and charterer are often three different companies with different interests, and ships are often traded every few years. In my opinion, efficiency improvement adds value to the ship for the rest of its life, not just until the next resale. All these reasons combined have resulted in the fact that ship owners often have an extremely low pay-back period in mind, regardless of the future risks, fuel prices and remaining lifetime of the ship. The barriers we encounter are often not technical but linked to the way the marine industry is organised. Nevertheless, I am convinced that on certain ship types – such as patrol vessels – the Hull Vane® will be as common as the bulbous bow is now on container ships. It just takes some time."

OPV

Hull Vane BV has recently done a CFD study for the Dutch navy on the Holland-Class oceangoing patrol vessels (108 metres). The expectations were low, because these vessels have an operational profile which includes an enormous amount of slow-speed patrolling, in which fuel savings are minimal or can be negative. 67% of the time is spent sailing at a speed below 10 knots. It is however in the other 33% of the time that 83% of the fuel is consumed. Based on this information, the Hull Vane® was optimised for 17.5 knots, and the performance then calculated at 5 knots, 12.5 knots, and the top speed of 22 knots. The hull was slightly modified by reducing the depth of the trim wedge, as the Hull Vane® will provide the vertical lift needed for trim correction at top speed.

At the optimisation speed, the resistance was reduced by 15.3%. Over the entire year, the fuel consumption will be reduced by 12.5%. Operational benefits were also quantified, such as a reduction of 13% of the vertical accelerations on the helideck in a typically encountered sea state, an increase in range from 5.000 nm to 5.850 nm and a safer launching and recovery of RHIBs from the stern slipway due to a reduced area of backwash. The navy will shortly conduct model testing for independent verification and will also consider Hull Vane® for their future new builds.

PATENTED

The Hull Vane® is now patented worldwide, designed and sold exclusively by Hull Vane B.V., which belongs to the Van Oossanen group, along with their naval architecture and computational fluid dynamics divisions. It is supplied as a finished product, including hull inserts. It is available to all ship owners, shipyards and naval architects. It is a perfect example of how CFD has accelerated innovation in ship design and only one of the possible efficiency improvements in the toolbox of Van Oossanen Fluid Dynamics. The Hull Vane® has won the Maritime Innovation Award in November 2015, where it was praised for its winning combination of simplicity and effectiveness. It's a relatively small investment to reduce emissions from a ship, which is paid back many times over in fuel savings and which improves the comfort and operability on board.

The Hull Vane® can be easily retrofitted to an existing ship, as it requires only a minor amount of internal reinforcements. Here a vessel is being fitted without having to be dry-docked.

THE APPLICATION OF TECHNOLOGY IN MARINE SURVEYING

The world of marine surveying is no different to any other industry sector or profession when it comes to the onslaught and proliferation of new technologies. The aim always is to make the task easier to carry out and arguably just as accurate, but in a shorter time frame and all down-loadable digitally. For some, this new technology is frightening. Dr Risto Talas sets out to prove the doubters wrong by explaining how iassessor™, a software app, can be deployed to good effect.

Around 11am one morning in early January 1999 I received a telephone call at my desk in Lloyd's asking me to a meeting with Stuart Todd, the new Protection and Indemnity (P&I) underwriter, whom we had recently recruited from the UK P&I Club. Our Syndicate, headed by Jonathan Jones since 1988, had grown by 1998 to have the largest book of blue water hull and machinery business in the Lloyd's market. Jonathan had taken a strategic decision in 1997 to take on the International Group of P&I Clubs and begin underwriting fixed premium P&I for vessels of any size (excluding passenger vessels) with limits of liability up to $1 billion. This development from an upstart hull underwriter had ruffled many a feather among the managers of the traditional Clubs, contented as they had been to swat away any concerns from the European Union about anti-competitive practices in P&I underwriting.

My meeting with Stuart was intended to last half an hour to discuss my role as the Syndicate's war underwriter, the brokers' hull war covers that we lead and other aspects of the war account for which I was responsible. Instead, our conversation was interrupted by a telephone ringing non-stop and soon thereafter the arrival of a steady stream of unfamiliar faces, in the guise of P&I brokers to see Stuart. I made my excuses and asked him if we could continue our conversation later that evening in the City Flogger wine bar. He mouthed the words "fine" while cupping his hand over the telephone's mouthpiece. Stuart arrived for a drink around half an hour late that evening, looking somewhat flustered. After a few glasses, I suggested that he might need a hand answering the telephone while he dealt with his brokers and before I could offer the services of my assistant, he roped me into the job. And so began an incredible initiation into the world of P&I in the run up to the 20 February renewal date. In those six weeks, we underwrote just under twenty million dollars premium of new P&I business; a staggering achievement for a completely untested product underwritten on a brand new wording, in a market that had not insured P&I since the 1850s. The speed and scale of the underwriting in January and February meant that it was not until early March that we had a final figure for the total tonnage that we had accepted; and ship owners were still receiving their underwriting documentation in late April. For the first full underwriting year we had allowed for two filing cupboards six foot tall by three feet wide for all the paperwork but by June we had filled four. Furthermore, to say that our hull underwriting IT systems were overwhelmed is an understatement – we had to design a new database from scratch to keep track of vessels, policy terms, deductibles and amendments. There was paper everywhere.

As with any marine underwriting operation, the underwriter wields his ink pen over the slips of paper that will become the marine insurance policy largely oblivious to the condition of the vessel, or even its whereabouts. The brokers do their best to keep shipowners at arm's length to prevent any meaningful relationship developing between shipowner and underwriter, lest the broker feel he or she is no longer in control of the relationship and might easily be substituted for another. In their day-to-day lives, marine insurance brokers also do their best to test underwriters by inserting innocent looking clauses into the proposed policy, such as extending collision liability or amending warranty wordings, which if not discovered by a sharp underwriter, may develop into a sharp practice by a broker. Nevertheless, in the P&I underwriting which Stuart undertook on behalf of the Syndicate in 1999, the one key phrase he inserted into every policy was "vessel(s) subject to survey within 30 days."

While this phrase was intended to protect the Syndicate from unnecessary exposure to a vessel deemed to be in poor condition, in reality it fell to the experts, such as Captain Michael Tskitishvili who worked in the Syndicate's claims department who would instruct surveyors or carry out the surveys himself. While our paths had not crossed for some years, I recently caught up with Captain Michael after his return from ten years in Greece where he ran his own surveying business, Argomar and began by asking him how he managed to cope back then with the huge number of vessels to survey in such a short space of time.
Captain Michael: *"The only difficulty was to get a ship's itinerary from Shipmanagers as soon as possible and then, as we had quite a developed network of surveyors, it was a matter of communication with a surveyor in the area of the ship's next port of call. The P&I survey format which we used was very useful and a helpful tool both for surveyors and for us as after receiving the completed reports we could immediately send lists of deficiencies found on board together with recommendations for corrective actions and the target dates to Managers. Then we only needed to ensure that the recommendations have been fixed in time."*

I then asked him how a paperless audit system would have assisted him in his role.

Captain Michael: *"It would have helped us and the underwriters enormously and I would have been freed from the paper routines and insurers would receive information about potential problems as soon as the survey would have been completed."*

While the episode I am describing took place fifteen years ago, I believe that it has relevance for today's marine surveyors as well.

I asked Captain Michael if he could recommend a colleague whom I could interview and he kindly put me in touch with Chartered Engineer Costas Markopouliotis of C.V. Markopouliotis and Associates, Piraeus. Below is a summary of our interview.

RT: How long have you been involved in marine surveying?
CM: *26 years.*

RT: What did you do before you became a marine surveyor?
CM: *I was a Shipyard naval architect and a superintendent engineer.*

RT: What types of vessels are you most familiar with?
CM: *ankers, dry cargo and yachts.*

RT: How many times have you been called to give evidence in a court of law based on one of your surveys?
CM: *20 times.*

RT: How long does it typically take for you to complete a survey?
CM: *It depends. Two to twelve hours, or in some cases days.*

RT: Do you rely entirely on a paper-based survey system?
CM: *No.*

RT: Do you rely partly on a paper-based survey system?
CM: *Yes.*

RT: Do you rely entirely on a paperless survey system?
CM: *No.*

RT: How do you capture photographs or video?
CM: *By camera.*

RT: How do you ensure you can date stamp your photographs or video?
CM: *Date by camera. Stamp if necessary in case of court only, by printing and stamping.*

RT: How do you capture your thoughts while conducting a survey?
CM: *Notebook.*

RT: If conducting a vessel survey, do you normally share your thoughts with any of the on board crew prior to departure from the vessel?
CM: *It depends.*
If condition survey, yes.

RT: How long does it normally take to compose your survey report?
CM: *Two to twelve hours.*

RT: Do you normally compose your survey report before you leave the country where the survey took place?
CM: *No.*

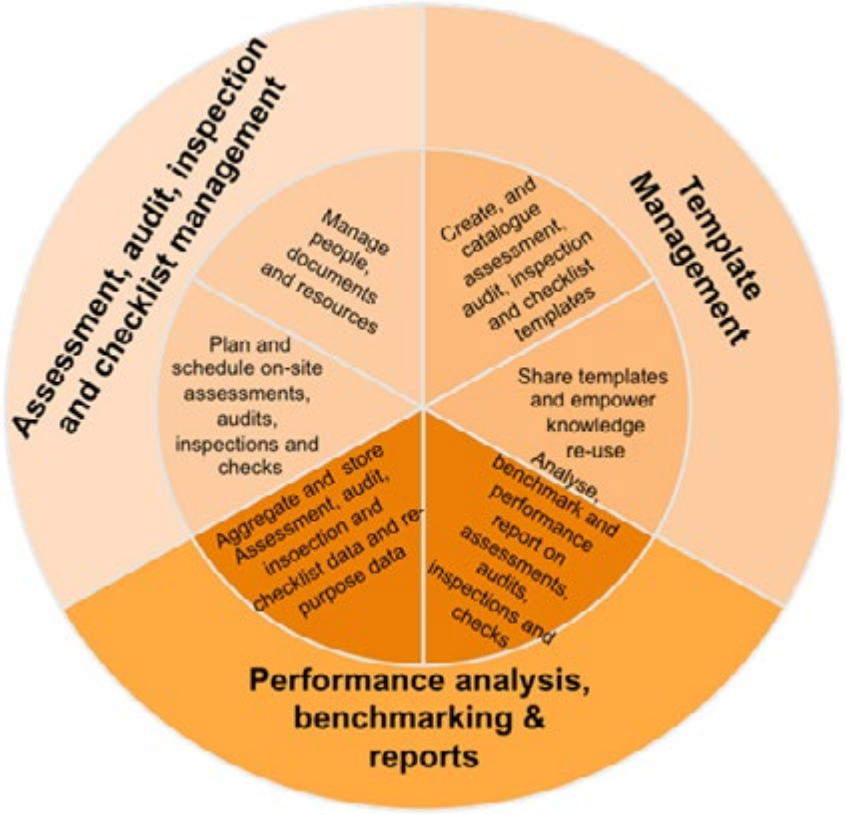
RT: How do you think the process of sending or receiving completed surveys could be improved?
CM: *By improving size of files able to be send by the computer.*

RT: What concerns do you have about using a paperless, automated system for surveys?
CM: *None.*

In my discussions and interviews with Captain Michael and Costas Markopouliotis, they both alluded to the increased use of technology in marine surveying, not only for Hull and P&I vessel condition surveys but also for new buildings, cargo and many others. I am grateful to them both for their time and comments.

This topic was also the subject of my presentation at the IIMS London conference in September in my former workplace, Lloyd's of London. As a director of synergia, the software solutions company, I presented on iassessor™, a new form of tool for marine and non-marine survey work.
So, what exactly is iassessor™?

The iassessor™ ecosystem delivers key capabilities that empowers people to do their jobs better across the Assessment/Audit process.



The conduct of Assessments/Audits within the iassessor™ ecosystem is based on the PDCA cycle.

Plan

- Research
- Reference Documents
- Create Assessment documentation
- Create, update and/or manage templates
- Complete Assessment pre-checklist
- Create new Assessment
- Schedule Assessment
- Assign Staff
- Allocate Resources
- Arrange logistics
- Brief Audit staff
- Pre-Audit meetings

Do

- Client Mgt brief
- Opening meeting
- Assessment begins
- Respond to questions
- Log Non-Conformances
- Log Issues
- Make Comments
- Make Observations
- Make recommendations
- Complete Exec summary
- Assessment sign-off
- Closing meeting

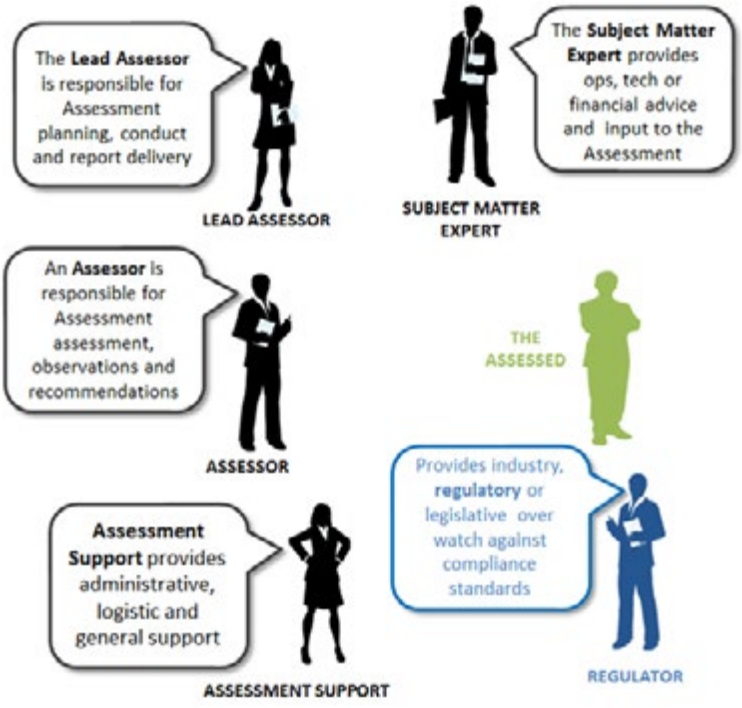
Share

iassessor™ is a software app, secure communications and data storage infrastructure for Governance, Risk and Compliance (GRC) management. It provides enterprises and organisations with powerful capabilities for: assessments, inspection; peer-reviews; and checklists and timelier management reports, monitoring and performance management.

iassessor™ is designed for either conducting integrated assessments across the enterprise as a comprehensive programme of assessments, inspections and checks, or it can be deployed for single-point assessments to meet a specific compliance or assurance requirement.

In its standard edition, the iassessor™ App software is a tablet computer app for field data capture, which also includes assessment reporting capabilities. The larger iassessor ™ecosystem also comprises and optional iassessor™ Portal with a larger set of capabilities and functions including: data synchronisation; secure cloud data storage; benchmarking data analytics; performance management.

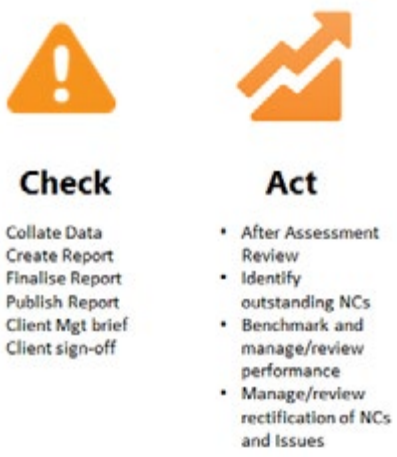
Assessments within the iassessor™ ecosystem involves the following personas, as shown below:



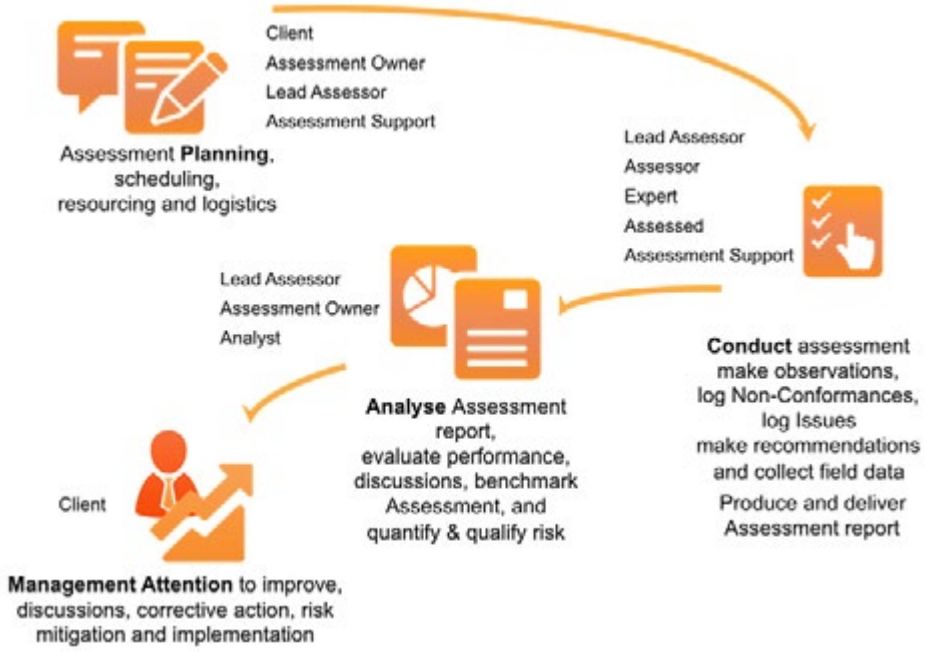
The shipping companies and Flag States that have deployed iassessor™ for their in-house surveys have reported both financial and efficiency savings. Surveys that are completed on site can immediately be prepared in an interim or full report format and can be downloaded onto a memory stick to be left with the master or chief engineer. There is no need for a surveyor to delay his or her next job through having to write up survey notes or attach photographs to an email - iassessor™ can be used to capture photographs and video and linked to specific non-conformances, which automatically date stamped.

Furthermore, a data compressed version of a survey report of less than one megabyte can be emailed directly from the device. The following sections contain some more information about iassessor™ and if you have any queries or would like to have a free trial, please email me at **risto.talas@synergia.biz**

It uses the following key processes, as shown below:



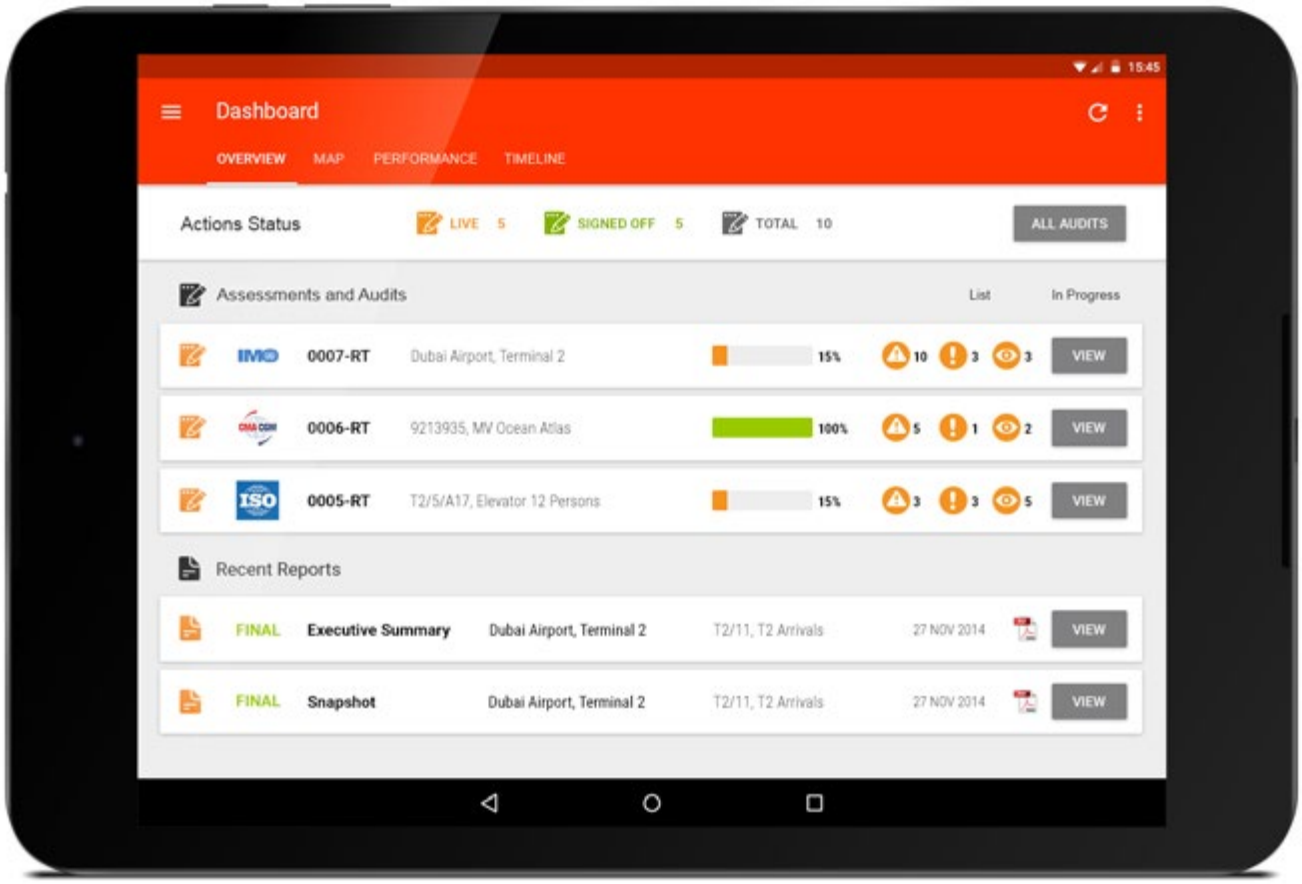
Assessments within the iassessor™ ecosystem is progressed through the following key stages, as shown below:



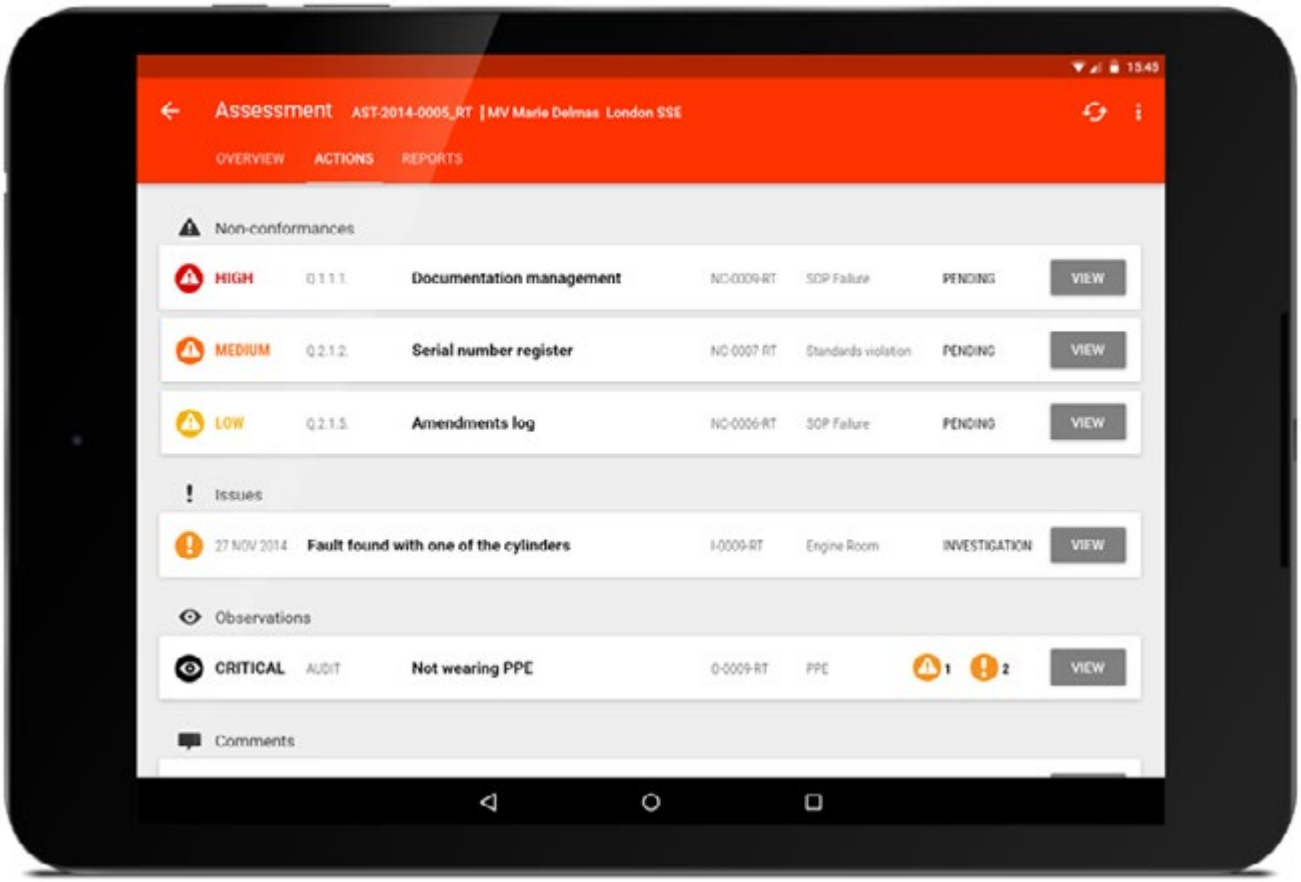
The functions delivered by the iassessor™ R4 App is shown below:

Function	Description
My Dashboard	A personalised space where the users messages, assessments, team, templates and non-conformances can be accessed
Templates	Downloaded templates for assessments, inspections and audits that are based on pre-configured questions and response types
Assessments	Enables the conduct of an assessment using a pre-formatted template. Captures field data, syncs with Iassessor server
Actions	Provides an easy-to-access summary of all Non-Conformances, Issues and Observations for all assessments
Map	An interactive map that shows the location of assessments, inspections, audits or checks. Auto geo-located
Social	A link to the iassessor™ Portal social network for sharing ideas, having conversations and accessing knowledge
Settings	User-configured switches and settings to control the operation of iassessor™ app for the end-user. Controlled by security access
Data	Downloaded and user-defined data used within the iassessor™ app
Reports	Provide seven types of management reports on assessment status and performance via dashboard and dynamic/exported reports
Sync	Enable the secure synchronisation of data from the iassessor™ app in the field to either on-premises or secure remote data store

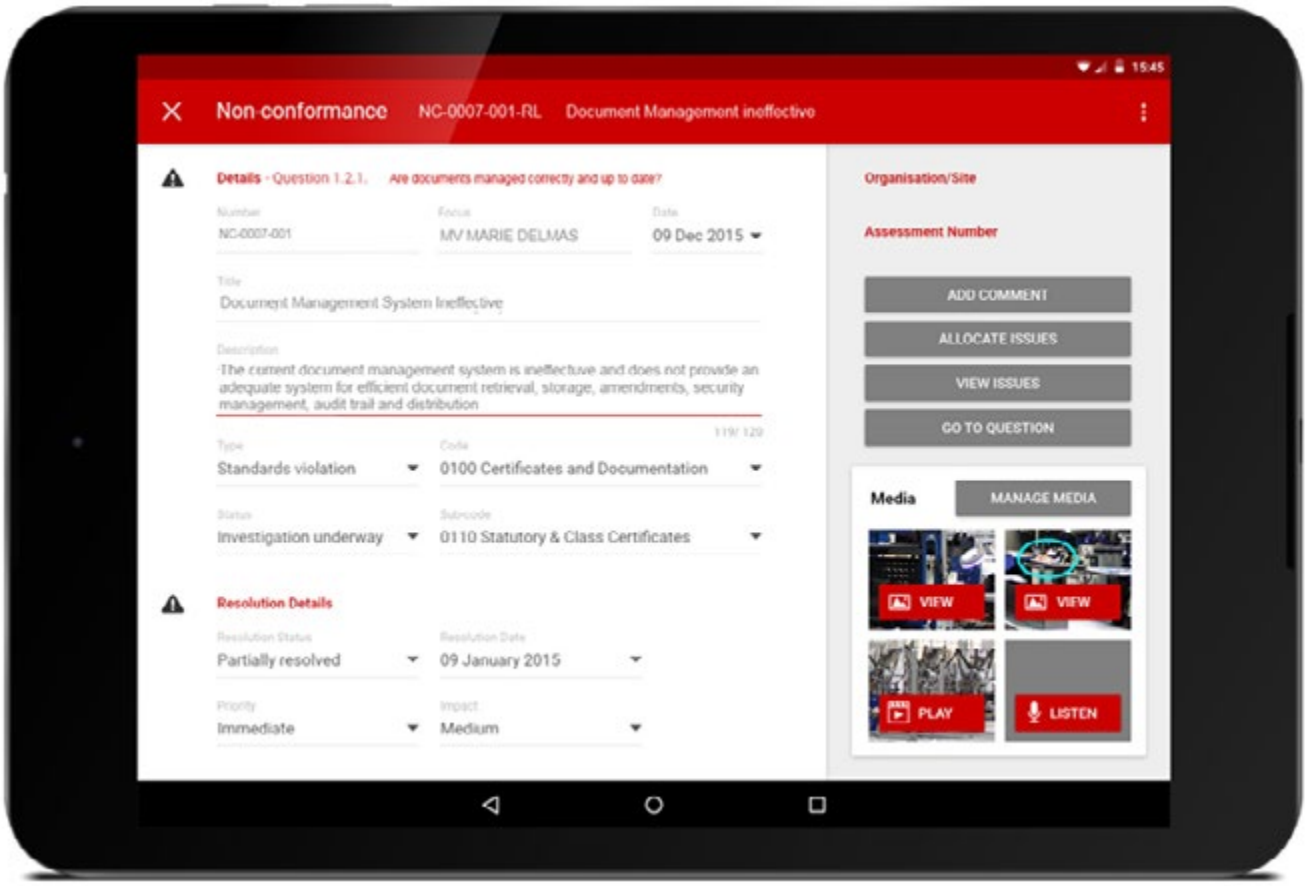
The iassessor™ R4 App uses a design pattern-based approach. The pattern for the iassessor™ R4 App Dashboard Page is shown below:



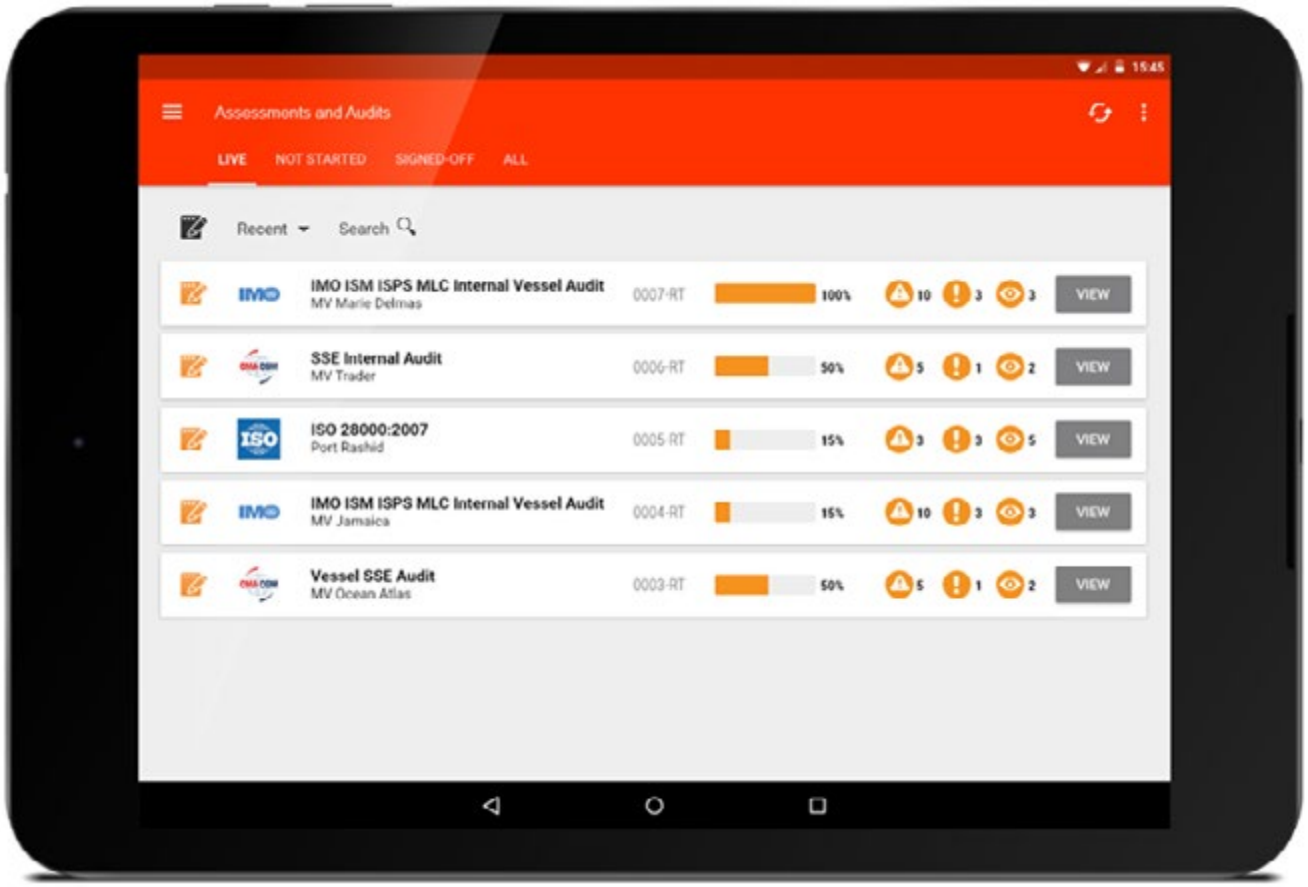
The design pattern for the iassessor™ R4 App list for Actions:Non-Conformances Page is shown below:



The design pattern for the iassessor™ R4 App for Non-Conformances:Detail Page is shown below:



The design pattern for the iassessor™ R4 App for Assessments and Audits List Page is shown below:



Valuation of a Second Hand Ship

BY **P.K. BHATTACHARYYA,**
FIIMS

The ship owners who offer cargo transportation services across the ocean require ships for the service. In order to acquire a ship the ship owner may place an order for building a ship in a shipyard and once the ship is built, it is put into service.

As this process is time consuming and requires amount considerable of financing, the ship owner buys a second hand vessel from the sale and purchase market and adds to its existing fleet. There are some ship owners who buy ships for asset speculation. The finance for acquisition of a second hand vessel is obtained from the ship owners own fund, or they borrow money, or use debt financing. In this background the valuation of a second hand vessel assumes importance. However, in order to carry out the valuation of a vessel a general overview of the shipping market is necessary.

OVERVIEW OF THE SHIPPING MARKET

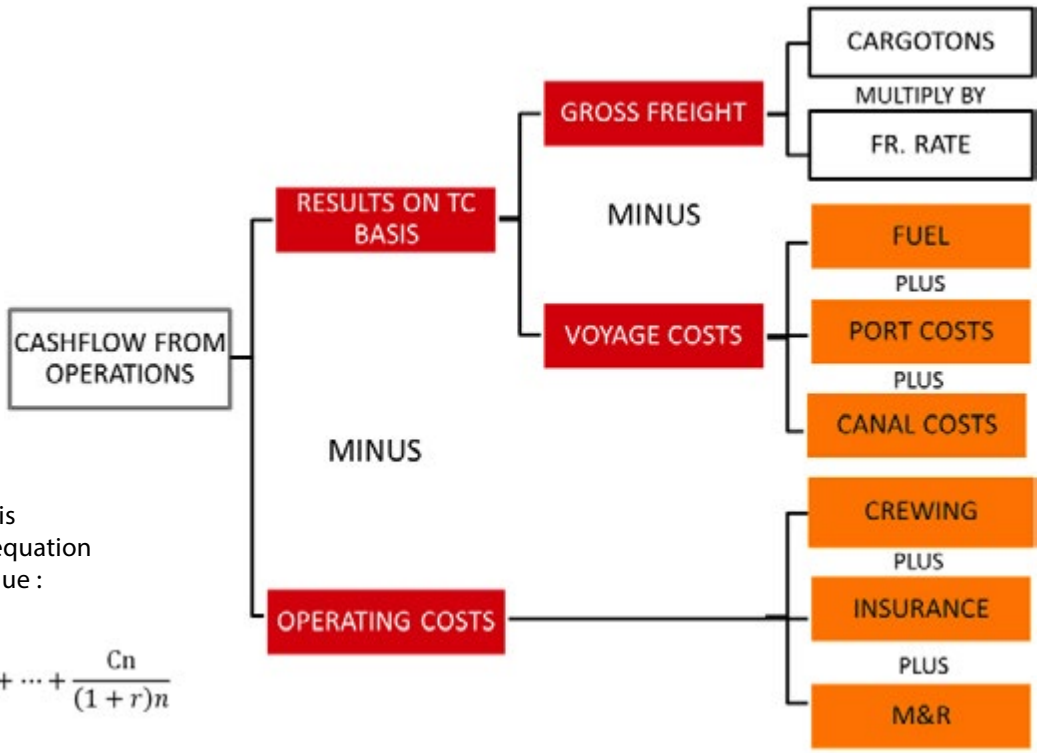
The International Shipping Industry is normally divided into four closely related markets, which have influence in the price of a second hand vessel. These are

- The Freight Market.
- Sale and purchase Market where second hand vessels are sold for further trading.
- New building Market. In this Market even a newly built ship is resold.
- Demolition Market. Here second hand vessels are sold for scrap.

Since the above four Markets are linked by CASH FLOW, the traders in these markets push the market directions the way they want.

WHAT IS CASH FLOW

The Cash Flow from a ship's operation, is the cash available after paying out the voyage cost and operating cost, thus providing a profit and yield return on investment. The major cost and revenue items that determine the cash flow is illustrated in the following diagram:



The influence of cash flow is reflected in the following equation for a secondhand ship's value :

$$Ps = \sum \frac{C1}{(1+r)} + \frac{C2}{(1+r)2} + \cdots + \frac{Cn}{(1+r)n}$$

Where

Ps = Ship Value

C1 = Net Cash flow in each period i = 1 .... n

n = No of expected year of trading

r = Rate of discount

SHIPPING MARKET DETAILS IN BRIEF

- The freight market consists of the Ship Owners, Charters and Broker. In the freight market four types of contractual arrangements are practised such as

  1) Voyage Charter
  2) CO A
  3) T/C
  4) Bare Boat Charter

- Freight derivatives, which include FFA (Forward Freight Agreement), container SWAP Freight agreements and option based on these financial instruments for trading in future levels of freight rates for bulk carriers tankers and container ships.

  These instruments are settled against various freight rate indices published by the BALTIC EXCHANGE and various transactions done by sale and purchase brokers.

The second hand ship's price is therefore market driven. Traditionally the equilibrium between supply and demand sets the market price of a second hand ship. However there is a difference between 'price' and 'value'. The 'price' is set by supply and demand and the 'value' is how much the vessel is worth excluding supply and demand.

SECOND HAND MARKET ANALYSIS

An analysis of second hand market can be represented in terms of Supply and Demand which is given along side:

- Demand for 2nd hand ship = $\int$ *(fr, Second hand price, nb price)* or Q^{D}_{SH} = $\int$ *(fr,second hand price, nb, Interest rate).*
- Supply for second hand vessel $Q^{S}_{SH} = \int$ *(order book / fleet, second hand).*

Since $Q^{D}_{SH} = Q^{S}_{SH}$ the function can be inverted to obtain Second hand Ship prices expressed as function of Second hand =

$$\int (fr, nb, \frac{order\ book}{fleet}, Interest\ rate)$$

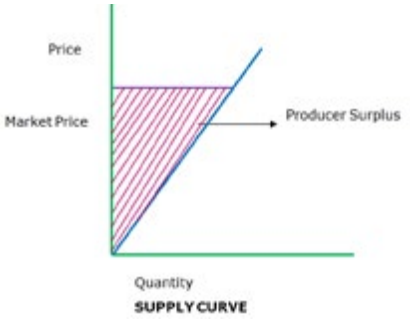
Where Second hand = Second hand Price

$$fr = \frac{\text{Vessel's Average time charter rate}}{\text{day for the year}}$$

nb = New building price

$$\frac{order\ book}{fleet} = 0/0 \text{ of total fleet}$$

The economic benefit is often measured by consumer surplus. This is graphically represented by the area under the demand and supply curve.



VALUATION

The valuation of a second hand vessel is normally carried out by following ways:

- DCF Valuation.
- Valuation by time series analysis and least square value of observed data.
- Mathematical modelling for valuation.

DCF VALUATION

Historically the primary measure of the value of a ship has been seen as market value, the estimated price for which the vessel could be bought or sold in a fair and open market. But the market value may not necessarily represent the real worth of a second hand vessel.

In the DCF valuation the main consideration is the vessel's capacity to earn during its remaining working life. This is done by Discounted Cash flow analysis. The outcome of such analysis is the present value of, or the long term asset value of the vessel.

The formula for Long Term Asset Value is

$$LTAV = \sum_{t=1}^{T} \frac{(C_t - B_t)}{(1+i)^t} + \frac{R_T}{(1+i)^T}$$

LTAV = Long Term Asset Value

T = Remaining life of the ship in years

t = 1, 2 ..... T are the remaining years

C_t = Annual revenue for year *t* in dollars

Bt = Annual Expenditure for year *t* in dollars

Rt = Residual Value of the ship in T year in dollar

i = Discount rate

VALUATION BY TIME SERIES ANALYSIS

The Valuation of second hand vessels can be carried out based on the reliable time series model of ship prices. The time series is comprised of four separate components such as trend component, cyclical component, seasonal component and irregular component. These four components provide specific values of time series, when combined data obtained from the Sale and Purchase market based on time series is plotted and a best fit curve is obtained. This curve is known as linear regression, which is a concept known as the Least square method. The Ordinary Least square fits a straight line to data by minimising the residuals. The process of minimisation is done by use of differential calculus, as explained below:

- Ordinary least squares (OLS) fits a straight line to data by minimizing the residuals (vertical distances of observed values from predicted values), top right:

$$Y_i = A + BX_i + E_i = \hat{Y}_i + E_i$$

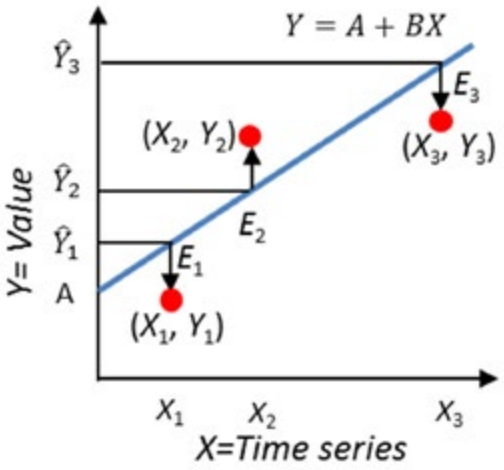
$$E_i = Y_i - \hat{Y}_i$$

where $\hat{Y}_i$ is the fitted value of Y_i.

- The solution for A and B ensures that the sum of the errors from the mean function is as small as possible:

$$\sum_{i=1}^{n} E_i = \sum (Y_i - \bar{Y}) - B \sum (X_i - \bar{X})$$

$$= 0 - B \times 0 = 0$$



For a fixed set of data, the residuals depend on the choice of A & B. This relationship may be expressed as function F(A,B).

Using partial derivation to 0, coefficients for A&B are obtained as given below.

$$F(A,B) = \sum_{i=1}^{n} E_i^2$$

$$A = \bar{Y} - B\bar{X}$$

$$B = \frac{n\sum X_i Y_i - \sum X_i \sum Y_i}{n\sum X_i^2 - (\sum X_i)^2} = \frac{\sum (X_i - \bar{X})(Y_i - \bar{Y})}{\sum (X_i - \bar{X})^2}$$

Once the value of A&B are obtained based on time series data, the value of second hand vessel can be found out by using equation Y = A+Bx for any quarter of Time Series.

MATHEMATICAL MODEL FOR VALUATION

The mathematical model for value of the vessel considering present discounted value of future cash flow, including scrap price, Residual life of the vessel and vessels income is given by the following function:

$$V(t,a) = \int_0^{T-a} \pi(t,a)e^{-rt}dt + Se^{-r(T-a)}$$

$$= \int_0^{T-a} [R(t,a) - C(t,a)]e^{-rt}dt + Se^{-r(T-a)}$$

$$\text{for } a \in [0,T]$$

Where
- V = Vessel Value
- ∏ = Net Cash flow
- r = Constant discount rate
- s = Scrap Value of vessel
- R = TCE
- C = Fixed operating costs
- t = time
- a = Current vessel age
- T = Demolition age of vessel and
- t = [0 .... T-a] is the period of time in which vessel will produce freight services.

HAMBURG FORMULA

The Hamburg Formula for ship valuation is based on Long Term Asset Value which is explained below:

$$TAV = \sum_{t=1}^{T} \frac{(C_t - B_t)}{(1+i)^t} + \frac{RW_T}{(1+i_{i=T})}$$

Where *(Hamburg Formula)*
- C_t = Current Net-TC–Rate in running year (Base: Con Tex; Baltic Dry Index (BDI); other proven data etc.)
- C_2-T = Average–Net-TC-Rate of past 8–10 years (if possible otherwise shorter)
- B_t = Average–OPEX of the last 8-10 years (if possible, otherwise shorter).
- i = Discount rate
- t = Period (t1 current year; t2–T: period end)
- T = Remaining period until 20/25 Years.
- RW_T = Residual value, based on ldt, average $ scrap price/ldt

The above formula seems to be quite practical. Hamburg Formula is in fact DCF analysis which is described in earlier paragraph.

AUTHOR'S PROPOSAL

The author proposes the following procedure for valuation without applying any data intensive mathematical model which may be suitable for a practising Surveyor/ Valuer, when he is called upon to carry out a valuation of a second hand vessel at the time of pre-purchase inspection.

The procedure is enumerated below:

- Considering the year of build of the Inspected vessel the new construction price for similar vessel is to be calculated (when the inspection was carried out) based on UNCTAD / BSRA data for New building cost / light Displacement ton of a vessel in US $.
- Using average of 3% annual inflation and percentage discount as applicable, the new building price of the vessel needs to be calculated for the day when inspection was carried out.
- The new building price thus obtained will be the price of the replacement vessel on the day of inspection.
- But as the vessel was actually old on the day of inspection a 5% depreciation per year is to be applied subject to maximum of 70%of new building price (depending on the vessel's age). That is the value of the vessel, which will be only 30% of the new building price being the residual price of the ship on inspection day. However this price of the vessel depends on the peaks and troughs of the market cycle.

The following example explains the methodology.

Estimating the Residual Value of a 10 years old bulk carrier.

Initial cost	$ 28 million
Depreciation	5%
Book Value after 10 years	$ 14 million
Inflation rate per year	3%
Expected residual value	$ 18 million
Cyclic trough Margin say	70%
Value of the vessel at trough	$ 5.5 million
Cyclic peak	70%
Value at cyclic peak	$ 31.1 million

Hence it is important to consider the second hand vessel market position when valuation is made.

CONCLUSION

The valuation of second hand vessel is a difficult task for a working Surveyor. The Valuation is normally carried out by Sale and Purchase Brokers using cross sectional data based on actual sale and purchase transactions in the second hand ship market which rely heavily on the time series model. But due to sheer illiquidity and the heterogeneous nature of the second hand market it is difficult to create a reliable time series based on available data. In order to avoid sale and purchase data it is proposed to approach the valuation based on the money value of a second hand ship and with a maximum depreciation of 70%, depending on the vessel's age.

EDUCATION

PART TWO

THE EDUCATION SYSTEM IN PAKISTAN

BY **Capt KHALIL U KHAN**
Regional Director,
IIMS Pakistan, FIIMS

The importance of education is an open fact. No nation can exist in the world without present modern education that builds nations and produces the cause of prosperity. It gives the path that leads towards bright future. So every country's education policy should be made according to the era time and situation. Our religion, Islam, also gives and tells the importance of education not only for men but also for women.

The real purpose of education in Islam is to get peace and to get close with Allah, Prophet (P.B.U.H) and his teaching; but unfortunately this essence of education is not only lacking in schools but also in madarsas who claim to be the benefactors for others.

Our parents put the burden on children's' shoulders and just make them cram different topics concerning science, arts and lot more. Our education policy has limited worth because of the burden the children have to bear. They are not usually able to find time to have complete rest, or doing other curriculum activities such as playing cricket, football, volleyball and swimming because they have little time. Even they are not able to give time to relatives because they get always busy with their books, making assignments and giving more time to their computer than to their parents and other close relatives.

Here we have to bring consideration towards systems of education running in our country. There are four to six government systems - private system, federal board, Aga khan board, and O level board. They are each providing a totally different quality of education. The parents who can afford Aga khan O level A level system can also afford to send their children to Europe, America, Australia and the UK for higher education. So what happens next is a "brain drain". Pakistan is not able to utilize their student's minds to bring prosperity to the country whilst the other students who belong to the lower and middle class are considered average students and they can only get average jobs.

In the Human Development Report, Pakistan is placed at 136th position for having just 49.9% educated population. In addition to that, Pakistan is ranked at 113th out of 120 registered UN members according to the research conducted by UNESCO. Some of the very basic flaws of the education system in Pakistan contribute to the economic, ethnic and socio-political crisis within the country.

Flaws of the Education System in Pakistan

Firstly, the education system of Pakistan is based on unequal lines. The medium of education is different in both the public and private sector. This creates a sort of disparity among people, dividing them into two segments. Such a distraught infrastructure is a basic cause of high illiteracy rate in Pakistan and high dropout rates in rural areas and public school.

Secondly, regional disparity is also a major cause. The schools in Baluchistan (the largest province of Pakistan by area) are not as good as those in the Punjab (the largest province of Pakistan by population). In FATA, the literacy rate is deplorable constituting 29.5% in males and just 3% in females.

The third major cause of the flawed education system in Pakistan is gender discrimination. The current primary school ratio of boys and girls is 10:4, which is a cause of huge concern. For the last few years there has been an increase in the growth of private schools. It is believed that Pakistan is among the most prominent states affected by gender discrimination, which harms the quality of education in the country.

Fourthly, the lack of technical education is the biggest flaw in the education policy that has never been focused before. Therefore, fewer technical people means low standard of education.

Fifthly, the average allocation of funds for education is very low. It is only 1.5% to 2.0% of the total GDP. It should be around 7% of the total GDP. At that budget level, the illiteracy rate in Pakistan would not decrease but rather increase. The federal and provincial governments need to cut down their expenditures in other sectors and spend a bigger proportion of income on education is essential. Further, the quality of education in most of the public schools and colleges is well below par due to the teachers in government schools being not well educated and trained. People who do not get a job in any other sector try their luck in the educational system; so the seed is not of food quality in the education system. They are not professional, nor trained teachers, so they are unable to train and to produce a good nation. The quality of teaching needs special attention in rural areas where major action should be taken and where the teachers lack in all departments.

In United States, Europe and most of the developed countries, the emphasis of the states is on developing virtual education systems i.e. provision of education through online networks. The idea of online education is gathering momentum fast and many online institutions have been set up which offer online courses and online degrees. For our country the Higher Education Commission and Education ministry need to focus on developing a strong online education network so that students throughout the country can benefit. Universities such as Harvard, Berkley and MIT are offering online courses and degrees. It reflects the importance of online education in today's modern high tech world.

Lastly, poverty is also another factor which restrict the parents ability to send their children to public or private schools. So, they prefer to send their children to Madrassas where education is totally free. The government has to make changes to financial infrastructure to improve the situation. Bank loans for education purposes should not be interest bearing as it discourages the people of Pakistan to acquire loans. Education loans should be offered at low rates such as throughout the world and thus enables people to acquire quality education. These loans are payable when worked at an easy installments level.

Social awareness regarding all the above issues needs to be spread and we, the people of Pakistan, have to work jointly with the government authorities to improve the current system. Our children should not be deprived of their basic right to acquire education and knowledge.

All the issues described here contribute to the high illiteracy rate, which results in economic crisis in the shape of high unemployment and below-par quality of labour. Moreover, the country suffers social, political and technological ineptitude! There are thousands of other problems which need our attention, but the core issues need to be addressed as soon as possible.

In this modern world, the benchmark for excellence is education. Moreover, if a country such as Pakistan has a distraught academic infrastructure, the chances to survive in the current competitive world are petite. The illiteracy rate in Pakistan is alarmingly high which calls for our utmost critical attention. The federal and provincial governments need to work together towards elimination of flaws in our education system in the country.

Pakistan's Educational System

If we look around ourselves, our friends and our seniors, we all come from very different schools, colleges and universities. Some are privileged enough to have studied abroad. They have the access to everything and anything they might feel like doing while studying in that particular institution. We have indeed created a privileged and proud class among ourselves.

According to the UN Charter, it declares that basic education should always be open to everyone irrespective of class, creed and colour.

The literacy rate in Pakistan is valued at different percentage levels. However in my opinion it is below 35 %. It is well below par. Moreover, if a person can write his name, he is classified as literate. The dropout rates in public schools are at all-time high due to rising costs of living for an ordinary man. Governments have always emphasized on surface level, the importance of education. But never has a proper implementation taken place. Even now, when the country is standing on thin pillars, only a petite proportion i.e. 2% of the GDP is allocated to education.

We should have a fair and un-biased educational system which unfortunately we didn't have. It should provide balance and equality for every fellow Pakistani if we succeed. Then this hatred of the two societies would end and people will again start to care and respect like in our old culture.

FACTORS WHICH AFFECT THE EDUCATIONAL SYSTEM OF PAKISTAN

Education around the world is considered as the defining feature of economic and social development. Pakistan has clearly lagged behind in the provision of adequate educational resources and consequently on the demand side has failed in creating a clear demand for education. However, it is important to realise that the problems which hinder the provision of education are not just caused by mismanagement by government. Some of them are deeply rooted in the social and cultural orientation of the people. Overcoming the latter is difficult and would require a change in attitude of the people. Until then universal primary education is difficult to achieve it.

Many reasons could be attributed to it;

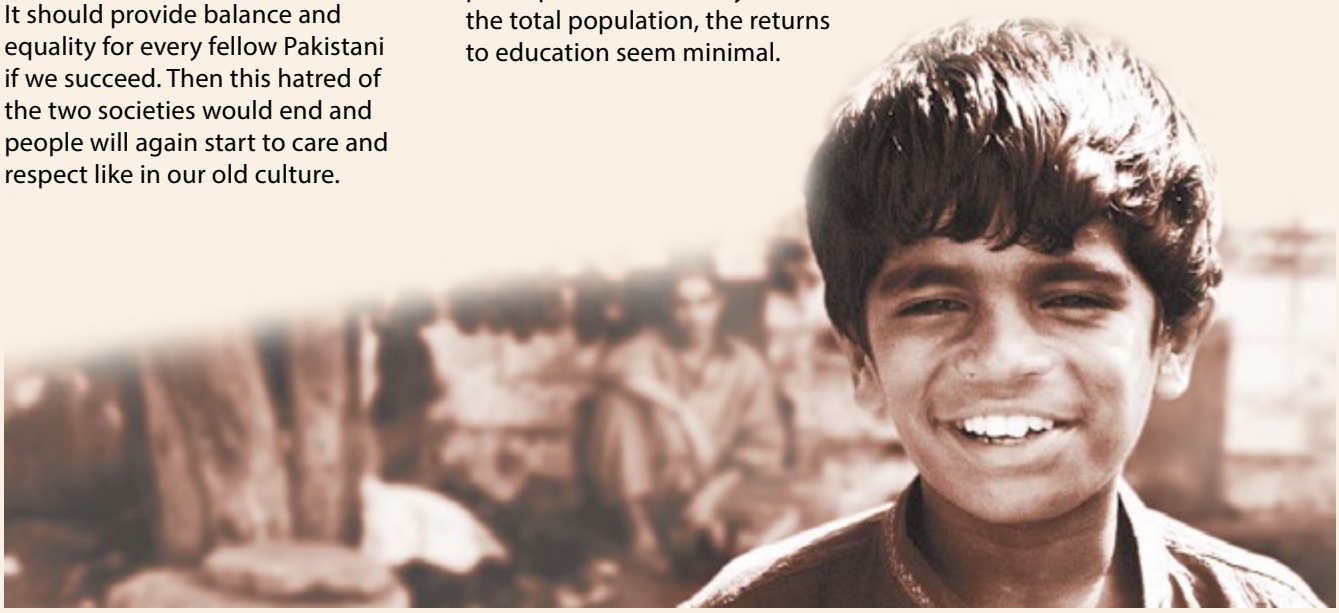
Gender Discrimination

Major factors that hinder enrolment rates include opportunity, cost, poverty, cultural constraints, illiteracy of parents and parental concerns about safety and mobility of their daughters. The economic benefits from schooling are particularly doubtful for girls as society approves of Pardah. Also, since girls have a labour force participation rate of only 4.3% of the total population, the returns to education seem minimal.

Female enrolment rates are low as the schooling system is considered to have a bad impact on girl's character. Society's emphasis on girl's modesty, protection and early marriages may limit the family's willingness to send them to school. Enrolment by rural girls is 45% lower than that by urban girls; while for boys the difference is of 10% only, showing that the gender gap is another factor. There exists a positive relation between enrolment and household incomes.

Cost Of Education

The cost of education is another determinant for parents to decide whether to send their children to government schools, private schools or no schools. The cost of education has increased further due to increased inflation. Educating a child in a public school costs twice as much to society as it would cost in a private school. Private schools appear cheaper but government fees appear "free" to parents. However society bears the cost by paying taxes. Societal "cost of learning" is lower in private schools, but private schools are located in richer settlements only. The paradox is that private schools are better but are not to be found everywhere; and government schools ensure equitable access but do not provide quality education.



Returns to Education
A Misconception

The issue with non-achievement of primary education to all is due to the low enrolment rate coupled with very low retention rate; especially for girls, in United Kingdom, "Education, Skills, and Labour Market Outcomes: Evidence from Pakistan" explained that returns to education are significantly greater for women than men in almost all occupations. This could be due to scarcity of educated women nevertheless; women actually earn less than men because of lack of equal opportunities. Moreover, returns to wage employment as well as returns to self-employment increase with the increasing years of education for both genders. This implies the presence of misconception of education having negative returns due to the forgone income. Thus there is a strong need to make the students and their parents aware that returns to education increase with an additional year of education.

Thus, to improve the cynical condition of education in Pakistan and not just the provision of education has to be focused upon by the government; but the problems of demand side of education needs to be addressed as well. Only then could there be a hope for higher enrolment rates accompanied with proper retention and low drop outs rate. Parents and society in general have to reshape their preferences for the system to improve. And to supplement this government has to provide the resources along with diverse opportunities to provide proper returns to education. Equality of opportunities where returns of education could be compensated is the key to fix the demand side problems of education.

"...today's students are tomorrow's nation builders..."

How to Improve the Education System in Pakistan

Education is a source that can turn a nation's fortune and bring positive change in any society. Well-educated nations are always successful in every field of life. Pakistan is one of those developing countries that is facing threatening problems and education is on the top of the list amongst such problems.

Here are some important and effective reforms that can help improve the educational system of Pakistan:

First of all the medium of all schools must be the same. The division of schools in the Urdu and English medium is a wrong concept that is destroying our education system. So, all primary schools must be in the English medium.

Secondly, there must be appropriate training programs for the teachers of Government schools. Most poor people send their children to Government schools for primary education. So the teachers in Government schools must be highly qualified and their salaries should be according to their needs and qualifications.

Computer study is essential at primary level. The students must have good knowledge of how to use a computer and how it is helpful in their studies. There should be computer labs in every Government school so that poor students, who can't afford computers at their home, can get knowledge of computers.

Allocation of funds to education sector by the Government is very low. The Government of Pakistan should allocate a greater percentage of total GDP to the education sector so as to improve the structure of the educational system.

Education is very important for the success of every nation. Unfortunately, Pakistan is one of those countries that has a poor educational system. It needs to improve its educational system by making changes in educational policies and overhaul the entire educational system. The government of Pakistan should take steps to improve the educational system because today's students are tomorrow's nation builders and proper educational opportunities can motivate them to work hard.

Fifty Shades of Insurance: Chapter 7

UNLEASHING THE ADVANTAGES OF MEDIATION

In this and the next chapter we will "pry" into the secret world of mediation, hopefully "unleashing" its advantages and "destroying" any myths and the mystery of the process.

Talking and listening are skills we use every day as a matter of course throughout our whole lives. It is however interesting that in certain situations we "freeze" and avoid talking with someone or listening to them, commonly when there is a conflict or dispute. What causes this we wonder? Perhaps the dislike of confrontation or the fear of not being able to handle a situation or being unsure whether what may be said could invalidate an insurance cover. There can be many reasons.

Conflicts and disputes don't just dematerialise suddenly, they won't go away on their own. Ultimately if there is no communication at an early stage in a dispute it can quickly escalate and soon costs can spiral out of control.

SO WHAT CAN FACILITATE DISCUSSION BETWEEN DISPUTING PARTIES?

A solution is to use a form of alternative dispute resolution and one of these is mediation which has now been recognised by the courts. Under the court practice directions litigation should be a last resort. Parties should consider the possibility of reaching a settlement at all times by negotiation or some other form of alternative method of resolving a dispute. If proceedings are issued parties may be required by the court to provide evidence that some form of alternative dispute resolution has been considered.

SO WHAT IS MEDIATION?

- It is a private non-binding, voluntary and without prejudice process in which a third party known as a mediator intervenes in a dispute as a facilitator for discussion with the intention of bringing the matter to a close in a written settlement agreement. That settlement agreement does not have to be financial; a party may agree to discontinue their claim.
- If the mediator is successful in assisting the conflicting parties to achieve resolution then a binding agreement is drawn up by the parties themselves and signed by the parties.
- At any time either party may choose to terminate the mediation process and continue with or start the litigation process.
- Hopefully at the very least the mediator will be able to assist the parties in narrowing the dispute to the key issues which can often have become blurred over time.

Mediation is a private non-binding, voluntary and without prejudice process

WHY BOTHER TO CONSIDER USING OR UNDERSTANDING MEDIATION?

These are just some of the reasons:

- To remove a conflict or settle a dispute at an early stage.
- For compliance with the requirements of court practice directions.
- To negotiate a settlement that could not be ordered by a court.
- To benefit from the advantages the process provides.

WHAT ARE THE ADVANTAGES OF MEDIATION?

There are many advantages in using mediation and these are just some of them:

- It is a relatively fast process as a dispute can generally be mediated within one day.
- There are benefits to businesses and individuals as resolution allows their lives to return to normal and stops affecting businesses.
- Unlike litigation mediation brings decision-makers together. You need decision-makers in the room otherwise the effectiveness of mediation is destroyed.
- There is an obvious cost advantage in that settlement by this method avoids the usual Court Protocols and procedures involved in litigation and even if settlement is not reached it has often reduced costs by settling certain issues at an early stage.

WHY CAN MEDIATION BE EFFECTIVE?

The mediation process assists in breaking down some of the barriers that frequently prevent resolution of a dispute.

- Parties in dispute often maintain their position as they feel they are right and they are reluctant to discuss issues with opponents.
- This stance frequently means that they leave their legal representatives to state their case with no flexibility for discussion or movement on any point, both sides can then become intransigent.
- Intransigence can lead to increased legal costs and as costs rise parties to a dispute become less willing to discuss and find a resolution to settle a dispute for anything less than they want.
- Mediation provides an opportunity for parties to voice their views and sometimes allowing just this can be more important than a financial settlement.

With the many benefits of mediation why not try it next time you have a conflict or dispute; the alternative is to participate in time-consuming, protracted litigation that can be stressful, a financial drain on resources and where the outcome is uncertain.

To be continued...

If you would like more information on the mediation process or would like to speak with a mediator please contact us.

Karen Brain
Managing Director - solicitor non-practising
Matrix Insurance Services Ltd
Tel: **01892 724060**
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A day in the life of Captain Allen Brink

Based in Durban, South Africa, Allen is a very long standing member of the Institute, an Honorary Fellow, past President and presently sits on the Management Board as well as being a Director on the Executive Board. Allen was present at the very first international organised gathering of Marine Surveyors, a Seminar held aboard the "HQS Wellington" on 22 April 1991, entitled *"Marine Surveying – A time for Self Appraisal"*. This Seminar was attended by some 150 delegates representing Marine Surveyors from more than 30 countries. It was from this gathering, together with the enthusiasm of a number of attending Surveyors, as well as Allen, which led to the formation of the IIMS in October 1991.

So it is fitting to catch up with Allen as we start to prepare for the Institute's Silver Jubilee year in 2016. Mike Schwarz poses the questions to Allen Brink.

Q1. Allen, please tell readers of the Report magazine how you got into marine surveying and what you did before you discovered this noble profession.

After completing high school in South Africa in 1970, I became interested in a sea-going career and commenced training as a Deck Cadet with a shipping company based in Durban. After obtaining my Master Mariners qualification in 1979, I did not want to continue "life at sea" and was subsequently offered employment as a Marine Surveyor with a long-established marine surveying company who were the Lloyds Agents and the Protection and Indemnity Club Correspondents (P&I Clubs), with offices throughout South Africa.

I joined this company in June 1980 as a Staff Surveyor in the P&I Club Correspondent subsidiary and throughout my 3-years of employment with them, I gained extensive experience in all marine surveying related matters ranging from cargo damage, cargo pre-loading and outturn, shipboard accidents / incidents, collisions, groundings, fires aboard, structural damage to vessels as well as matters relating to professional indemnity insurance liabilities. Three years later, in 1983, I had the opportunity of setting up my own independent marine surveying and consultancy company. AR Brink &

Associates was established in July 1983 in order to provide the local South African shipping industry with a prompt, reliable and cost effective marine consultancy and surveying service. Established initially as a one-man operation but with the intention to expand as it has done over the past 32 years, not only in terms of the number of Staff Surveyors employed but also in terms of extending services geographically to all Southern African and Southern Indian Ocean ports. Apart from conducting an extensive range of marine surveying and consultancy work, AR Brink & Associates are appointed correspondents to several P&I Clubs and conducts survey work for all Clubs in the International Group.

Q2. What are your areas of surveying specialism?

I have, in the past, conducted survey work covering all disciplines ranging from cargo, ship condition surveys, on and off Hire surveys, pre purchase condition surveys, P&I Club condition surveys, draught surveys, pre-loading surveys, accident investigations, ship repair super-intendence, collisions, groundings, damage to hull, damage to fixed and floating objects, stevedore damage claims, fire and explosion investigations, supercargo loading and discharge supervision, personal injury, heavy lift &and project cargo, heavy weather damage and all matters covered by protection and indemnity insurers. Now, after 32 years of running the company and having a team of experienced Staff Surveyors, I have tended to concentrate more on expert witness consultancy, not only for the local South African shipping industry but also for international clients including Underwriters, P&I Clubs and the maritime legal fraternity.

Q3. What do you believe are the key challenges facing marine surveyors in an ever changing and more complex marine world?

Marine Surveyors today are facing the challenge of maintaining credibility by having to continually practice CPD (Continued Professional Development) in order to keep abreast with the ever-changing international maritime regulations, especially those promulgated by the IMO, coupled with the evolvement of more complex ships and ever-changing electronic navigational aids with respect to those surveyors who concentrate on ship and shipboard operations.

Q4. Have you seen profound changes over the years in the profession and have they always been for the best?

The maritime and shipping industry, in general, is facing a huge challenge with respect to the source of experienced Marine Surveyors entering the industry. The traditional marine surveying career commenced with sea-going training, either as a Master Mariner or a Marine Chief Engineer. Today, in my opinion, the marine surveying profession is not as attractive with respect to remuneration as that of the seafarer who enjoys the benefits of an attractive tax-free salary with short terms of on-board service and generous leave breaks. Marine Surveyors, by virtue of the industry, are required to work extensive hours and travel to various destinations to attend to the required surveys, thus spending periods of time away from home and do not necessarily enjoy the same remuneration and leave packages of those at sea. As a result, profound changes have occurred in that Marine Surveyors are now having to evolve from all backgrounds of the shipping industry and thus specific and specialised training has had to take place, leading to the development and establishment of specific marine surveying education programmes, of which the IIMS has been the market leader, establishing the first series of distance learning diplomas in 2004.

This education programme, in my opinion, has been hugely successful and although aimed at training of non-seagoing background individuals, it has also provided a wealth of additional enhanced training for those with seagoing qualifications (i.e. Master Mariner and/or Marine Chief Engineer), enabling them to increase and expand their knowledge. Training courses for Marine Surveyors were not available previously and Surveyors gained experience by "on-the-job" training.

Q5. Which aspects of what you do are the most enjoyable and why?

Although I have throughout my career as a Marine Surveyor enjoyed most aspects of the work, I do now, in my senior years, enjoy the expert witness consultancy aspect. I find the research and drawing on my past experience to prepare complex reports for either arbitration or litigation, extremely satisfying. Furthermore, the satisfaction that I gain from having been selected by international clients to provide expert opinion, which in turn assists their case, is possibly the most rewarding.

Q6. As the IIMS prepares to celebrate a quarter of a century, what do you think the role and relevance of the Institute will be over the next twenty five years?

In my opinion, the IIMS has evolved superbly from when it was established in 1991, not only growing the membership and providing a professional body for surveyors to obtain support and a professional status in this unique industry, the Institute needs to continue its role in the education and training field, which will manifest its importance and relevance in promoting the profession as the industry continues to change and become more complex.

Q7. I know you spend a lot of time in the UK and London in particular. What is it about that city that draws you back (apart from work of course)!

London is the prime centre of all matters maritime. I enjoy the fact that I can mix with professionals of all disciplines in this ever-evolving maritime industry and rub shoulders with those who are at the forefront of the decision and regulation formulation. I also find the history of the City fascinating. I do not believe that I would like to live in London but for short visits, it is a city that excites me.

Another reason for my regular visits to London is that I am a member of several professional maritime organizations who have their head quarters based in London – i.e. I'm a Fellow of The Nautical Institute, a Fellow of The Royal Institute of Navigation, a Fellow The Society of Consulting Marine Engineers and Ship Surveyors, an Honorary Fellow of The IIMS, a Liveryman of The Honourable Company of Master Mariners and a Freeman of the City of London. Additionally, not only do I attend the various meeting and functions organised by these organizations but I also attending management and board meetings for the IIMS and the Nautical Institute (where I am presently the Vice President).

Additionally, the regular visits are also intended to ensure that I continue to connect with the relevant industry client base and promote and advertise the survey and consultancy services that A R Brink & Associates can provide.

Q8. How do you relax when away from work? Are we likely to find you on a golf course, or seeking out new cultures for perhaps?

I have never been one to totally relax. Ever since establishing AR Brink & Associates, I have made and continue to make, a point of keeping my finger on the pulse of almost every aspect and matter that the Company is handling at any particular time. I do enjoy travel and meeting up with fellow maritime industry colleagues. I enjoy savouring a glass of good red wine and have a fairly large wine cellar at my home in Durban. At present, I do not have the time to play golf but may do so when I slow down. I am presently involved in my first property development where my wife, Rene, and I are building a holiday cottage in an eco friendly wildlife estate in the Drakensberg mountains in Kwa Zulu Natal, South Africa. I enjoy visiting The Algarve in Portugal where I have an apartment in Lagos and of course, spending time in the Drakensberg in-between my regular visits to the UK – my apartment in London and my holiday lodge in Norfolk.

Q9. If you had one wish, what would it be?

I concentrated my endeavours at sea in the deck department, qualifying as a Master Mariner. Today, mariners can, if they wish, follow a dual qualification as Master and Chief Engineer. If I could have one wish, it would be to train in both these disciplines as well as follow on to a maritime law qualification. Being qualified in this way would be most useful to develop as a multi-disciplined Maritime Consultant and Surveyor.

Q10. And finally, as we prepare for the celebrations in 2016, do you have a personal message for IIMS members around the globe?

My message to all fellow Members of the IIMS is to continue CPD and gain knowledge coupled with the experience gained during survey work to enhance your professionalism and to bear in mind the definition of "Genius" – which is, 98% perspiration and 2% inspiration. One does not get anywhere in life without hard work.

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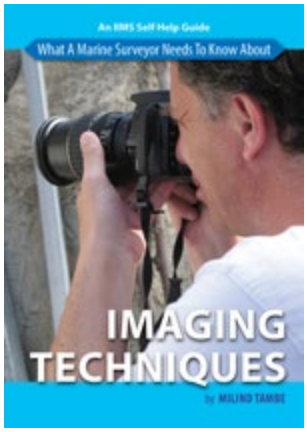

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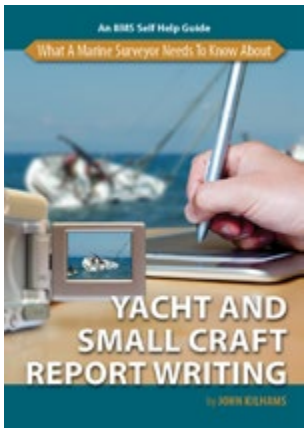

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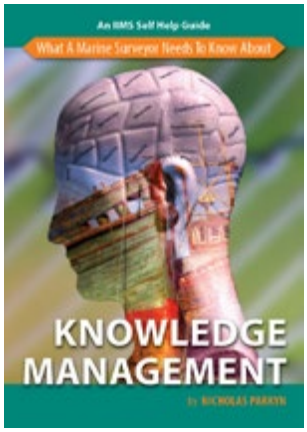

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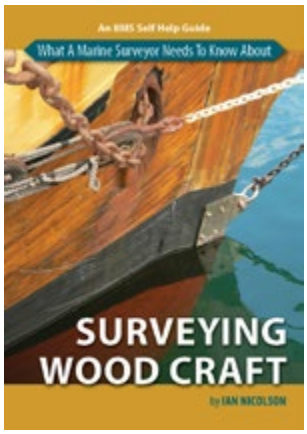

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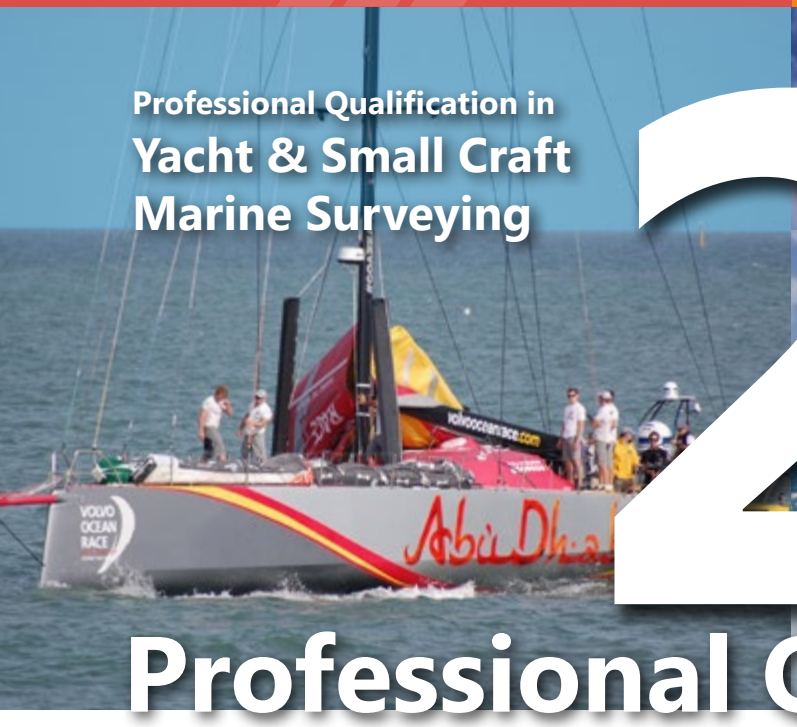

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