THE REPORT

The Magazine of the International Institute of Marine Surveying

SEPTEMBER 2018
ISSUE 85

INTERNATIONAL INSTITUTE OF MARINE SURVEYING

REACTIVATION INSPECTIONS FOLLOWING LAYUP

BENEFITS OF LONDON ARBITRATION

AUTOMATION AND THE FUTURE OF SUPERYACHT MAINTENANCE

HIDDEN BENEFITS OF AN ASBESTOS SURVEY

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Editor's Letter

Dear IIMS Member

What a corker of a summer we have had in the UK, but also in keeping with other parts of the world too, which have experienced similar soaring temperatures and turbulent weather patterns. The unexpected heatwave has made surveying here perhaps even more demanding than normal. Climbing on-board a boat with an inside temperature of 120 degrees Fahrenheit is not for the fainthearted or the unfit I would suggest!

Of course in other parts of the world, such as Singapore, heat and humidity are common place as I was reminded on my recent trip to that country. On the back of rising oil prices, there is cause for a little optimism and an improvement in surveying activity in Singapore was the message I picked up, but it is still slow and remains a tough environment for marine surveyors. I appreciated the opportunity to engage with some of our members in south east Asia during the recent seminars, which featured some fascinating presentations from some knowledgeable presenters. The prospect of an upturn, however small, makes reactivation surveying a hot topic. Andy Goldsmith, IMCA Technical Adviser, picks up this topic in an exclusive article written for The Report (page 34).

As Geoff Waddington, a future IIMS President, points out, surveying can be a tough game, lonely at times too and not a career path you would necessarily enter if you have i) a fear of being unpopular or ii) hate imparting bad news! He is the subject of this edition's 'The day in a life of' and reading about his 'near miss' in his early days in the British Navy in the Falklands and why he became known as *Bomb Head* is worth while.

The results of the first detailed IIMS membership survey for four years are published in this edition. My personal thanks to all those who took the time (and nearly 300 members did) to complete and respond to the survey. It has provided a welcome and valuable snapshot into what the membership thinks about the organisation. In broad terms the findings are largely positive, but I offer my own personal thoughts on the survey results, which can be found together with the outcome from page 26.

I apologise if the editorial balance of this edition is a bit 'big ship' orientated and will endeavour to rectify this next time! I make that point as I review the collection of articles, which range from the need for London Arbitration to the hidden benefits of an asbestos survey and on to the errors leading to inaccuracies in draught surveys.

Automation plays an integral role in the daily running of a superyacht, from using autopilot in the bridge to an automated fuel shut-off in the engine room. This technology improves not only efficiency but also safety. Read Bryony McCabe's fascinating overview (page 55).

The vexing subject regarding the risk of liquefaction from nickel ore cargo remains high. Janice Dao, Senior Claims Executive from Skuld, Hong Kong provides some context to the issue (page 55).

Karen Brain offers her usual insightful thoughts in her regular column – see page 74.

I would draw your attention to the Safety Briefings content from page 14. This section has become a regular feature in each edition now and one that members mention often as a valuable source of learnings resulting from accidents and serious incidents.

Mike Schwarz
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International Institute of Marine Surveying

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The President's Column

Dear IIMS Member

Hello from sunny Dubai. I am just back after a week-long break at my home town Pune where the green landscape and continuous monsoon drizzle was a welcome change.

I feel honoured to share my thoughts through this medium. The effort of not re-inventing the wheel, but rather increasing its revolutions, is going to be the mantra. Being a believer in action oriented good thoughts, words and deeds, I do feel my predecessor Adam had a valid point about "giving back" to this institute and its global campaign of professionalism in Marine Surveying. This institute needs worldwide regional and in-country representatives. So come please put your hands up members "you will get back much more than you give", and as Adam mentioned in his last column, I too am a strong believer in "Giver's Gain".

It's at those remote ports and harbours worldwide and those back of beyond marinas that the real need of a qualified and trustworthy Surveyor is most felt by the industry. Big towns have the "value for money" criteria and "who knows who" referrals as we all know. I believe IIMS can make inroads into the minds of principals and build a trusted partnership to empower the larger database of experienced surveyors we proudly hold in over 90 countries now. The employers of surveyors need to know this and use this resource. IIMS is underway with this and we will have big news rolled out very soon, I assure you. It's my number one campaign and very achievable with the digital forward-thinking mindset IIMS has developed in the past few years.

Singapore during early August was my first IIMS conference as your President. I gathered lots of interesting reactions and feedback. Singapore for IIMS has so much room for growth, possibly a branch in the near future? Enough has been said about the center of gravity shifting eastwards, related to global maritime activity. Personally, I do believe that the center will disburse into lots of focal points, but the umbilical cord will remain connected to English law and the English language. This is so deeply woven into virtually every major contract and shipment obligation that it will be hard to ignore.

Lastly, I feel it necessary to touch upon IIMS being inclined towards brown water or blue water surveying (like some say - small boats or big ships). I have gone through the comments and stats of the recent member's survey conducted by the IIMS team at Portchester with great interest. Very interesting qualitative feedback to say the least. Most was very encouraging and positive. My view on this subject of diversity in surveying is very strong, having sailed on the high seas on P&O Shipping's Cape size vessels and after my command since 2004 earned my living closer to brown water surveying with oil rigs, AHTs, crew boats and local yacht marinas, if at all I have to choose between the two worlds It would be like trying to make up my mind if my right heel or left balances my body. Personally, I don't see it in black or white. On the contrary, as your new IIMS president, I would endeavour to make the possible spectrum as diverse as bringing in coating inspectors, wind farm and alternative energy technicians, sub-sea inspectors and air borne drone inspections into our IIMS fold.

I can't wait to see what the future holds for this institute. Enjoy the rest of this Report. Please don't forget to report back with any comments that this column has generated.

Zarir.

Mr Zarir Irani *President*
International Institute of Marine Surveying
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NEW METHOD TO ASSESS STRUCTURE DURABILITY OF AGED SHIPS ANNOUNCED BY SHIP STRUCTURE COMMITTEE

The Ship Structure Committee is pleased to announce the publication of a new report, SSC-474, titled Structural Assessment of Aged Ships, authored by Mr. Gregory Walker, Mr. Brendan Connell and Mr. Sean Kery of CSRA.

The report describes the development of an assessment process to accurately predict the survivability of a corrosion-degraded ship in specific wave conditions. The method developed utilizes a ship specific 3-D hydrodynamic model to simulate the ship's rigid body dynamic response to wave conditions, measuring the resulting ship motions and pressure distribution on the hull. Pressure and acceleration data from the hydrodynamic model is then input into a 3-D finite element model of the degraded ship structure where the resulting stresses in stiffeners and plating are assessed against various failure modes, including buckling modes, which are calculated according to IACS Common Structural Rules. The results form the basis of a degraded ship strength assessment which can be provided to a ship owner and operator to make operational and repair decisions.

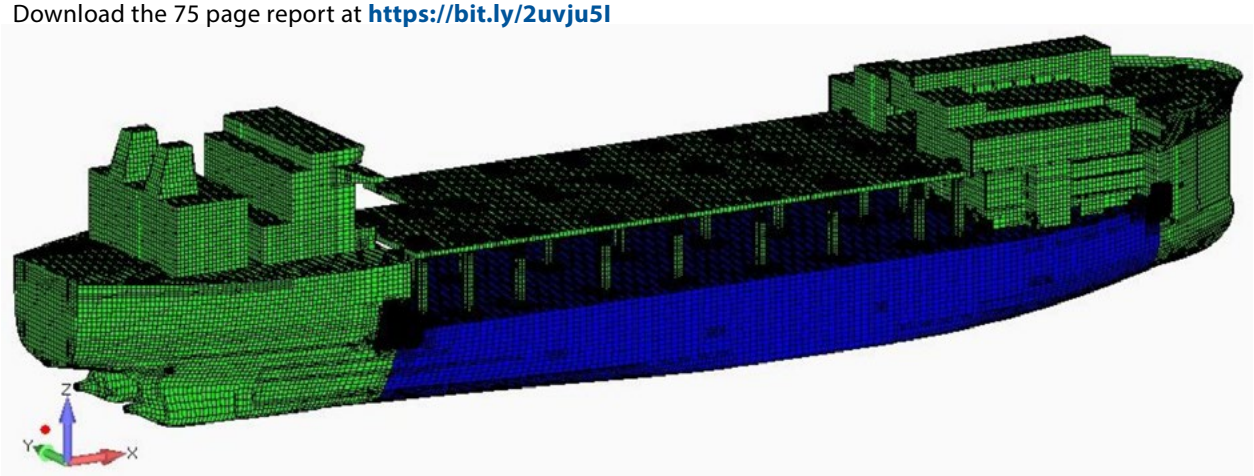
The report describes the development of an assessment process to accurately predict the survivability of a corrosion-degraded ship in specific wave conditions. The method uses a ship-specific 3-D hydrodynamic model to simulate the ship's rigid body dynamic response to wave conditions, measuring the resulting ship motions and pressure distribution on the hull.

After conducting a limited study of the Expeditionary Sea Base (ESB), a US Navy Auxiliary ship, with uniform corrosion beyond the typical 25% limit, hull bottom plate buckling coefficients rise dramatically, so that even in the lower sea states buckling of the hull plating is possible.

A more thorough investigation may reveal other failure locations with less than 25% wastage. Future research on this topic could consider and evaluate the residual strength of a ship structure with localized corrosion damage. Localized and nonuniform structural corrosion and pitting are probably more common than uniform corrosion across the entire hull structure, but is very case-specific.

The approach that the report uses to assess a degraded ship structure can be expanded and used to develop a safe operating envelope for a ship's hull structure with various degrees of corrosion. While many simplifications of scope and assumptions were made for this project, a more thorough assessment of a degraded ship structure can be accomplished, but would require modeling the ship's actual corrosion levels, more seaway conditions, more headings and more ship loading conditions, amplifying loadings to account for expected exposure times, and investigating more structural components such as internal tank bulkheads and their internal fluid loadings.

Download the 75 page report at **https://bit.ly/2uvju5I**



CHOOSE THE RIGHT CO ALARM, BUT BE AWARE OF FALSE CLAIMS WARNS BSS

Following recent media reports about non-working, imported carbon monoxide (CO) alarms sold on internet shopping sites, the Boat Safety Scheme (BSS) is cautioning boaters that choosing the right CO alarm is an especially critical decision as boats can fill in minutes, sometimes seconds, with lethal levels of the highly toxic gas.

The BSS has teamed up with the CoGDEM (Council of Gas Detection & Environment Monitoring) to urge boaters to choose one from the list of CO alarms suitable for boats as recommended by the makers of independently certified products. The list can be found on the home page of the BSS website.

Incident reports collected by the BSS show that properly certified CO alarms have repeatedly protected skippers and crews from the hidden dangers of CO and ought to be regarded as part of the boat's essential safety equipment.

The advice is to buy alarms that have been independently tested and certified by British Standards Institution (BSI). So, look for the Kitemark on the alarm or packaging or the Loss Prevention Certification Board, or look for the LPCB Certification Mark.

CO alarms certified to BS EN 50291-2 are the best choice for boats, but if you have a CO alarm, BSI or LPCB certified to BS EN 50291, or 50291-1, CoGDEM's advice is to keep it, test it routinely and when it needs replacing, choose a unit certified to BS EN 50291-2.

BSS Manager, Graham Watts said:
"Reports of new alarms not working out of the box are very concerning, so our advice to anyone worried that they have bought a non-functioning alarm for their boat is to reassure themselves by looking for the Kitemark or LPCB Certification Mark."

Leigh Greenham, Director and Administrator at CoGDEM added:
"We cannot stress enough that CO alarms are vital pieces of life-saving equipment, but only independently tested and certified alarms should be trusted to do this most important of jobs."

http://bit.ly/2OUeeRx

THE MARINE ACCIDENT INVESTIGATION BRANCH ANNUAL REPORT FOR 2017 HAS BEEN PUBLISHED

The Marine Accident Investigation Branch (MAIB) has published its 112 page annual report for 2017 today. the report in full can be downloaded in pdf format below. Writing in his introduction for the final time after eight years with the Branch, Steve Clinch, Chief Inspector of Marine Accidents, says:

"2017 was a typically busy year for the Branch, not only in terms of its investigation workload but also in respect of its effort to promulgate the safety message, build relationships with stakeholders and train its staff. Included in this report is a selection of the diary entries for MAIB staff, which I hope will provide a flavour of the diverse nature of the work they have been involved with during the year.

There were 1,232 accidents reported (1,190 in 2016) and 21 investigations were started (29 in 2016). The decrease in the number of deployments to marine accidents was due to an unusually quiet start to 2017, which saw MAIB inspectors being deployed on only two occasions between January and April. During May and June there were two further deployments to attend accidents involving UK registered vessels trading in the Arabian Gulf.

Full story and for access to the report in full: **https://bit.ly/2MtZvel**

FOLLOWING THE REPORT BY MARITIME NZ INTO A FATAL ACCIDENT NEW REGULATIONS ARE INTRODUCED

In the aftermath of the report published into a fatal accident in which two crew members of the yacht Platino died back in June 2016, Maritime NZ has announced regulatory changes. These apply to safety requirements for recreational vessels leaving New Zealand ports and for other recreational vessels operating in New Zealand waters.

The investigation concluded that many factors came together to cause the accident and the severity of its outcomes. One factor was that the crew, all of whom were experienced sailors, had not trained together for emergencies on board this yacht, and was not sufficiently familiar with its particular equipment.

Photo credit: Maritime NZ

In response, Maritime NZ Director, Keith Manch, said work is already underway with Yachting NZ to change Yachting NZ's Safety Regulations of Sailing that are used for safety inspections of all recreational vessels – sailing or powered – bound for overseas.

Maritime NZ requires all such vessels to be certified by qualified Yachting NZ inspectors before than can leave New Zealand. The vessels must get what is known as a Category 1 safety certificate.

Maritime NZ will also be working with Yachting NZ and other boating organisations about a range of technical requirements for vessels' equipment, and particularly about training for skippers and crew, and vessels operating manuals. While the changes relate to a range of equipment and procedures, at their heart is the preparedness and training of the skipper and crew. The skipper and crew must be familiar with the equipment on board, know how to use it correctly, and know how to respond in an emergency.

LONDON P&I CLUB ONE OF THE FIRST TO DECLARE THEIR STRATEGY IN THE EVENT OF A HARD BREXIT

UK maritime insurer London P&I Club is taking out an insurance policy against the business risks of Brexit by opening a subsidiary in Cyprus. The European market accounts for nearly two-thirds of London P&I's business, and a Cypriot entity would still be able to operate under EU rules with EU clients in the event that a "hard Brexit" impedes cross-channel transactions.

London P&I, which has been serving the UK's maritime sector since the dawn of the steamship era, told Reuters that it is now obtaining the necessary licenses from Cypriot authorities and setting up its new operations in the island state. they are one of the first to openly declare their post Brexit strategy.

Britain's financial services sector relies heavily on a European client base, and it has lobbied heavily for a Brexit deal that ensures continued market access. However, successive British proposals for an open-market agreement for finance have met with disapproval from Brussels.

On Friday, lead EU negotiator Michel Barnier rejected UK Prime Minister Theresa May's latest plan for post-Brexit financial ties. Her government had proposed a system of "enhanced equivalence" involving mutual recognition of financial regulations between the EU27 and the UK, similar to "equivalence" arrangements that the EU has with the U.S. and Japan. Under May's proposal, though, the EU would have had to give Britain a longer period of prior notification before any cancellation of the agreement. Barnier told media that this was not acceptable since it would effectively allow the UK to set the terms of an EU policy. "Equivalence" has historically been a trade benefit that Brussels conveys upon its close partners, and the existing arrangements have a one-month cancellation period.

BPA CALLS FOR ALCOHOL LIMITS IN UK RECREATIONAL BOATING

The British Ports Association (BPA) has called for new legislation to introduce alcohol limits for non-professional mariners, replicating the rules that already exist for commercial ships in British waters.

Commenting on the anomaly, the BPA's Chief Executive, Richard Ballantyne, said:
"As it is Maritime Safety Week its right that we revive the debate around the gap in legislation regarding alcohol limits for non-professional mariners. We understand there will be technical challenges to overcome and also that enforcement will not be easy but it cannot be right in this day and age that such a sizeable section of our maritime sector is exempt from drink-drive rules. There have been too many occasions when alcohol has endangered lives in the maritime environment, both within and outside ports and harbours."

Professional mariners and fishermen in charge of commercial ships are covered by alcohol limits but there is a loophole for those in the leisure sector.

Mr Ballantyne continued:
"This issue was last seriously looked at a decade ago when there was resistance from parts of the recreational marine community. However times and attitudes are changing and we feel that if the UK Government brought forward proposals now, the marine leisure and yachting sector would be more conducive to change.

"Rules for road users brought about a gradual change in culture for vehicle drivers but without new legislation, in the marine environment, it is difficult to see how we can drive a similar shift in behaviour. We have raised this with the UK Government and would welcome a constructive discussion with the with organisations such as the Royal Yachting Association and the Cruising Association along with the Department for Transport and the Maritime and Coastguard Agency, to look at how legislation might be drafted."

OCEANCO LAUNCHES 90 METRE SUPERYACHT PROJECT SHARK

Dutch shipyard Oceanco has delivered its 90-metre (295-foot) motoryacht Project Shark making her one of the 100 largest superyachts in the world.

Exterior styling comes courtesy of DeBasto Design, with interiors by Nuvolari Lenard. She reflects the latest advances in glass technology and is the first yacht in the Netherlands to be given the official Lloyd's Register Integrated Bridge System (IBS) notation and designation.

Project Sharks features a steel hull and aluminium superstructure completed with reflective glass. From the interior, the glass yields panoramic floor-to-ceiling views aft, port and starboard. Her design was crafted to maximise opportunities for outdoor living and to have direct contact with the marine environment.

"The profile has a unique sense of contrast and homogeneity between the dark glass and the white balconies, providing a constant exchange in shape and lines between the two elements," said Luiz DeBasto of the design.

He added, "My initial drawings may have looked like a futuristic concept, yet she is now a very real yacht on account of the execution made possible by the advanced technology of the Oceanco engineering team and by the vision of her experienced owner and his team."

AUSTRALIAN REGULATOR AMSA SETS DEADLINE FOR FLOAT-FREE EPIRBS TO BECOME MANDATORY FROM 2021

From January 2021, AMSA is imposing regulation that float-free EPIRBs will be mandatory on certain types of commercial vessel. This change to safety requirements is in response to tragic incidents in which commercial vessels sank quickly and the master and crew were not able to deploy their EPIRB in time.

AMSA will give industry a two-year transition period to plan for the added cost of fitting a float-free EPIRB, but calls owners to fit one to their vessel as soon as possible.

The National Standard for Commercial Vessels (NSCV) will change from 1 January 2019, with a two-year transition period for operators to comply, but AMSA calls owners to fit a float-free EPIRB to their vessel as soon as possible.

From 1 January 2021 it will be mandatory for the following domestic commercial vessels to carry a float-free EPIRB:

- All fishing, passenger and non-passenger domestic commercial vessels (Class 1, 2, and 3) that are equal to or greater than 12 metres in length and operate beyond 2 nautical miles from land;
- All fishing, passenger and non-passenger domestic commercial vessels (Class 1, 2, and 3) that are less than 12 metres in length operating in restricted offshore and offshore waters (B or C waters) and do not have level flotation, and;
- All hire and drive vessels operating in restricted offshore waters (Class 4C) equal to or greater than 12 metres in length, or less than 12 metres and do not have level flotation.
- This change applies to new vessels, existing vessels, and transitional vessels. It also applies to vessels that are exempt from the requirement to have a certificate of survey.

Vessels without level flotation that are less than 12 metres in length and operating in D and E waters will not be affected by the changes. Similarly, all vessels that are less than 12 metres with level flotation can continue to carry the kind of EPIRB currently required regardless of where they operate.

OYSTER YACHTS PLUMPS FOR NEW SAFETY CERTIFICATION PROCESS

Oyster Yachts has formed a partnership with Lloyd's Register EMEA (LR) to secure a safety certification process to be implemented on all its new built yachts.

LR will approve the design, materials and build quality of all hulls and decks on Oyster yachts. To ensure compliance with LR rules, an LR surveyor will inspect all yachts in production once per week. As a result, all newly built Oyster vessels will carry an LR moulding certificate immediately upon completion. Oyster will become the only British builder of sailing yachts sub 24m to carry out this level certification.

Richard Hadida, Oyster's CEO, said: "It is incredibly exciting to be working with such an esteemed, globally recognised partner in LR, another great British brand. This third-party accreditation will assure all Oyster customers that their yachts are crafted in accordance with relevant international standards, particularly with regards to safety."

The mould production facility is expected to open in September, with the first LR certified yachts to begin moulding in September.

"By bringing total control of our hull construction in-house for the first time, we not only continue to provide more jobs in the Norfolk area but also scale-up production capacity," explained Richard. "This is key to our growth plans as orders continue to increase. There are precious few smaller vessels with this level of certification and this is yet another way in which Oyster's yachts set themselves apart."

DNV GL ISSUES FIRST TYPE APPROVAL FOR ALUMINIUM CABLES ONBOARD SHIPS

As the competitive and economic pressure on the shipping and offshore industries continues to grow, owners, operators and yards are searching for every efficiency. To support its customers, DNV GL has developed the first type approval scheme for the use of aluminium cables and connectors onboard vessels.

"This type approval represents another first for the DNV GL rule set and demonstrates our commitment to moving classification forward to help our customers," says Geir Dugstad, Senior Vice President, Director of Ship Classification & Technical Director at DNV GL – Maritime. "Electrification is playing an increasingly important role in ship propulsion and this new type approval can help to reduce costs and improve sustainability."

DNV GL's new type approvals for aluminium cables and connectors allow expensive copper to be replaced with aluminium. The cost savings can be significant – with the price of aluminium in 2018, approximately one third that of copper.

"Traditionally, power cables for marine use have been made with copper," explains Ivar Bull, DNV GL – Maritime. "Copper is an ideal electrical conductor of course, but the price of copper has been rising sharply over the last several decades – putting increasing cost pressures on the maritime industry. At the same time, electric propulsion is becoming more widespread in shipping, which will increase the demand and importance of finding more economical power cables."

THEYACHTMARKET.COM SOUTHAMPTON BOAT SHOW SET TO CELEBRATING 50 YEARS OF BOATING EXCELLENCE

This year TheYachtMarket.com Southampton Boat Show celebrates its golden anniversary. Over the last 50 years it has been the launchpad for boating legends, seen the evolution of ground-breaking technology and tracked the rise of global marine brands. Visitors will be able to see the best of the past alongside the latest and most innovate craft and technology on the market.

Taking place from 14-23 September 2018, this year's Show will boast an expected 100+ debuts and more than 500 exhibitors, of which 81 will be new to the Show for 2018. Additionally, it will showcase pioneering environmental research.

The Show will also mark the 50th anniversary of the first single-handed non-stop circumnavigation of the globe with Sir Robin Knox-Johnston's Suhaili on display. Plus, sporting stars and celebrity supporters of the event over the last 50 years will be welcomed and there will be a touch of the late 1960s in the new Guinness Bar and refreshments area. What's more, any golden couples from Southampton celebrating their 50th anniversary during the Boat Show (14-23 September) will gain free entry to the event.

AUSTRALIAN GOVERNMENT EXTENDS DOMESTIC COMMERCIAL VESSEL SCHEME LEVY-FREE PERIOD IN SURPRISE MOVE

In an unexpected turn in the face of severe criticism from the local surveying profession, the Australian Government government has announced an additional AUS$10 million in funding to support the launch of the National System for Domestic Commercial Vessel Safety (National System). The scheme, administered by the Australian Maritime Safety Authority (AMSA), officially started on 1 July.

Last year, in response to an industry backlash over new fees and charges associated with the National System, the government promised AUS$102 million in funding over ten years and announced that no levies would be charged during the first year of the scheme's operation.

With the additional government funding, the levy-free period has now been extended to three years.

Announcing the funding boost, deputy prime minister Michael McCormack said the government remains committed to the National System delivering safety benefits for commercial boating, fishing and tourism operations across Australia.

"The Australian Government has listened to the concerns of Australia's domestic commercial vessel industries about the cumulative impact of costs and charges on these industries. In response, I am announcing the Australian Government will provide an additional AUS$10 million funding for the national system, increasing our total contribution to AUS$65 million over ten years, and increasing total funding by all governments to AUS$112.4 million.

"This additional funding will mean no levy will be charged to industry for the first three years of AMSA's service delivery to assist all operators as services transition.

"This will provide two more years for AMSA to engage with industry on a range of important matters."

New fees for services provided by AMSA to individuals, such as issuing safety certification to vessels and seafarers, and accrediting marine surveyors, were also introduced on 1 July. However, the government also announced that due to "efficiencies that have already been identified" by AMSA, the fee for a new Certificate of Survey and a Certificate of Survey renewal will be reduced from $366 to $206.

A review of all costs and charges for the National System will be conducted in 2020–21, including public consultation.

ELECTRICAL FAULT CAUSED THE FIRE ON BEST REVENGE 5 SAYS NTSB REPORT

The NTSB has issued its investigation report on the fire onboard sailing boat 'Best Revenge 5', while it was docked at a marina pier at Inner Harbor in Falmouth, Massachusetts, in July 2017.

At about 0130 on 11 July 2017, the 'Best Revenge 5' caught fire while docked at a marina pier in Falmouth Inner Harbor. The vessel's two crew members escaped the burning vessel and attempted to fight the fire but could not contain it. Local firefighters later extinguished it.

One crew member sustained second and third degree burns to the arms, hands, and feet. An oil sheen was observed in the immediate vicinity of the vessel after the fire but was contained by a floating boom.

Damage to the Best Revenge 5 (which was declared a constructive total loss), to a vessel docked next to it, and to the pier totalled an estimated $1,508,000.

Probable cause
The National Transportation Safety Board determines that the probable cause of the fire aboard the uninspected sailing vessel Best Revenge 5 and on its pier was an electrical fault in an accommodation space on the vessel.

Analysis
After the fire, marina personnel reported that the circuit breaker powering the dock pedestal from shore was in the "tripped" position (electrically disconnected as a protection measure) and that the two shore power circuit breakers onboard the vessel (fed by cables from the pedestal) were undamaged and tripped to the "off" position as well. They concluded that the vessel "may have been [electrically] powered at the time of the fire."

The fire originated on the port side of the vessel; specifically, in the area between the port side lavatory, aft stateroom closet, and port side hull, in the area of the shore power pedestal. The only potential ignition sources identified within the area of origin were the shore power pedestal, electrical conductors/ components in the lavatory, aft-port stateroom closet, and area above the aft port lavatory/shower area. The only fuels identified were the fiberglass hull, insulation, and ordinary combustibles within the area of origin. The report noted that both equipment and conductors that may have been affected by the lightning strike (which occurred a month earlier in Bermuda) were "located in the general origin area of the fire.

Full story and report available here: **https://bit.ly/2L1qwcD**

CLASSNK PUBLISHES ITS ANNUAL REPORT ON PORT STATE CONTROL WITH ILLUSTRATED DEFICIENCIES FOUND

Leading classification society, ClassNK, has released its 2018 annual report on Port State Control (PSC). The report aims to assist ship operators and management companies in maintaining compliant operations by providing information about ships detained by PSC as well as deficiencies that were found on board from many port states in 2017. However, surveyors will find the examples and images of the deficiencies illustrated in the report of key interest too.

In line with the International Safety Management (ISM) Code, PSC inspections ensure that vessels departing the port meet international standards and have proved to be highly effective in eliminating substandard ships that are in operation. They oversee not only the hardware of a ship, but also the software by examining the maintenance and operation methods being used.

To help its customers improve safety management systems and overall fleet quality, ClassNK has included a breakdown of deficiencies which shows that fire safety-related deficiencies continue to be the most frequent detainable deficiencies item. ISM, lifesaving appliances and safety of navigation also remain major items where many detainable deficiencies are found.

Click to download the 58 page report: **https://bit.ly/2uEbxKP**

FIRE ONBOARD 'BBC XINGANG' STRESSES HAZARDS ASSOCIATED WITH HOT WORK

The Australian Transport Safety Bureau has published its investigation report on the fire onboard the general cargo ship 'BBC Xingang', while berthed at Mayfield number four berth in Newcastle, New South Wales, in December 2017. The incident highlights that, prior to hot work, cargo coverings should be carefully assessed and adequate protection against damage or fire due to hot material should be provided.

The work commenced in the number two cargo hold tween deck. Gaps between the tween deck pontoons were filled with fire blankets (made from woven fibre and leather) to stop sparks from falling onto the cloth-covered cargo in the lower hold. A small diameter fresh water hose was laid out and a makeshift water spray extinguisher readied for immediate use in the lower hold. Cargo in the lower hold was covered with the transport cloth, but was not covered with fire blankets.

At 1015, the boilermaker began removing the stoppers. The port captain asked that sparks be directed away from the cargo to protect the component surfaces. This request, in some cases, resulted in the sparks being directed toward gaps between the tween deck pontoons.

The work continued as expected and, at 1100, the boilermaker stopped to relocate to the next stoppers on the tween deck. As part of checking the new work area, he lifted a fire blanket and could see small flames and smoke in the lower hold through the gap in the tween deck pontoons. He immediately raised the alarm. The lower hold fire watch was notified on the radio. At the time he was notified, he was not near the area directly under where the work was being conducted. After moving to the relevant area, he quickly extinguished the fire using the water hose and water spray.

An inspection of the work site following the fire identified that molten metal and other hot material produced by the hot work had burned through the fire blankets. This hot material fell onto the material covering the cargo in the lower hold, resulting in the fire. As a result of the fire, the material covering the cargo was damaged and some surface blemishes were apparent on the cargo itself. No other damage was reported. Subsequent inspection of the cargo covering material found it to be 100% polyester transport cloth with a maximum rated temperature of 200 °C.

Full details, findings and lessons learnt: **https://bit.ly/2umziYv**

A CULTURE OF POOR MAINTENANCE PRACTICES LED TO CARIBBEAN FANTASY FIRE SAYS REPORT

A poor safety culture and the ineffective implementation of a safety management system were identified as the most likely causes of the 2016 fire aboard the RoRo vessel Caribbean Fantasy.

The vessel's main engine room was hit by fire in the morning hours of 17 August 2016, when fuel spraying from a leaking flange came in contact with a hot surface on the port main propulsion engine, the National Transportation Safety Board (NTSB) said in a report.

NTSB has reported that poor maintenance practices led to an uncontained fuel spray from a blank flange at the end of the port main engine fuel supply line onto the hot exhaust manifold of the engine.

Contributing to the rapid spread of the fire were fuel and lube oil quick closing valves that were intentionally blocked open, fixed firefighting systems that were ineffective and a structural fire boundary that failed.

Contributing to the fire and the prolonged abandonment effort was the failure of the Panama Maritime Authority and the recognized organization, RINA Services, to ensure Baja Ferries' safety management system was functional.

Full story: **https://bit.ly/2mmdoA2**

THE IMPORTANCE OF KILL CORDS REITERATED BY UK COASTGUARD FOLLOWING AN INCIDENT

The UK Coastguard has issued kill cord safety advice following a recent incident when two men were thrown from their speedboat in the afternoon of 12 July off the coast of Kent. The kill cord is designed to 'kill' a boat engine in case the driver goes overboard.

At around 2.25pm on 12 July, HM Coastguard received a number of 999 calls reporting that two men had been thrown from a speedboat, which then continued unmanned until it crashed into the sea wall at Minnis Bay Margate. The two men were rescued by the RNLI Lifeguards.

Margate Coastguard Rescue Team, Margate RNLI lifeboat, Minnis Bay RNLI Lifeguards and Kent Police were on scene and the two men, who were wearing lifejackets, were recovered from the water. They had not sustained any serious injuries.

Tony Evans, HM Coastguard Maritime Operations Specialist, said:
"These two men have had a very lucky escape. Although they were wearing lifejackets, it would appear that they had a kill cord on the engine but neither of them was wearing it. With a busy beach nearby, the circumstances could have been very different, or indeed tragic, if the vessel had not crashed into the wall."

On the aftermath of the incident, the HM Coastguard advised:

- All owners and drivers of open powerboats, personal watercraft and RIBs should ensure that if their boat is fitted with a kill switch and kill cord, it is correctly used.
- On a powerboat the kill cord should be attached securely around the thigh and on a personal watercraft it should be attached to the buoyancy aid.
- Attach your kill cord before the engine is started, but certainly before the boat is put in gear where safe to do so.
- Stop the engine before transferring the kill cord to another driver.
- Always check your kill cord works at the start of each day or session and remember to replace it when there are signs of ageing, or wear and tear or it starts to lose spiral tension.
- When replacing kill cords, buy the manufacturers genuine replacement kill cords.
- Do not leave kill cords out in the elements. Extremes of temperature and UV light will harm the kill cord in the long term.

CATASTROPHIC ENGINE FAILURE THE CAUSE OF FIRE ON WIGHT SKY FERRY SAYS MAIB REPORT

At 2133 on 12 September 2017, while approaching Yarmouth, Isle of Wight, the ro-ro passenger ferry Wight Sky suffered a catastrophic failure of one of its Volvo Penta D16 main propulsion engines, followed by a fire. The fire was brought under control in less than 2 minutes, but the vessel's engineer, who had been standing near the engine, suffered serious burn injuries to his hands and face.

Safety lessons

- Rebuilding the engine and transporting it in parts to the engine room through an emergency escape rather than using the vessel's deck opening, created the possibility of dirt ingress into the engine bearing lubricating channel
- The engine was not fitted with a wear detector, so there was no means of receiving a warning before the engine failed
- The essential services switchboard aft circuit breaker had been left in manual mode, resulting in the loss of power to critical equipment, including the fixed fire-fighting system

Recommendation
A recommendation has been made to Volvo Penta UK to consider offering wear particle detection technology for marine engines that cannot be easily serviced on board.

BROKEN VALVE CAUSES OIL SPILL WHILE BUNKERING

The Swedish P&I Club has described a case of an oil spill during a vessel's bunkering operations which led to an oil spill, the cause of which was a broken valve. Following investigation, the Club recommended that all involved parties should be informed when tanks are switched and that the crew must always ensure the valves are completely shut and working.

The incident
The vessel was loading in port and had also planned to bunker fuel using shore trucks. The plan was to load the fuel into port tank 2 and fill it 96%, but the chief engineer changed this just before loading and instead wanted to load port and starboard 3 tanks. The plan was to fill these tanks 90%. The number 3 tanks were half the size of the port and starboard 2 tanks.

The bunker system was lined up to bunker the port 3 tank. Deck scuppers were put in place on deck. The chief engineer then met the truck driver to agree on basic hand signals before connecting the hose to the ship's manifold. The plan was to have the 3rd engineer taking manual soundings from the deck, as the chief engineer didn't think the automatic sounding system in the engine control room was accurate enough.

It was later found that the valve to port tank 3 was not completely shut and oil had entered the tank until it overflowed.

Safety issues
Always ensure that all involved parties are informed when tanks are switched. Reduce the flow from shore or stop the bunkering when switching tanks.

- It is essential to verify that the valves are completely shut and in working condition. This should preferably also be done manually to verify that the valve is closed.
- It is also essential that the tank system is working correctly and that it can be monitored with confidence in the engine control room. Just trusting manual soundings is not appropriate. It would also have been appropriate to sound the port tank when returning to deck to ensure the level was not increasing.

Full story: **https://bit.ly/2mqC6zd**

ISO UPDATES GUIDELINES FOR SEA ANCHORS ON SURVIVAL CRAFT AND RESCUE BOATS

A sea anchor is a vital component to a rescue boat, reducing the likelihood of it drifting away or spinning around, and keeps it steady in the wind.

As more people are heading out to sea over summer, safety both onboard and overboard is under the spotlight. For this reason, an ISO has been updated for the effectiveness of sea anchors for rescue boats known as 'ISO 17339:2018, Ships and marine technology – Life saving and fire protection – Sea anchors for survival craft and rescue boats.'

A sea anchor is a vital component to a rescue boat, reducing the likelihood of it drifting away or spinning around, and keeps it steady in the wind. The updated ISO for the performance and safety of sea anchors brings them in line with the IMO's International Life-Saving Appliance Code.

The International Life-Saving Appliance Code prescribes the carriage and use of sea anchors for survival craft and rescue boats, yet the revised recommendation on testing of lifesaving appliances does not provide requirements of performance and testing procedure for the sea anchors. This document addresses those areas, which the IMO recommendation does not address, in order to enable consistent implementation by maritime Administrations.

Continue reading the story: **http://bit.ly/2B3v9P4**

THE APPOINTMENT OF A SUITABLY EXPERIENCED SURVEYOR IS VITAL TO AVOID STEEL CARGO DAMAGE SAYS NORTH P&I

Several problems can arise when transporting steel cargoes by sea reports North P&I. The more common issues can be broadly categorised as mechanical damage, or rust-related problems. Indeed, in many cases the damage occurs before it is even loaded onto the carrying vessel.

Common issues that can result in damage to the cargo include poor handling, substandard stowage and securing, water ingress into the hold and improper hold ventilation.

Key issues
Pre-shipment condition: It is not uncommon for steel cargoes to be damaged prior to loading on to the vessel. If the cargo is exposed to adverse environmental conditions or subject to poor handling, this can lead to rusting or mechanical damage before shipment. It is therefore very important that the Master ascertains that the condition of the cargo prior to loading and that the description of the cargo is accurately reflected in the bill of lading.

Mechanical damage whilst handling: Incorrect handling of the cargo whilst it is being loaded can lead to mechanical damage. Poor slinging, the use of incorrect lifting gear and rough handling with fork lifts can all lead to serious product damage and result in rejection of the cargo by the receiver. The crew should monitor closely the handling of the cargo and record any damage before it is accepted onboard.

Wetting damage in the hold: If the vessel's cargo hatches are not weathertight, seawater or rain water may enter the holds and come into contact with the cargo, leading to rusting. The most effective means to avoid wetting is through proper ventilation of the hold. By monitoring and recording the dew points of the air within the cargo hold and the ambient air, correct and effective ventilation can be maintained.

Mechanical damage on voyage: Incorrect stowage on board, such as using unsuitable dunnage or poor standards of cargo stowage and securing can lead to cargo movement or shifting whilst on passage. One of the primary reasons is overloading. A common scenario concerns too many tiers of steel coils which lead to ovalisation of the lower tiers. As well as potential cargo damage, there is also a risk of hull damage should a steel cargo shift on passage, or of damage to the tank top from overloading.

Full details and to download the briefing document: **https://bit.ly/2MpSJq0**

FIRE SAFETY ON FERRIES GUIDE ISSUED BY THE STANDARD P&I CLUB

To raise awareness, the Standard P&I Club has published a 36 page guide about fire risks on ferries. This type of ship presents particular risks due to the cargo onboard, including cars, lorries and refrigerated containers. All of these have combustible material and are fire hazards in their own right.

There are numerous causes of fire but the most relevant ones to ferries are:

– Electrical defects, such as overloaded electrical equipment, damaged cables and poorly formed connections. – Electrical faults in vehicles, especially when engines are hot/running. Reefer containers are major sources of fire.
– Mechanical failure, such as ignition from overheated bearings or a catastrophic engine failure.
– Uncontrolled release of oil or flammable liquid coming into contact with a hot surface, or the release of a low flashpoint fuel, such as petrol vapour, coming into contact with a source of ignition.
– Dry, readily combustible materials (such as wood, paper, textiles) coming into contact with an ignition source,
– such as a lighted cigarette, sparks or conducted heat from burning or cutting, highintensity lights or defective electrical equipment.

Click to read the full story and to download the 36 page guide: **https://bit.ly/2JszREO**

MAIB ISSUES URGENT SAFETY BULLETIN AFTER KEEL FAILURE TO A COMMERCIAL YACHT

The MAIB is investigating the keel failure and capsize of the UK registered commercial yacht Tyger of London while on passage from La Gomera to Tenerife, on 7 December 2017. The five persons on board were rescued from the water by the crew of a nearby yacht.

Tyger of London was a Comar Comet 45S designed by Vallicelli & C and built in 2007 by Comar Yachts s.r.l, at Fiumicino, Italy. In common with other vessels built by the shipbuilder, the Comet 45S could be fitted with a choice of two keels:

- A 3200kg, 'deep draught bulb keel', consisting of a cast iron fin with a lead bulb fixed to its base; or,
- A 3700kg 'shallow draught, lead keel', consisting of a fabricated rectangular stainless steel top plate and frame, onto which lead was cast to form the keel.

Tyger of London was fitted with the 'shallow draught, lead keel', which is the subject of this safety bulletin.

The post-salvage inspection of the yacht identified that the keel's stainless steel top plate was still attached to the hull. The MAIB recovered the top plate to the UK for technical assessment. The lead section of the keel sank in deep water and could not be recovered. The technical assessment of the top plate revealed that the keel had not been manufactured in accordance with the designer's drawing or intent. Specifically, the stainless steel rods forming the frame and their interconnecting plates had been only partially welded to the underside of the top plate.

As a result, the joins progressively failed over time (Figure 3c). The final joins failed while the yacht was underway, causing the lead keel to separate from the keel plate, following which the yacht quickly capsized and inverted.

Tyger of London had been employed as a charter vessel since 2013. It is estimated that the yacht had sailed approximately 29,000nm since build. The MAIB has been informed that prior to the accident the yacht had grounded on a number of occasions, all reportedly at slow speed and onto sand or mud.

The yacht's manager had removed the yacht from the water 22 months before the accident, for maintenance, during which paint and filler were removed to allow the keel plate and lead keel to be inspected. The securing arrangements between the keel and the hull matrix were found to be in good condition, however the lead casting prevented the inspection of the welded joins between the keel's fabricated frame and top plate.

Full details, safety lessons and recommendations: **http://bit.ly/2ANNiQF**

LOW SPEED DIESEL ENGINES SAVE ON CLAIMS IS THE FINDING OF A RECENT SWEDISH CLUB STUDY

In a recent study the Swedish Club has warned that vessels propelled by medium or high speed diesel engines have a claims frequency two and a half times higher than slow speed engines with an average claims cost of about $650,000.

Statistically, a vessel will suffer between one and two incidences of main engine damage during its life time, according to the club. However, the incidence rate varies by vessel class (and engine type).

"Our research shows that bulkers and tankers are the best performers for claims cost," said senior technical advisor Peter Stalberg. "Most of these vessels have slow speed engines. Conversely passenger vessels/ferries have the highest frequency of main engine claims – 0.066 claims per vessel and year. Often these vessels have multiple medium speed engine installations."

Full story: **https://bit.ly/2ur4PZj**

RETIRED IIMS MEMBER, ROBERT MORLEY, GIVEN A LIFETIME ACHIEVEMENT AWARD BY THE TRANSPORT TRUST

At a ceremony that took place on 4th June 2018, Robert (Bob) Morley, a retired IIMS member, was recognised for his work by The Transport Trust in restoring and preserving historic military vessels. He is pictured being presented with his Award by HRH Prince Michael of Kent.

Bob's back story that led to this Award is an interesting one. A World War II motor torpedo boat caught his attention when he was a child and a seed was sown. Many years later he came across a Coastal Motor Boat, a World War I veteran 55ft long. It was sunk and derelict, but CMB 331 is now restored and displayed and can be seen at the Coastal Forces Museum at Gosport.

Next came Motor Launch 293, even bigger at 112ft in length, built in 1940 for the Royal Navy and brought back to first class condition over a 5 year restoration.

Boat number three was an RAF launch, number 2748, built in 1953 for target towing. When he first saw her she was sitting on the bottom in Barry and was in a very sorry state. Another one saved, now living in Plymouth.

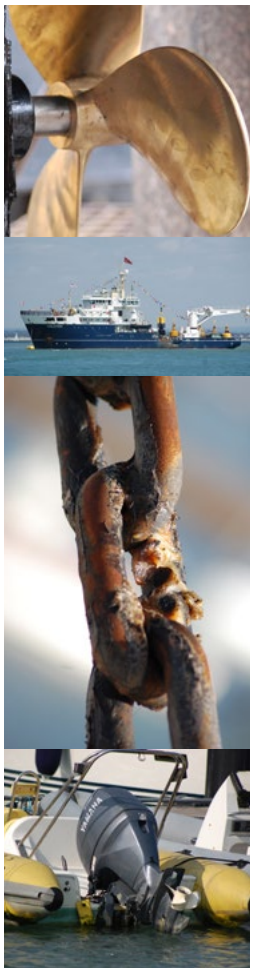
The last in the line is Coastal Motor Boat 9, one of twelve 40ft vessels ordered by the Admiralty in 1916 and built by Thornycroft on the Thames at Hampton. After action in World War I which included the sinking of a German destroyer in 1917, CMB9 was adapted to take part in a series of top secret experiments designed to test whether unmanned fast patrol boats armed with torpedoes could be controlled from the air and directed towards enemy targets. CMB9 was re-designated DCB1 - Distance Control Boat.

Distant Control Boats were never used operationally during the First World War, but their development continued for many years afterwards with an aeroplane controlling the boat by wireless from a height of 16,000 feet and a distance of 5 miles. Tests had shown that the height and distance from which the boat could be controlled were only limited by the visibility. Satisfactory runs had also been carried out by moonlight. During 1918 satisfactory runs were carried out, with an aeroplane controlling the boat by wireless from a height of 16,000 feet and a distance of 5 miles. Tests had shown that the height and distance from which the boat could be controlled were only limited by the visibility. Satisfactory runs had also been carried out by moonlight.

It appears that DCB1 returned to her former role as a Coastal Motor Boat once the trials were completed. As CMB9 she remained in service with the Royal Navy until the early 1950s. It seems that she carried out the routine duties of a Coastal Motor Boat during the Second World War.

Restoration of CMB9 has taken 6 years, and she is regularly on public display at events such as the Thames Traditional Boat Festival, which involves her in a journey past the yard in which she was built.

Bob is a Marine Surveyor and historic vessel consultant, which may make his hobby of restoring elderly boats seem like a busman's holiday, but his record of saving these important vessels is exceptional and he is a worthy recipient of this award.



COPYRIGHT FREE IMAGE PHOTO BANK AVAILABLE

IIMS has launched a new member benefit in the form of a photo bank comprising initially over 300 images to choose from. Images range from high to medium resolution and are suitable for use in brochures, marketing material, web sites and so on. The aim is to keep adding to the collection.

The images have been arranged into seven categories:

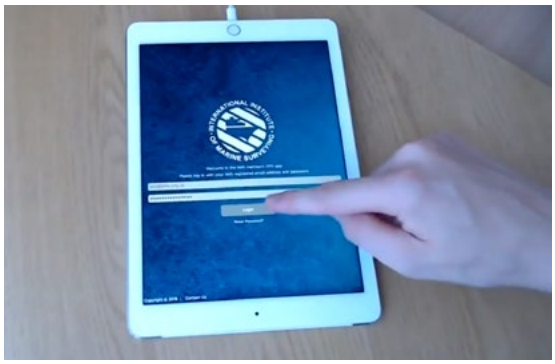
Superyachts	Workboats
Yachts & Small Craft	Ribs
Equipment	Miscellaneous
Commercial Ship and Offshore Vessels	

The page on the web site is password protected by can be accessed at **https://bit.ly/2uIpaIN** using the password Surveying (case sensitive).

The IIMS copyright free photo licence terms are simple. You may download as many photos as you wish as often as you like from the Downloadable Copyright Free Images page. All photos can be used freely for commercial and non-commercial use. There is no charge. That means you can use them on websites, in social media and marketing material, or anywhere else you wish. You may share them with colleagues, friends, media, graphic designers or web agencies. There is no need to credit IIMS. You are permitted to modify any photo. That means you can crop, resize and change the orientation if you wish.

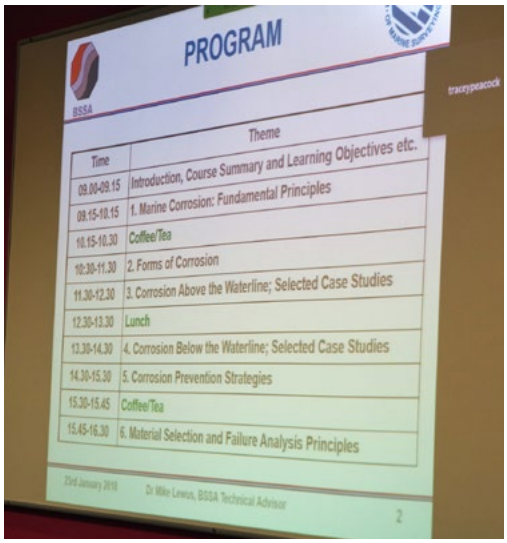
CONTINUING PROFESSIONAL DEVELOPMENT (CPD) VIDEO TUTORIAL

It became clear from the recent survey findings that whilst some members find the IIMS CPD App easy to use, for others it is very much the opposite. With this in mind, IIMS has made a short CPD App video tutorial (less than 5 minutes) to help those who have tried the App and got to stuck and to encourage those who have not yet tried it to have a go... **http://bit.ly/2Mr3FYK**.
If you still need help, please contact IIMS head office and we will do our very best to help you make sense of it.



IIMS ADDS NEW VIDEO CONTENT TO YOUTUBE

More video has been added to the growing IIMS YouTube channel, which is free to access and watch. The recent seminars in Singapore have been recorded. The channel now boasts 139 videos covering the widest range of topics for surveyors of every type. It is a wonderful resource and you are encouraged to use it. The YouTube channel can be found at **https://bit.ly/2c7Vpuz**.



IIMS AND BSSA TO DELIVER A SPECIAL ONE DAY SEMINAR ENTITLED MARINE CORROSION AND ITS PREVENTION IN AMSTERDAM NOVEMBER 2018

Following the huge success of the first corrosion seminar delivered by Mike Lewus, British Stainless Steel Association (BSSA), which attracted nearly 60 delegates (both real-time and online) in January, IIMS has decided to run the programme again in Amsterdam on 27th November 2018.

Mike Lewus from British Stainless Steel Association (BSSA) will deliver this essential one-day seminar called 'Marine Corrosion and its Prevention'. The day's seminar programme will be delivered on 27th November at Park Inn by Radisson by Amsterdam Schiphol Airport commencing at 09.00. Delegates who cannot be there in person may join online live via Zoom.

Who should attend?
This seminar suits marine surveyors, marine engineers designers, coatings inspectors and specifiers interested in material degradation mechanisms in the marine environment and selecting fit-for purpose materials.

An outline of the day
This one-day course gives a comprehensive overview of the fundamental principles of corrosion and forms of corrosion that beset marine metals including, stainless steels, aluminium alloys, copper/nickel and titanium alloys. The types of corrosion commonly found above and below the waterline of vessels and the factors which influence the rate of degradation are considered. For completeness protection methods, elements of failure analysis and illustrated case studies are to be discussed.

What will you learn?

- Recap on fundamental corrosion principles including, the driving force for electrochemical activity and principles of galvanic corrosion
- An understanding of the corrosion mechanisms that undermine the performance of stainless steel and other 'marine metals' and associated metrics
- An appreciation of what environmental factors influence corrosion above and below the waterline and how this impacts material selection
- Consider how to minimise corrosion through material selection, improved design and other strategies i.e. cathodic protection, changing electrode potential, surface treatments etc.
- Become familiar with important aspects of failure analysis; inspection, sample preparation, analytical techniques and diagnostic methodologies

For full details and to reserve your place go to **https://bit.ly/2K6EAgF.**

REMAINING PLANNED IIMS TRAINING AND EVENTS 2018 CALENDAR

IIMS has lined up a bumper crop of training and networking events for the second half of 2018 and there is something for all members to dip in and out of. Many of the events are now open to online delegates too, so you can take part no matter which part of the world you are in.

Wednesday 10 October
IIMS India Branch Mumbai Symposium 2018
See: **https://bit.ly/2uNcVut**.

Monday 15 October
Certifying Authority Autumn training near Portsmouth. There have been a number of procedural changes brought about as a result of new MCA guidance notices and IIMS's desire to make coding even more efficient. Coding surveyors need to be aware of the changes and this will form a central part of the day. Details to follow.

Monday 22 October
The second UK Inland Waterways Working group training event will take place at Church Minshull Aqueduct Marina near nantwich in Cheshire. The provisonal speaker line up will cover spray foam insulation, an overview of key aspects of corrosion, a presentation by Paul Winter insurance and Jeffrey Casciani-Wood speaking about anodes. A tour of the on-site workshop will also be given. Reserve your place online via the IIMS website.

Monday 29 October
The annual Large Yacht and Small Craft Working Group 'super' training day will be held in the Portsmouth area. The agenda is being put together now and details will be released soon.

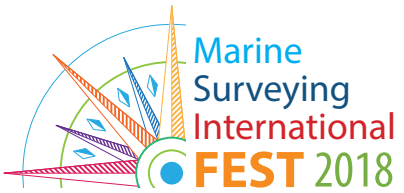
Friday 2 November
One day training event at the Sydney Heritage Fleet venue in the heart of the Australian capital confirmed. Full details to follow soon.

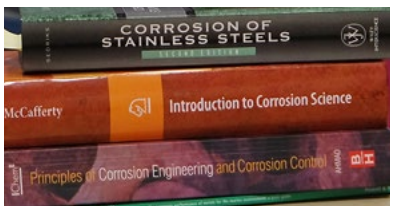
Tuesday 6 into Wednesday 7 November
The date of the Marine Surveying Fest, a 24 hour online only marathon and extravaganza has been changed for operational reasons. IIMS has created the Marine Surveying International Fest 2018, a 24 hour celebration of marine surveying. The date for this innovative and eye catching event is now Tuesday 6 into Wednesday 7 November, depending on your time zone of course! Watch for details coming soon.

Monday 12 and Tuesday 13 November
The annual Large Yacht and Small Craft Working Group Training Scotland event will be held at Inischinnan Cruising Club by Glasgow Airport. Full details coming soon.

Tuesday 27 November
Following the huge success of the first corrosion seminar delivered by Mike Lewus, British Stainless Steel Association (BSSA), IIMS has decided to run the programme again in Amsterdam on 27th November 2018. Mike Lewus from British Stainless Steel Association (BSSA) will deliver this essential one-day seminar called 'Marine Corrosion and its Prevention'. The day's seminar programme will be delivered on 27th November at Park Inn by Radisson by Amsterdam Schiphol Airport commencing at 09.00. Delegates who cannot be there in person may join online live via Zoom.

Details about all of the above events can be found on this page on the IIMS website **https://bit.ly/2niVUFS**.





REPORT ON IIMS AND ECMID SEMINARS IN SINGAPORE

For the second consecutive year, IIMS organised and hosted a three day event in Singapore. IIMS is grateful to Simon Ward of MatthewsDaniel for their generous support of the event, which attracted good numbers over the three days.

The first day saw nearly 20 delegates attend a one day eCMID AVI accreditation validation course under the tutelage of Joe McWilliam.

Day two was aimed directly at those involved in the inspection of offshore assets using the eCMID format. Mike Schwarz welcomed guests and gave an overview of the accreditation scheme so far. Joe McWilliam spoke about the key learnings from more than 30 AVI courses so far. There followed a video presentation of Mark Ford (and IMCA colleagues) addressing the seminar in April as he talked about eCMID updates. Alex Harrison, LOC Group Director for Energy Services, closed the morning session with his thoughts on offshore wind farms and marine warranty surveying.

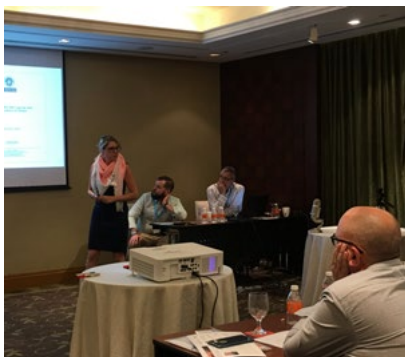
After lunch, Joe McWilliam picked up the reins and talked about risk, the mariner and eCMID. He was follows by Simon Ward, Regional MD of MatthewsDaniel, who talked about the relevant subject of reactivation inspections and surveys and why they matter in a part of the world that has seen hundreds of lay-ups. The day concluded with Alex Brabin from M3 Marine speaking about the reactivation of DP vessels as he touched on a proposed new DP accreditation scheme under review by IMCA.

Seminar day two dawned. Once again Mike welcomed guests and following a short introduction by President, Capt Zarir Irani, gave a comprehensive overview of the many activities that IIMS is currently involved in. Zarir spoke knowledgably on the subject of shortage and misdeclaration claims and warned surveyors what they should be looking for and gave some of the reasons why claims are inaccurate. Mike Meade, CEO of M3 Marine, talked about the disruptive technologies facing surveyors, particularly with the onslaught of drones.

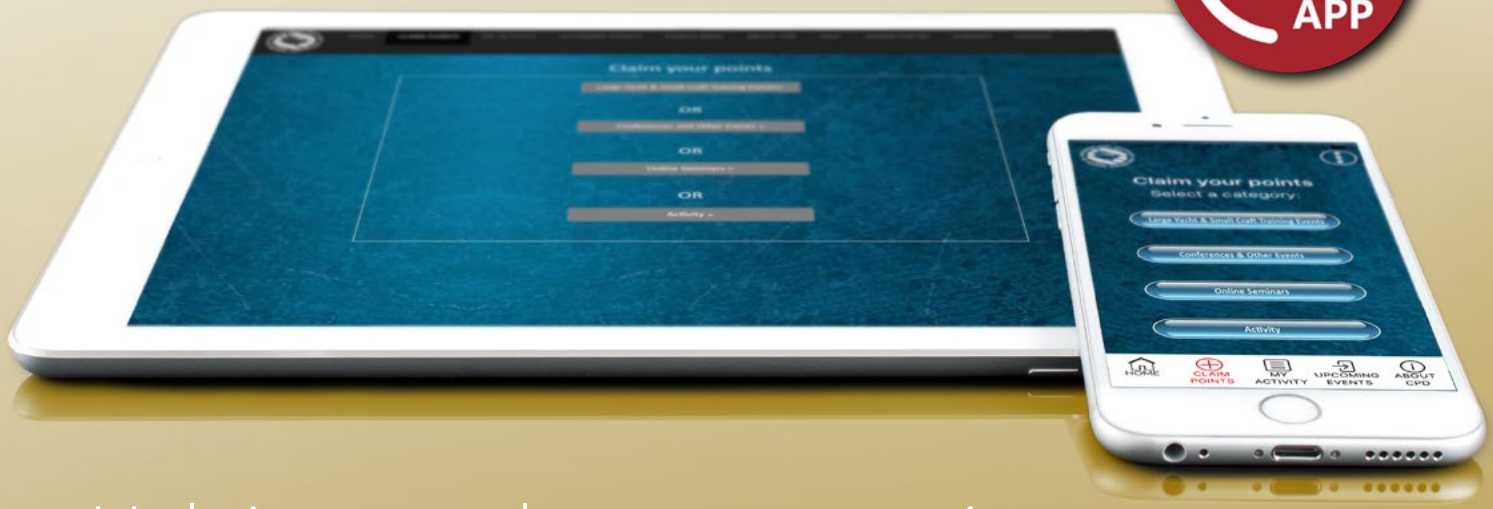
Following the lunch break, Simon Ward gave an in-depth insight into the common issues associated with operating and towing MODUs. He gave some rather sobering case studies to remind marine warranty surveyors and surveyors in general of the many dangers that are lurking. Jason Wee, Claims Director for Standard P&I Club Asia, delivered a thought-provoking presentation about what the club expects from a surveyor carrying out P&I Club work. Chad Fuhrmann from Maritime Assurance & Consulting Ltd closed the event with a powerfully delivered presentation about rebuilding confidence in reactivated assets, what to look for and how to deliver it.





The IIMS CPD App...



Helping you keep your points intact and up to date!

For **iOS** users go to the "**App Store**".

Android, go to the "**Google Play Store**".

Search '**IIMS CPD**' and install the app.

Login using your **IIMS credentials**.

Or the "**My CPD Program**" link on the IIMS membership details page, **re-directs** the user to the new **CPD Program Website**.

Web version, the login panel can be found at:
http://cpd.iims.org.uk/CPDWeb/Private/Login.aspx

To see how easy it is to acquire points, you can view the CPD points table here:
https://www.iims.org.uk/membership/continuing-professional-development/

“Over 70% of members rank IIMS higher than most or some similar organisations is key survey finding”

says IIMS CEO, Mike Schwarz, as he comments on the survey results...

Firstly, a big thank you to all those who took part recently in the most detailed IIMS membership research to be undertaken for four years. Nearly 300 members (almost 30%) responded and their replies give a valuable snapshot of the Institute. My initial thoughts on the survey are randomly presented and drawn mainly from the dozens of verbatim comments.

I am reminded at this point that as a membership organisation it is simply not possible to please all members all the time, but with 71% ranking IIMS higher than most or some similar organisations, I deduce from that percentage score that in broad terms your Institute is generally doing things to your satisfaction.

There are a few key learnings for me, some of which can and will be addressed fast, others of which I am in discussion with the IIMS management board about.

The most important learning and reminder relates to how we communicate with IIMS members in general. If we did not already know it, using all available communication channels is essential if we are to disseminate IIMS and industry news and information to the majority of members. Whilst social media and LinkedIn in particular is an important platform (46% said they follow IIMS via that channel), around one third of members stated social media is off limits. Equally, whilst more than 40% said the monthly news bulletin is a welcome email into their inboxes, I know from the emailer user stats each month how many bulletins remain unopened. But this works two ways of course. It is our responsibility and duty to make the information as readily available as we can, but it is then down to a member to access what he or she needs to keep themselves up-to-date with IIMS news and developments.

Through some of the verbatim comments it is clear that members in Ireland would like to attend a training event annually. I will be making plans to deliver something early in 2019, so watch this space.

On a similar theme, some respondents from Australia and New Zealand expressed concerns about the lack of IIMS training and events in that region. With no active branches currently in Australasia, this presents more of a challenge and I accept requires attention. A one day seminar has been confirmed for 2 November to be held at the Sydney Heritage Fleet facility. The speaker schedule will be available soon. Consideration is also being given to the formation of a South East Asia and Australasia combined branch.

Judging by the mixed responses to question 9 about the IIMS CPD App, it is clear that some people use it often and find it very effective. Others, however, find it baffling and still many members are simply unaware of the App's existence. To try and help we have made a short tutorial video to demonstrate how to log in and how to claim your points – see **http://bit.ly/2Mr3FYK**.

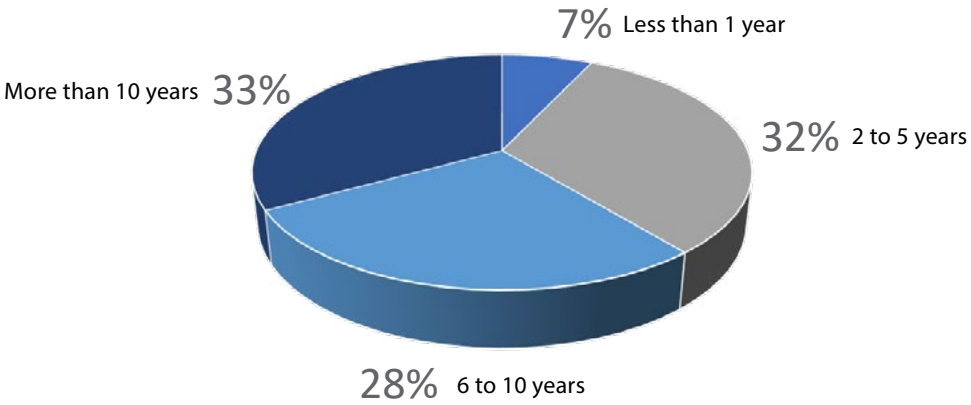
I remain concerned that there are many members who are not familiar with the full range of services and benefits the Institute has to offer, no matter which area of surveying they are engaged in. But that is down to my colleagues and I to do all we can to communicate effectively with you.

A few members rated the range of benefits as poor. If you have any ideas for new benefits for the IIMS head office team to explore, please email your suggestions to **info@iims.org.uk** and we will investigate further.

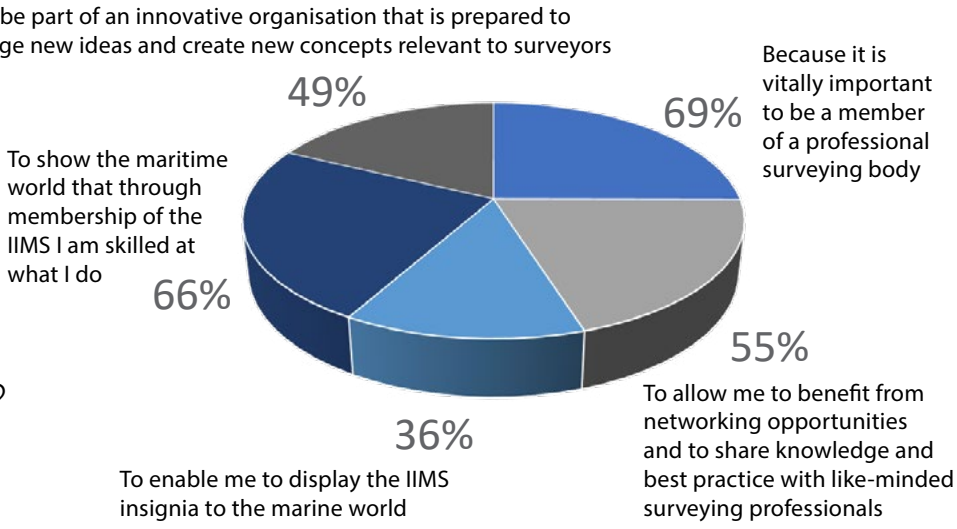
I have one final plea to all members and it is simply this. Please don't wait until the next survey to make your feelings and suggestions known. It is your organisation and I would encourage, urge even, that you write to me on any matter at any time. IIMS is open to your feedback, both positive and negative.

IIMS 2018 MEMBERSHIP SURVEY RESULTS

Q1. How long have you been a member?

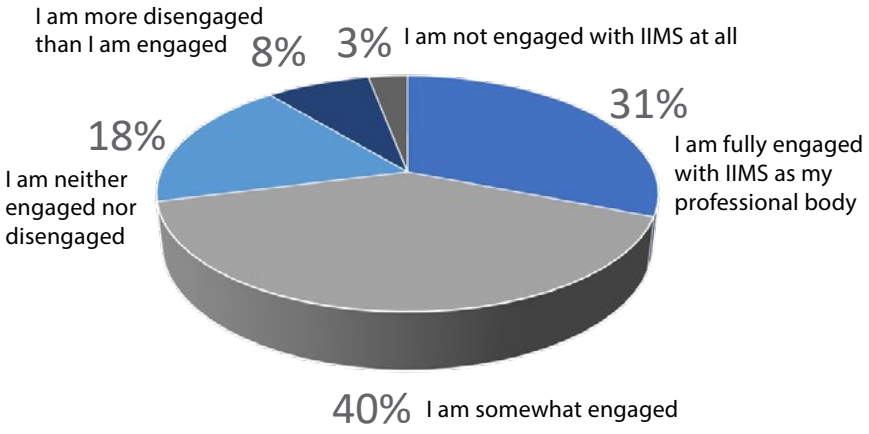


Q2. What are your primary reasons for being a member of IIMS?

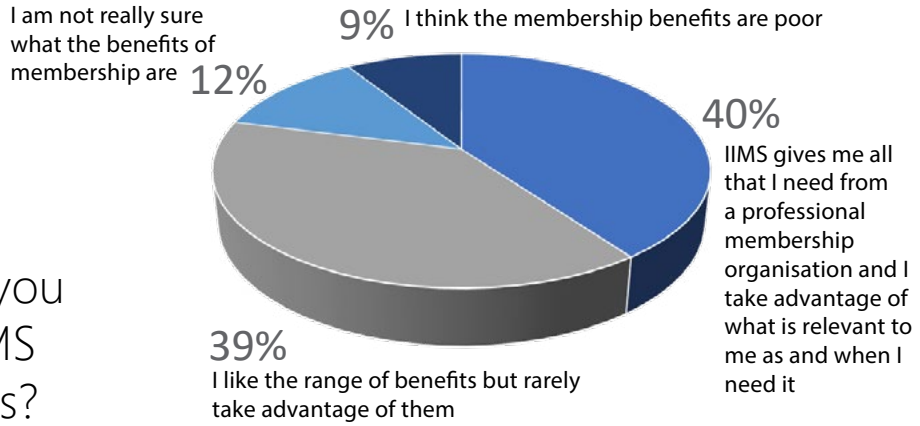


Q3. How engaged would you say you are with IIMS?

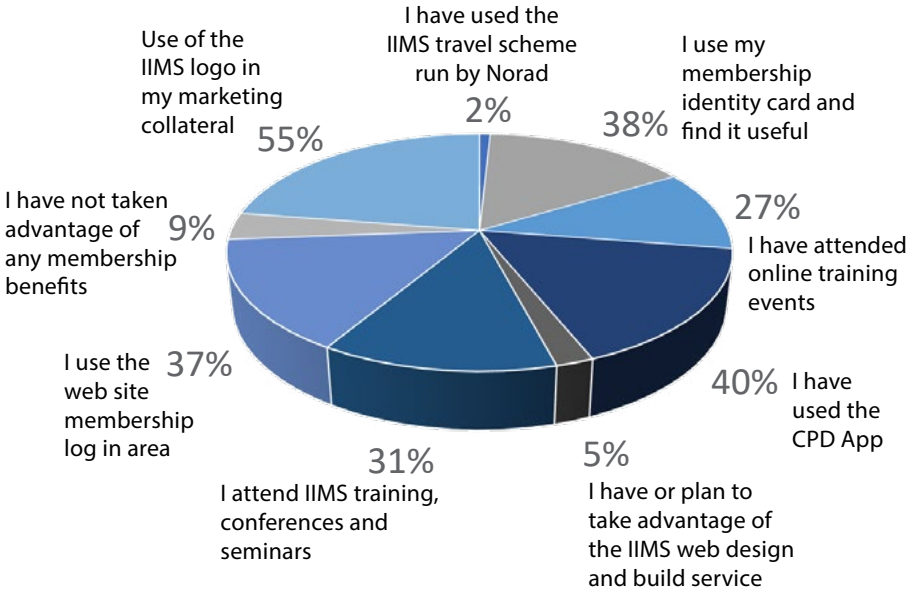
71% said I am either fully or somewhat engaged with IIMS as my professional body



Q4. How highly do you rate the range of IIMS membership benefits?

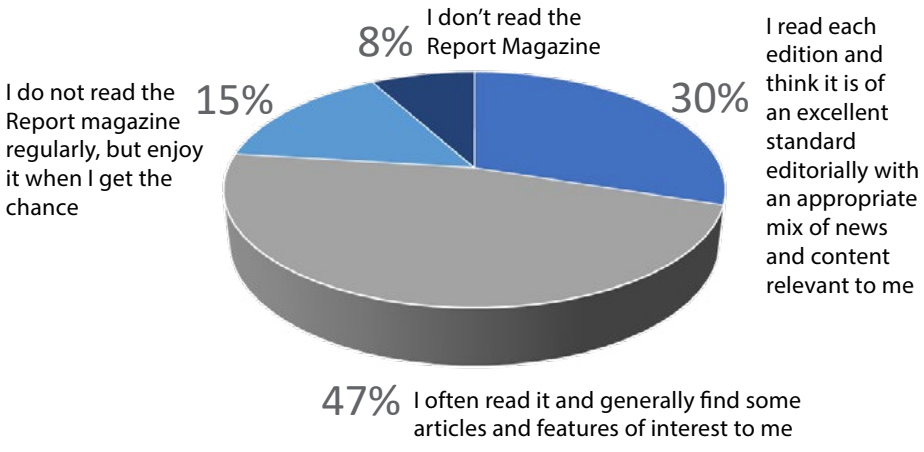


Q5. Which of the following membership benefits have you taken advantage of?

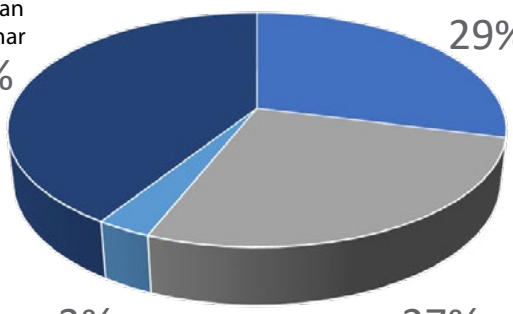


Q6. How do you rate the quarterly Report Magazine?

77% either read each edition or often read it and find it of interest



Q7. Have you attended an IIMS conference, seminar, or training day and if so what were your overall impressions?



I have never attended an IIMS conference, seminar or training day 41%

29% The range and content of IIMS conferences and networking opportunities are good, well organised and delivered by knowledgeable presenters as a rule

3% I have attended an IIMS event but was disappointed

27% Generally I am happy with the various IIMS events I have attended

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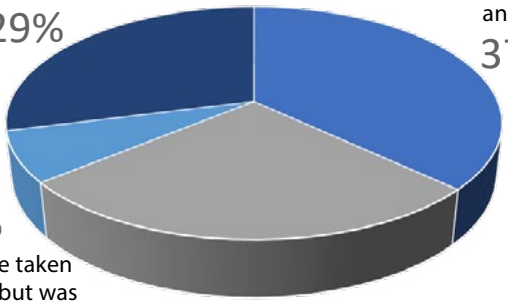
Powered by zoom

Q8. You may be aware that in the past 12 months or so IIMS has been offering online only seminars, also available to purchase by video after the event too. What are your thoughts on this?



I am unaware IIMS has been offering online only training seminars 29%

An easy, effective and modern solution to deliver bite sized surveyor training to an international audience and I approve 37%

7% I have taken part but was disappointed

27% Generally a positive experience, but the topics are not always relevant to me

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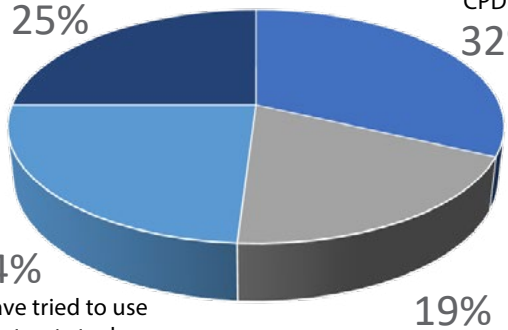
IIMS CPD APP

Q9. How often do you use the IIMS Continuing Professional Development App to maintain your annual points?



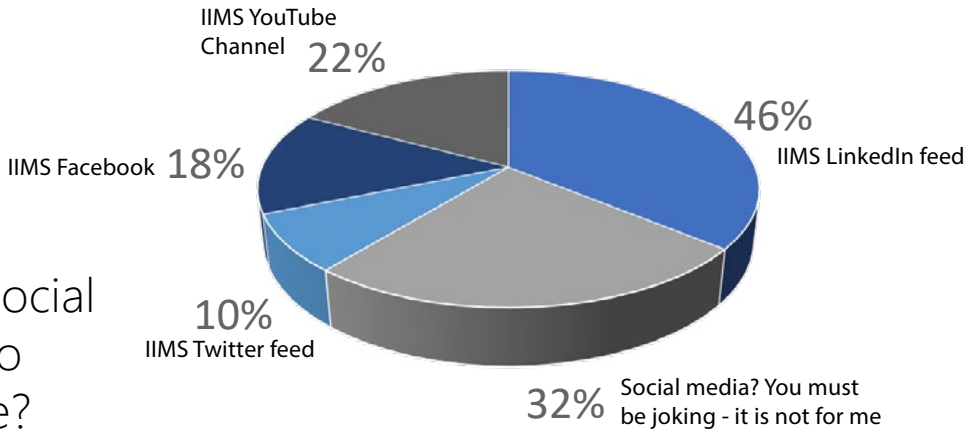
No idea what you are talking about and I have not used the CPD App 25%

I use it often and think it is an excellent and modern way to keep my CPD points up-to-date 32%

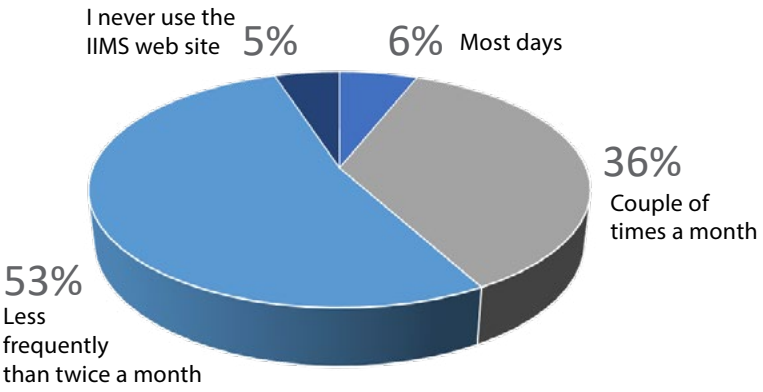
24% I have tried to use it but got stuck and gave up

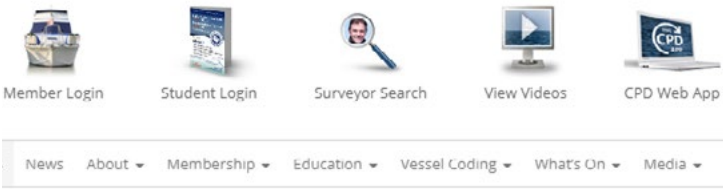
19% I have used it successfully a few times but find it not easy to use

Q10. Which IIMS social media channels do you choose to use?

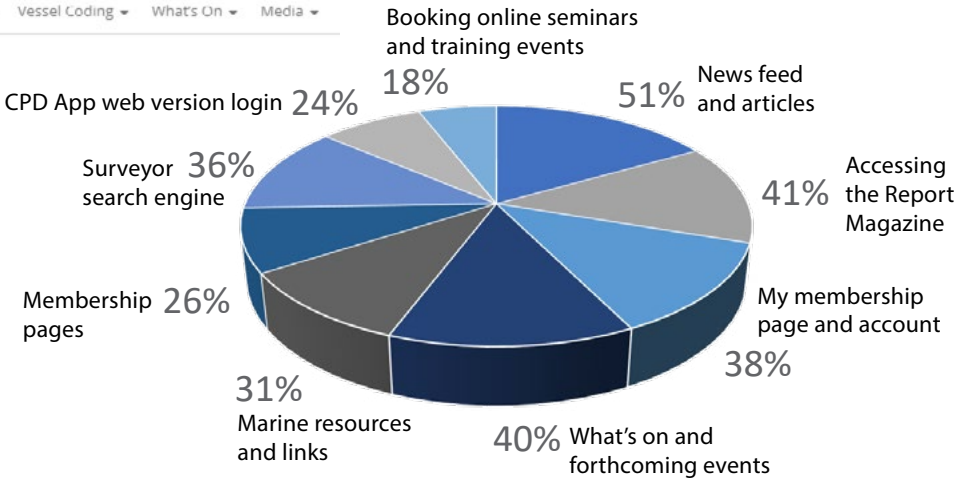


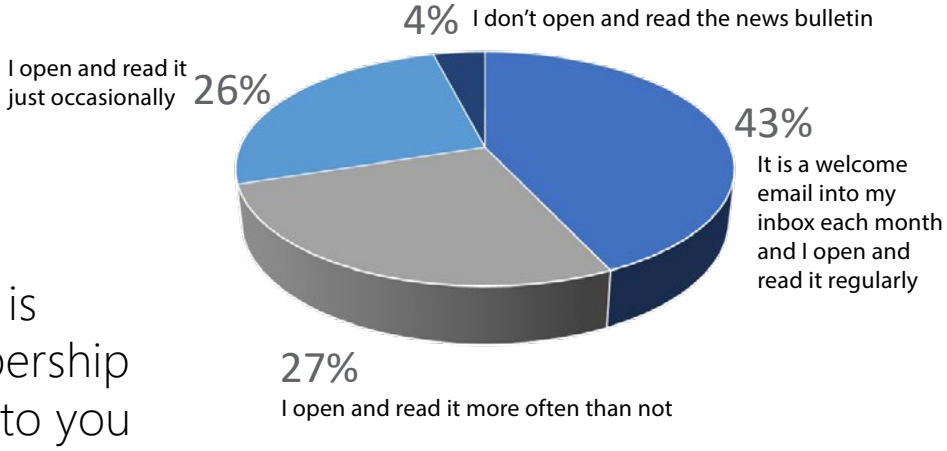
Q11. Thinking about the IIMS web site www.iims.org.uk, how often do you visit it?





Q12. Staying with the web site for a moment and, assuming you use it, which areas are of most interest to you?

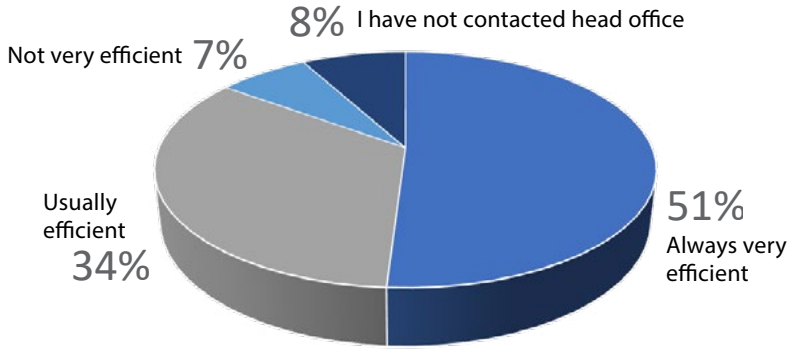




Q13. How valuable is the monthly membership News Bulletin sent to you by email as a reference and information source?

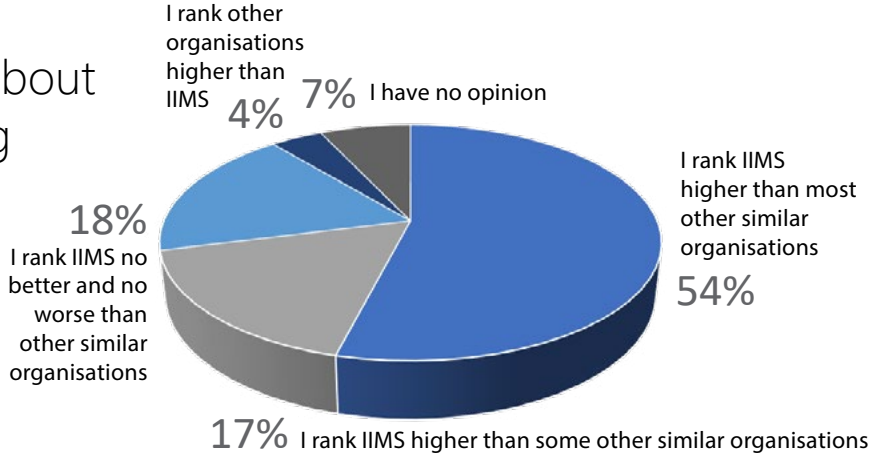
85% said the head office staff are either always very or usually efficient

Q14. When you have had contact with the IIMS head office, how helpful and efficient have we been in dealing with us?



71% said they ranked IIMS higher than most or some similar organisations

Q15. When you think about other marine surveying organisations that you might belong to, or know of, how highly would you rank IIMS?



Whilst most IIMS members expressed their general satisfaction with the organisation, there were also some critical comments too. Here are a selection from the many verbatim comments that were made by respondents...

Verbatim comments of praise for IIMS from survey respondents

"A great organisation well done."

"Thanks for all the hard work. I left NAMS this year as it is no longer relevant to me. IIMS does a far better job."

"Great organization that I will stay with until retirement, which is a long way off."

"The organisation has grown and progressed in an efficient and sophisticated way and all concerned should be congratulated. The openness and accessibility of the organisation is refreshing as opposed to the self-important closed shop attitude of others! I always recommend the IIMS to potential surveyors."

"Proud to be a member."

"A relevant organisation for me. I like its vision to enhance the professional standing of surveyors."

"I do like the IIMS. I find the seminars and workshops a good opportunity to catch up with fellow members."

"You are doing a great job. The initiatives like the CPD App and online training options are far superior to other organisations. I think you are all doing a wonderful job promoting IIMS and providing a service to the membership."

"I think the IIMS has achieved remarkable prominence in the last decade and believe will achieve critical mass in due course."

"My experience is that IIMS is a professional organisation that has taken strides in development over recent years and has a vital role to play in the future of the profession."

"I believe you are doing a great job. Personally being based in Canada / USA it would be nice if IIMS was more known about and the level of professionalism that the organization strives for was acknowledged more here."

"I think IIMS is a very prestigious organization and I am proud to be a member."

"I am impressed with how much it has improved over the last few years with excellent organisation, more seminars and training."

"Keep on going - you are doing a great job!"

"Honestly, I consider myself honoured to be an IIMS Member. Nevertheless, in Italy, as far as I have been able to verify, this Institute is little known and perhaps it would be worth making an effort in this sense, perhaps organizing a Conference in Italy."

"An excellent organisation for Marine Surveyors. I am very proud to be a member of it."

"I have benefited immensely by being a member of IIMS, both professionally and in marine surveying."

"I am sure standards of surveying have improved and I wish the IIMS continued success."

"I welcome the advancement of the social media in the Institute. I wish to thank the staff for maintaining them up to date."

"Overall, well run and based on sound principles, IIMS spans multiple disciplines and handles it well most of the time."

"The marine industry is continually evolving and moving with innovation and changes in my opinion is very important as a surveyor which is why I attend training and conferences. Clients are trusting that you are at the forefront of your business."

"Recognising that the organisation is international, it will be welcomed if consideration is given to locating some of the conferences, seminars and/or training within the African continent."

"Over the last years there has been an enormous improvement, unlike other similar organisations I see IIMS as generally moving forward."

"The choices don't allow for me to state my disappointment in the way CPD is being treated in the industry. I have twice emailed IIMS regarding the poor way that our submissions are treated and have not received any reply."

Verbatim comments of criticism about IIMS from survey respondents

"Brexit. There seems to be scant regard for the potential for changes which will likely affect surveyors operating within the EU regarding legislation and relevance of UK small craft CoP's, reference documents and equivalence to other EU member states CoP's and suchlike."

"The senior Marine Surveyors should write more articles relating to their own survey experience and how they faced the difficulties while doing the survey and how they finally they overcome the difficulties. They should share with the new generation of surveyors."

"There has not been a meeting or workshop held in Australia for a number of years."

"IIMS should be more selective with accepting of new members from certain parts of the world."

"Try and embrace the members you already have, rather than devoting so time to attracting others."

"Always remember, that many members live and operate outside the UK. Often, in challenging situations. But we all respect your help and assistance."

"As an overseas member it would be good if our country rep held group discussions and meetings as not all of us are able to travel overseas to the general meetings."

"I really hope the Australian members have the opportunity to attend local events."

"The Irish Branch used to hold regular twice yearly meetings. I don't think two meetings a year are necessary but it may be useful to have an occasional."

"The organisation has come UKcentric with little appreciation of what the members at the coal face need and want."

"I have the feeling that IIMS is following the commercial flow, moving the centre of interest eastward, in a way sometimes unclear. Although it is self-evident that East and Far East are and will be even more the engine of the world, the Institute loses in appeal if it is not firmly holding its roots."

"Increased vetting of members to verify their skills and that they are correctly listed."

"There should be some events run in Ireland."

"Although I feel that the magazine's content is generally superb, it lacks articles that are more relevant to me as a small craft surveyor specialising in wooden boat surveys and restorations."

"I am not convinced that there is a need for this CPD service. If a surveyor or marine professional is taking on and executing relevant work then they will be naturally continuing to develop. Providing they are a professional then in my opinion CPD is happening anyway. Is the need for this CPD recording to highlight those who are not developing?"

DP VESSEL REACTIVATION INSPECTIONS FOLLOWING LAYUP

BY **CAPTAIN ANDY GOLDSMITH**
TECHNICAL ADVISER - MARINE,
INTERNATIONAL MARINE
CONTRACTORS ASSOCIATION (IMCA)

Andy Goldsmith spent twenty nine years at sea, ten on deep sea tankers and nineteen in the offshore industry. He was Captain of DP diving support and offshore construction vessels prior to spending six years in the operations department of Smit International. He joined IMCA as a Technical Adviser in January 2015 working closely with the IMCA Marine, DP and Renewable Energy Committees.

He was instrumental in forming the IMCA Marine DP Committee and leading the revamp of the IMCA DP station keeping reporting scheme, with an emphasis on feedback to industry. Additionally, a systematic review of the technical library was introduced, thereby, ensuring IMCA guidance documents remain current and fit for purpose.

IMCA has recently released an information note on the reactivation of DP vessels following a period of layup. This 15-page aide memoire is designed to be used by vessel owners and operators, their Marine Superintendents and Accredited Vessel Inspectors (AVIs) tasked with inspecting DP vessels after a period of layup. Its publication helps to ensure that everyone concerned is singing from the same hymn sheet in the essential steps to reactivate a vessel, and get it back into safe and active service.

Why is layup a seemingly essential part of the offshore oil and gas industry cycle? It is a 'given' that exploration and production (E&P) spending growth is highly correlated to oil price. So a fall in the barrel price affects E&P activity levels, which in their turn contribute directly to lack of demand for MODUs (mobile offshore drilling rigs) and OSVs (offshore support vessels) in the upstream sector. The layup of DP vessels is thus an inevitable consequence of a low barrel price with vessels heading for the traditional layup locations.

Once the decision has been taken to put a vessel into layup, a superintendent will ask him/herself a number of key questions:

- When do I expect to return my vessel(s) to service?
- How should I manage a fleet of laid up vessels?
- What is their reactivation time?
- Is the vessel (or vessels) due for dry dock prior to reactivation?
- Do I know where the vessel is likely to re-enter service next?
- Is there a reactivation plan?
- Has any failure analysis study been completed for the vessel?
- What layup strategy and maintenance was done in layup?

REACTIVATION IMMINENT

During 2017, the IMCA Marine Division Management Committee recognised that with improving industry metrics, member companies could be considering reactivating their owned and managed vessels, following a period of layup. At the IIMS-organised eCMID Accredited Vessel Inspector Seminar, I reported on the findings of a Clarksons Platou Securities survey of 1,700 owners and charterers of OSVs who were taking an optimistic view of the market. Statistics then available showed that:

- 80% of owners and charterers expect ship use to rise
- Near-term vessel demand had risen markedly relative to their August 2017 survey
- The 2017 figure for a rise in utilisation was 40%, compared to 80% in 2018
- A quarter of respondents from oil and gas companies were unwilling to charter a vessel stacked for more than six months
  - This rose to 60% at more than a year idle
  - And 75% at more than two years idle
  - At more than three years idle the figure was 90%
- 92% of owners said they would demand a contract in order to reactivate a vessel.

These statistics show the importance of really effective reactivation readiness. They also highlight the fact that nowadays it is a far cry from, for example, the mid-1970s when traditional 'cold layup methods' were based on preventing corrosion and seizure in machinery and there was a relatively simple 'to do' list. This comprised dehumidification of accommodation and bridge; dehumidification of the engine room and machinery spaces; and the periodic turnover of machinery. Even with such a limited list of activities there were reactivation issues, which included:

- Electronic equipment failure – failed to start
- Pneumatic control systems sticky or not operating correctly
- Stiffening of ship side valves
- Corrosion issues in ballast lines
- Spares required to reactivate not on board
- Crew not familiar with the vessel
- No plan and therefore no idea how long to reactivate
- Could not pick up the anchor / twists in the chain

We were well aware that with more sophisticated vessels the steps to effective reactivation would be a great deal longer

and more detailed, and came to believe that there could be distinct bonuses if the task was undertaken correctly. Joey Fisher, a member of the IMCA Marine DP Committee and I spoke at four conferences about reactivation and also did a lot of listening. Two of the events were IMCA seminars held in Amsterdam and Singapore with interactive workshops on the topic enabling us to soak up valuable industry feedback.

Interestingly, these workshops concluded that given the right circumstances there is no reason why a reactivated DP vessel should not re-enter service in a better condition than when she was laid up - but more of that later.

GLOBAL INDUSTRY COOPERATION

There appeared to be every reason for getting to work on the production of the much-needed concise information note. There was agreement across the board that no hefty volume was necessary as the document was to be designed for professionals playing a key role, and so headings and bullet points rather than wordy paragraphs were crucial to its success in what we determined would be in the style of an aide memoire.

The Reactivation of DP Vessels Workgroup was established with Mike Meade of M3 Marine as its chairman and the first of six virtual meetings was held on 30 January across all geographic regions. It was a major piece of collaborative work involving 12 IMCA Member companies who are suppliers and consultants, as well as DP vessel owners and operators. We are extremely grateful for their time and commitment to this exercise.

Ten main sections were identified and work commenced. Two of our committee experts each took two sections and came up with the headings and the bullet-point topics to be listed under those headings. Then the entire committee reviewed the sections, headings and bullet points to ensure everything had been fully covered. It was an exciting and exacting process with the information note for industry being created, in a very timely manner, by the industry itself.

HEADINGS AND SUB-HEADINGS IN PLACE

This was the list of main headings that was determined. In all, there are 197 main bullet points (and a further 36 subsidiary bullet points) listed under these main and sub-headings. No mean feat and a great tribute to all 15 of our experts from seven countries.

1 Personnel
- 1.1 Crew considerations
- 1.2 Support staff requirements

2 Budget Considerations

3 Planned Maintenance & Spare Parts
- 3.1 Initial Planning
- 3.2 Mobilisation to Vessel – First Steps – Shore based personnel and crew based ashore
- 3.3 Commencement of maintenance work identified in 3.1 – Personnel living onboard
- 3.4 Review of FMEA and proving trials documents following maintenance and upgrades

4 Proving Trials & Acceptance Criteria
- 4.1 Purpose of reactivation trials
- 4.2 Lay-up factors affecting the reactivation trials programme
- 4.3 Documentation/inspection to develop a trial program (inputs)
- 4.4 DP subsystem specific guidelines for reactivation trials
- 4.5 Personnel and responsibilities
- 4.6 Follow up actions

5 Recertification, Flag, Class & P&I
- 5.1 The following should be notified at the earliest opportunity
- 5.2 Prepare vessel readiness for eCMID & OVID inspection

6 DP System components
- 6.1 Engines & Marine Systems
- 6.2 Electrical Systems
- 6.3 Propulsion and Thrusters
- 6.4 Vessel Control & Monitoring Systems including Dynamic Positioning
- 6.5 Mission equipment that could impact the DP control system

7 Mission critical equipment to be considered in the reactivation programme

8 Considerations depending on location of Vessel
- 8.1 Security
- 8.2 Environmental conditions
- 8.3 Facilities
- 8.4 Logistics

9 Vessel Structure & Fabric

10 Existing Guidance

If, on seeing the full document, any AVIs feel there are omissions, they should take advantage of our document 'feedback' button. All suggestions will be taken on board and, subject to committee approval, added at the next revision. This is a quick process as all our publications are online.

WHAT HAS CHANGED FROM OLD STYLE REACTIVATION?

There is no doubt that the cost and time to reactivate a vessel increases if the deactivation and layup are not managed properly. The importance of a proper reactivation plan cannot be underestimated, but how often are they in evidence? With publication of 'Reactivation of DP Vessels' we are challenging all owners/operators and Marine Superintendents to produce a well thought out plan using our section headings. This is something an AVI can reference to help him/her during the survey.

Vessels have become ever more sophisticated with a massive increase in electronic equipment fitted. Gone are the days when this would all be on the bridge, nowadays it is found in machinery spaces as well. Equally, there are many more control panels and different types of sensors to be taken into consideration. There is an increase in types and designs of specialised vessels, with DP vessels certainly coming under this heading. The use of varying types of propulsion has been developed and, of course, the use of computers and complex instrumentation plays an invaluable role on modern vessels. This leads very naturally to thoughts about cyber security.

A laid-up DP vessel that is five years old, will have computer-based thrusters. That short time ago no-one was thinking of those thrusters needing to be hack-proof, or giving much consideration to cyber awareness.

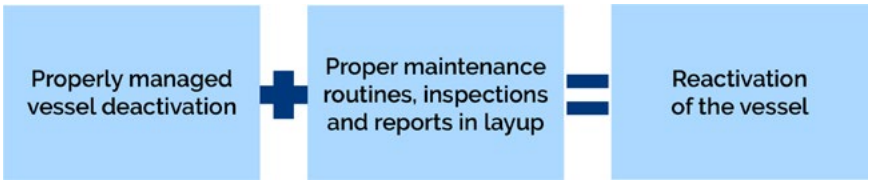
All that has changed. If it was a new vessel it would be fully cyber-threat protected; and during reactivation of that five-year old vessel a new piece of kit can be introduced that plugs into existing equipment ensuring cyber awareness and protection. Just imagine what can be achieved during reactivation to ensure that all computer-based systems and equipment can be updated in this way. It is a process that will greatly update all aspects of the vessel.

People need updating as much as equipment and any reactivation plan should include working with the entire crew to ensure they have been updated just like all the computer-based equipment. Safety and efficiency benefits to be gained from re-thinking the manning aspect by re-educating, re-familiarising, improving crew skills through to improving vessel and shore management interaction were also highlighted during our seminar workshop sessions as additional benefits. Looking in detail at the personnel section in the newly published information note, we see all the following personnel areas highlighted in readiness for detailed plans to be drawn up by the Marine Superintendent and his/her team:

1. Personnel
   Steps to be taken to ensure it is safe for the crew to go onboard

1.1. Crew consideration
- Define IMO Safe Manning Document
- Define operational crew required for the specific vessel, mission and geographic area
- Define STCW requirements
- Compile matrix for offshore courses, training, health, certificates, etc.
- Hire crews and ensure relief crews familiarise themselves with their roles prior to departure
- Ensure compliance with IMCA M117 – The Training and Experience of Key DP Personnel/IMO MSC.1/Circ.738/Rev.2
- Base familiarisation and training requirements on IMCA Guidance on competence assurance and assessment: Marine IMCA C002

1.2. Support staff requirements:
- Office support staff for both reactivation and operation
  - Critical vendors with timelines of availability. For example, engine, thruster and DP system original equipment manufacturers (OEMs)



For AVIs, it will not just be a reactivated vessel that is there for your inspection, but a highly efficient and well trained crew to help you in any way they can.

GETTING DOWN TO THE SURVEYS NEEDED

Our own research determined that if a vessel has been laid up for less than 12 months, only overdue surveys need to be carried out; with a condition survey for ships that have not been preserved.

For vessels laid up for more than 12 months, it is agreed that all overdue surveys must be undertaken, sea trials should be held, and that some postponement may be possible for bottom, tail shaft, and machinery.

In the case of long lay-ups with no preservation or maintenance an extended scope of survey is required.

We are confident that use of the reactivation information note by the Marine Superintendent and his team leading up to your visit will enable you to be optimistic about what you will find onboard, and serve as a useful aide memoire for you too.

Revision 11 of IMCA's Common Marine Inspection Document (CMID), due to be published by October, will include a new supplement on vessel reactivation from layup featuring 19 questions; again something designed to assist AVIs.

CAN WE ASK A FAVOUR?

We need your help please. You can assist IMCA by encouraging those on board all DP vessels that you inspect, to use the IMCA DP Station Keeping Event reporting scheme. Reporting events is not a blame game but instead enables the experience of others to be used within risk assessment, and enables all to learn from each other's' experiences. There are three clear reporting categories - DP incident, DP undesired event, and DP observation - ranging from major to something relatively minor worth sharing.

The online form is intuitive and thus simple and easy to use. The anonymity of participants is protected and the feedback to industry is prompt and unbiased. Following review by IMCA's Marine DP Committee the DP Station Keeping Event Bulletin is issued quarterly to vessel operators and training establishments; and once a year the Annual Review of DP Station Keeping Events is issued. This is a spreadsheet containing details of all received reports that allows the owners and operators of DP vessels to easily compare events with their onboard situation.

Those contributing reports are issued with a Certificate of Participation & Industry Leadership for display onboard their vessels. The more reports we receive on events, however seemingly minor, the safer the industry will be. Equally we encourage participation in the IMCA Safety Flash scheme. The scheme has been in operation for more than 20 years and is unparalleled in the offshore industry. Safety alerts are provided by IMCA members and from other leading offshore organisations – again all such reports are kept anonymous, and prove vital for keeping personnel and equipment safe.

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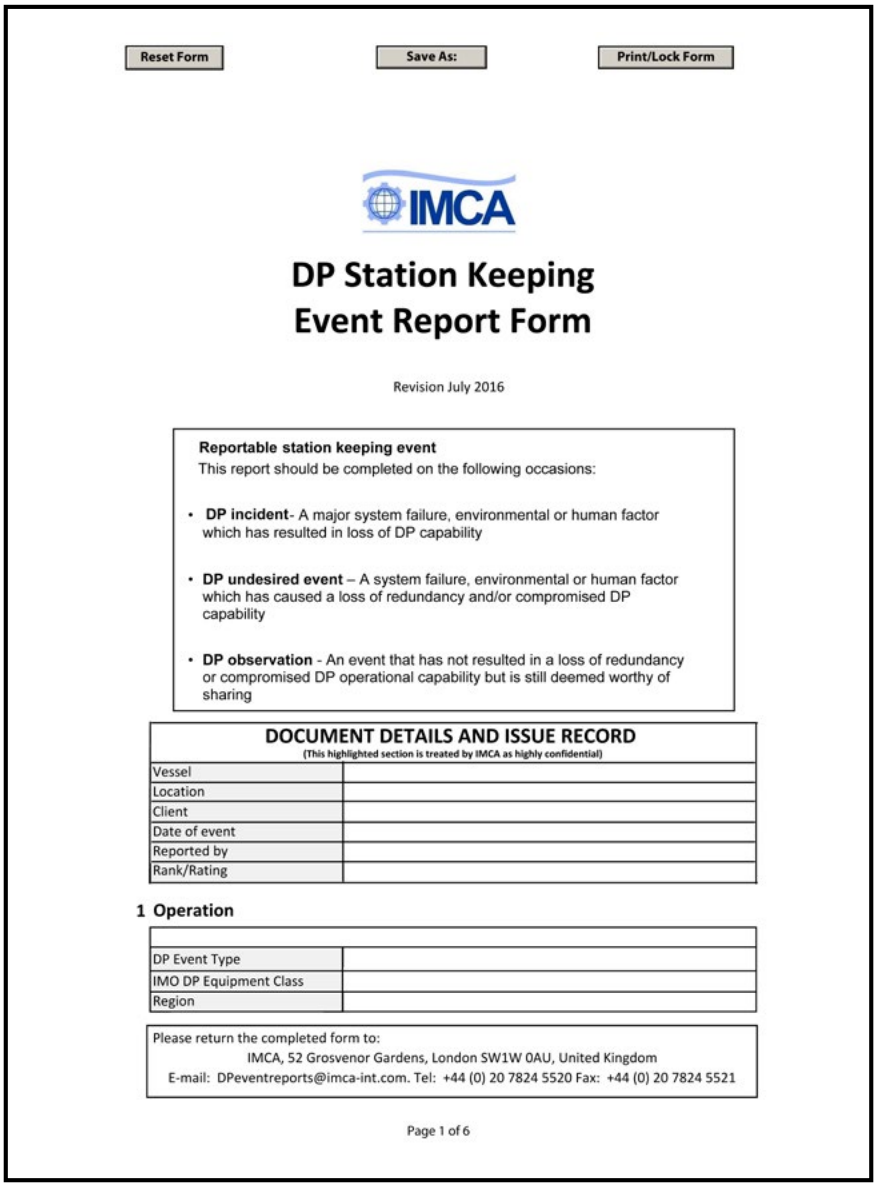

Reset Form | Save As: | Print/Lock Form

IMCA

DP Station Keeping Event Report Form

Revision July 2016

Reportable station keeping event

This report should be completed on the following occasions:

- **DP incident**- A major system failure, environmental or human factor which has resulted in loss of DP capability
- **DP undesired event** – A system failure, environmental or human factor which has caused a loss of redundancy and/or compromised DP capability
- **DP observation** - An event that has not resulted in a loss of redundancy or compromised DP operational capability but is still deemed worthy of sharing

DOCUMENT DETAILS AND ISSUE RECORD

(This highlighted section is treated by IMCA as highly confidential)

Vessel	
Location	
Client	
Date of event	
Reported by	
Rank/Rating	

1 Operation

DP Event Type	
IMO DP Equipment Class	
Region	

Please return the completed form to:
IMCA, 52 Grosvenor Gardens, London SW1W 0AU, United Kingdom
E-mail: DPeventreports@imca-int.com. Tel: +44 (0) 20 7824 5520 Fax: +44 (0) 20 7824 5521

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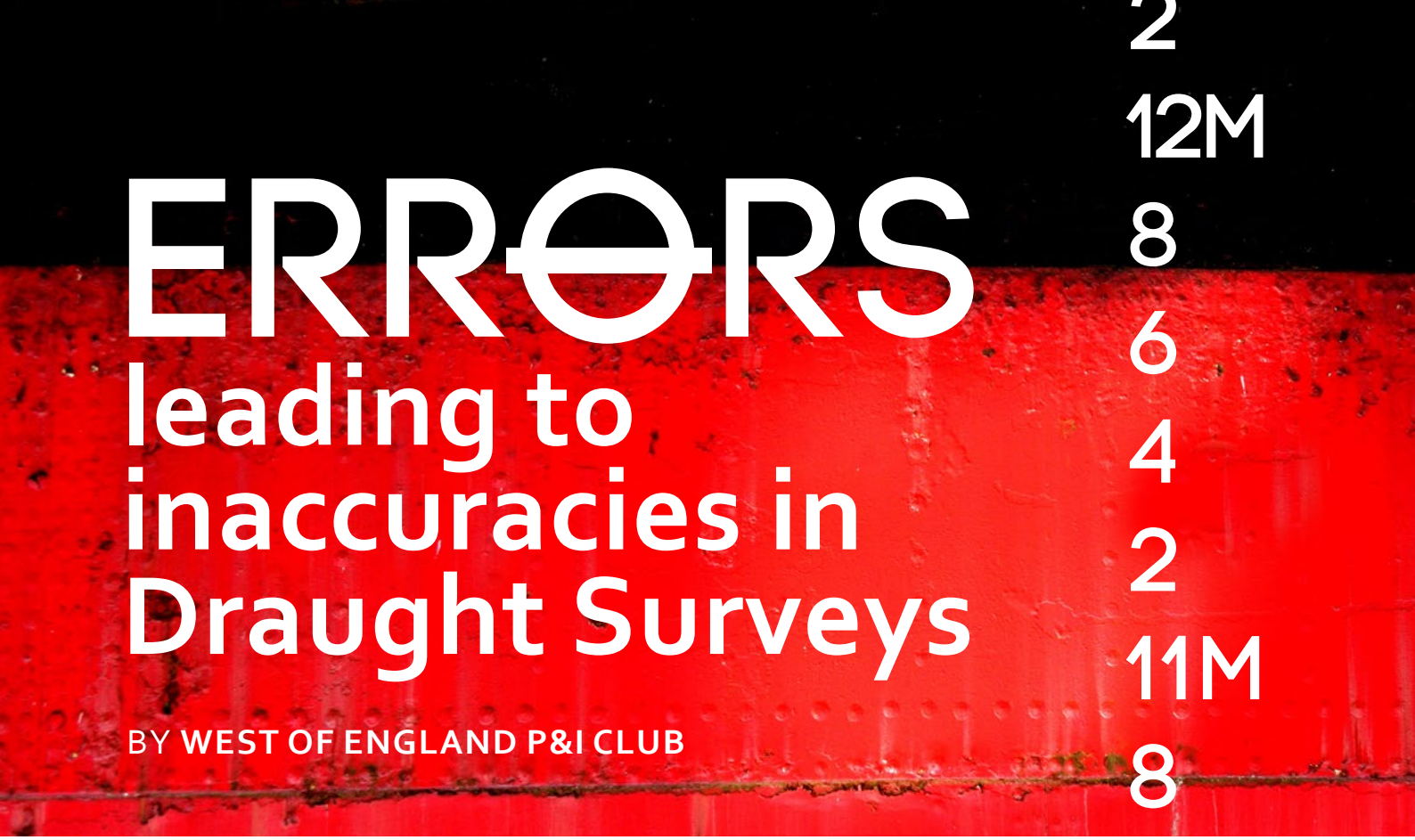


ERRORS leading to inaccuracies in Draught Surveys

BY **WEST OF ENGLAND P&I CLUB**

In a recent Loss Prevention Bulletin, West of England P&I Club has gone to great lengths to explain how discrepancies in draught surveys can occur, which can lead to claims.

The Club says it regularly receives claims arising from alleged shortages of cargo as a result of discrepancies between draught survey results.

Draught surveys by their very nature are not an exact science, and the accuracy of the calculated cargo figure may vary typically by between 0.5 and 1.0%. However, there are occasions when considerable differences in the cargo figures derived from the draught surveys are obtained. The purpose of this Loss Prevention Bulletin is to remind deck officers of the principal sources of errors which may affect the survey results, such that they can be taken into account when shortages in the cargo are found.

DRAUGHTS

It is imperative that the draught marks are read as accurately as possible. Ideally this should be done from a boat so that the marks can be approached closely and read. However, poorly painted, rusty, or draught marks covered with marine growth make reading the draught accurately problematic, therefore it must be ensured, so far as possible, that the draught marks are kept in a readable condition. The presence of wind waves on the water surface will necessitate an estimation of the average draught by observation of the peaks and troughs of the waves against the hull. Darkness and shadows also make accurate reading difficult; therefore good lighting will be required at night. The turn of the hull around the stern leading to elongation of draught marks being viewed from an oblique angle, especially when this has to be done from an adjacent wharf at a higher level, can lead to difficulty in accurately determining the draught.

As an example, an error of two centimetres in the mean draught would lead to an error in the displacement of approximately:

- **68t** – Handysize Bulk Carrier (10,000 – 35,000t deadweight)
- **90t** – Handymax Bulk Carrier (35,000 – 59,000t deadweight)
- **112t** – Panamax Bulk Carrier (60,000 – 80,000t deadweight)
- **300t** – Capesize Bulk Carrier (> 80,000t deadweight)

It is therefore advised to ensure that the inspection and maintenance of the draught marks be included in the planned maintenance system on a vessel.

DENSITY

Although there are numerous possible causes of inaccurate dock water density, it must first

be confirmed that the hydrometer being used is of the correct type. There are two types of hydrometer in use, the load line survey hydrometer, and the draught survey hydrometer, the latter being used in this case.

A draught survey hydrometer, calibrated in air, measures the apparent density of the water and is used for determining the weight of the cargo onboard. A load line hydrometer, calibrated in a vacuum, is used to determine the relative density of the water and determine the displacement of the vessel at a given load line. A dock water density reading taken with a draught survey hydrometer showing 1.015 t/m^3, would show 1.017 t/m^3 when taken with a load line hydrometer, both are correct, the difference between the two of 0.002 is known as the "air buoyancy correction", however as we want to determine the weight of the cargo on the vessel the density read from the draught survey hydrometer will be used. The draught survey hydrometer is calibrated at a standard temperature. Any deviation from the standard temperature does not require a temperature correction, as the changes in the volume of the vessel and the hydrometer will generally cancel each other out. It must also be ensured that the hydrometer is calibrated regularly to ensure its accuracy, as they can become chipped, damaged and / or contaminated with a film on their surface during use, altering their mass. Hydrometer manufacturers generally recommend they are calibrated after one year, and then every two or three years thereafter.

When determining the dock water density a sample of the dock water should be taken beneath the surface of the water, clear of overboard discharges and deck runoff. In order to ensure an accurate reading the receptacle used to sample the dock water, and the hydrometer, must be clean. When taking the reading the hydrometer must not touch the side of the receptacle and be gently spun to break the surface meniscus of the water. The density reading is then read from the hydrometer stem at the bottom of the remaining meniscus. A number of readings should be taken from each sample, with the average of the readings determined. A number of separate dock water samples should be taken from around the vessel and measured, with the mean of all the average densities used for the draught survey. If an error is made when determining the dock water density, using a density lower than the actual density will lead to an apparent cargo shortage, with an apparent cargo surplus when a density higher than the actual density is used.

BALLAST

A number of errors can occur when determining the ballast onboard. The tank soundings themselves may be incorrect due to difficulties in obtaining accurate soundings when using a sounding rod and rope, with the inherent possibility of reading incorrect depths from the rope due to a lack of markings and the wetness of the rope. When using a metal sounding tape it may be difficult to determine the actual water level from the metal tape. Further, inaccurate soundings may

be obtained when the doubler plate at the bottom of the sounding pipe is corroded and worn, increasing the sounding and hence the apparent weight of water in the tank. Often, particularly on older vessels, sounding rods and brass bobs may remain in the sounding pipe, giving readings less than true, as will be the case if the sounding pipe has become blocked with rust scale or other debris, such as rags left in the tank during maintenance or dry-docking. The presence of sediment in the tank covering sounding rods and tapes can also lead to erroneous readings. The figures for the ballast extracted from the sounding book may be in error due to inaccuracies in interpolation or not allowing for the trim or list of the vessel, further, the figures may be calculated assuming an incorrect ballast water density, and it is recommended that ballast tanks are overflowed for a length of time such that a truly representative ballast water sample can be obtained for density determination.

UNFACTORED WEIGHTS

Often weights are not deducted or allowed for when determining the cargo quantity, the commonly forgotten weights are:

- Bilge water present in the cargo holds, machinery spaces, duct keel, void spaces and the chain lockers.
- Swimming pool water.
- Anchor and anchor cable on the seabed, either when at anchor or alongside and an anchor has been deployed as part of the mooring arrangement.
- Silt and mud can accumulate in the double bottom tanks of vessels regularly ballasting in rivers or estuaries. The extra weight can give rise to an apparent increase in the cargo loaded.

As an example:

If we assume a single ballast tank with a 500m³ capacity.

On arrival prior to loading the tank is overflowed and full of seawater.

Therefore the assumed weight of water = 500m³ x 1.025 t/m³ = 512.5t.

However, there is 40m³ of mud in the tank.

Therefore the true picture of the tank's contents is as follows:

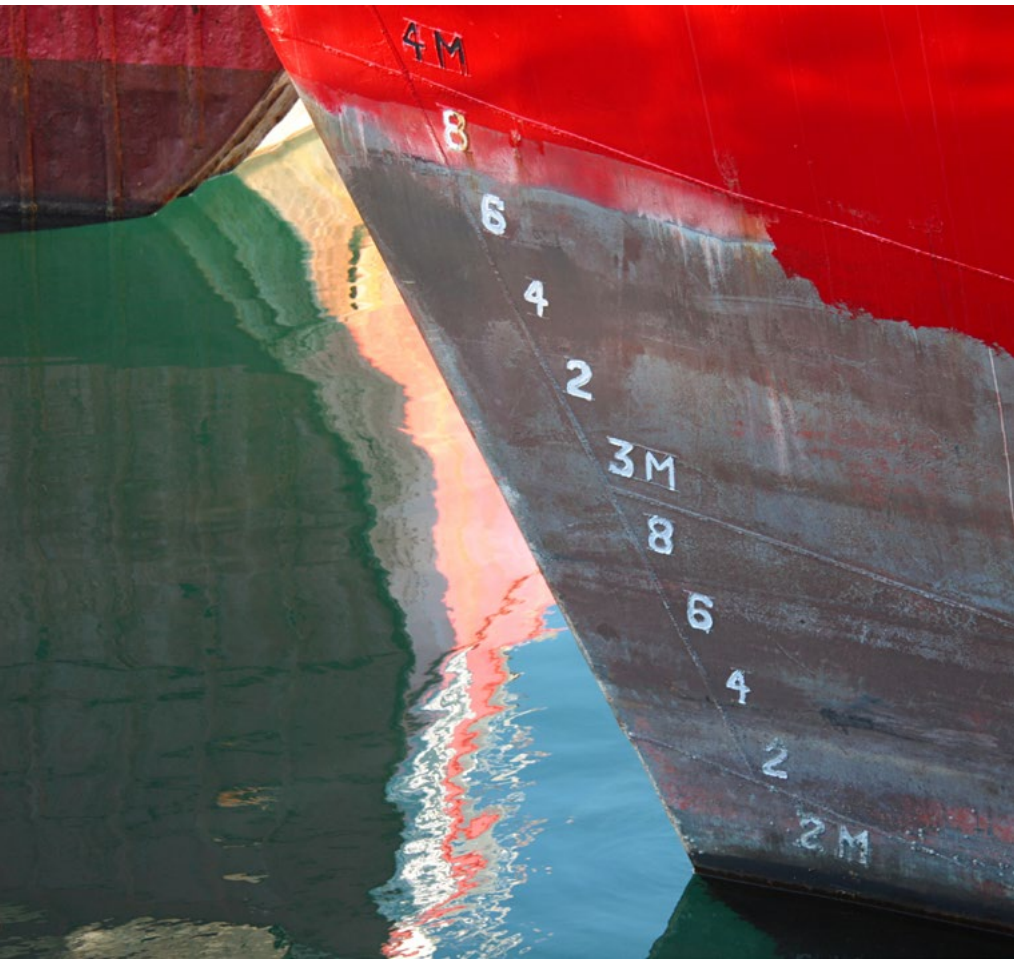
Water: 460m³ x 1.025 t/m³ = 471.5t

Mud: 40m³ x 1.9 t/m³ = 76t

Total weight of tank contents = 471.5t + 76t = 547.5t

As 512.5t is assumed to be the weight of ballast in the tank, the remaining 35t will appear in the constant.

On completion of loading it is assumed the tank is empty. However, 76t of mud remains, only 35t of which is in the constant, the remaining 41t will appear to be cargo loaded.



SQUAT

As most mariners know, squat is the bodily sinkage and trimming of a vessel making way with limited underkeel clearance. However, a vessel alongside a river berth may also be susceptible to squat, leading to inaccurate draught readings.

Squat will occur when there is limited space for the water to flow between the vessel and the river bed. In order for the river water to pass between the flat bottom and the river bed there will be an increase in velocity of the water flowing past the hull, and consequently a decrease in the water pressure. The decrease in pressure leads to the ship bodily sinking and also a change of trim.

The magnitude of the bodily sinkage and change of trim is difficult to quantify, however, it will be a function of the underkeel clearance, speed of the water, the cross section of the hull in relation to the cross section of the river (blockage factor) and the shape of the hull (full form vessels are affected more).

Generally full form vessels will trim by the head, and fine line vessels will trim by the stern. If a vessel is passing at the time that the draughts are being read, this may exacerbate the error due to the increased blockage of the river and consequently the vessel may trim and sink more than normal.

FURTHER FACTORS

Other areas that can lead to errors in the draught survey calculation include the following:

The hydrostatic data and tank sounding tables may not be accurate due to changes to the ship's structure.

On most vessels the ballast tanks suctions are located at the aft end of the tanks, as the normal convention is for a vessel to be trimmed by the stern. However, when trimmed by the head, although a ballast pump may have lost suction indicating that the tank is empty, there may be un-pumpable ballast pooled in the forward part of the tank. In addition, if the sounding pipe is towards the aft end of the tank and the vessel is trimmed by the head, then the sounding may also show the tank to be empty, when that is not the case.

Leaking tank valves – when a tank has been sounded and found to be empty, subsequent ballasting / de-ballasting operations could lead to water leaking into the tank, similarly, when ballast tanks are overflowed during discharge operations to show that they are full, water could leak out of the tank prior to the draught survey taking place.

Whilst on passage, depending on the nature of the cargo, water could migrate from the cargo to the cargo hold bilges and be subsequently pumped overboard. If water is found to be accumulating in the bilges while at sea, accurate records of the quantity of bilge water pumped overboard should be kept to help counter any subsequent cargo shortage claim.

Some vessels are susceptible to unsymmetrical hull deflection, this particularly affects smaller vessels due to their larger engine room in relation to their size which pushes the location of maximum sag forward of amidships, leading to inaccurate draught readings.

On older vessels in particular, problems can be encountered due to set in shell plating between the upper wing and double bottom ballast tanks. This can lead to actual displacements less than shown in the hydrostatic data for a given load draught, therefore there can be less cargo onboard than expected.

The position of the hatch covers can affect the deflection of the hull, particularly on smaller vessels when the open hatch covers may be stowed at one or both ends of a single hold. For draught surveys on all vessels it is recommended that the hatches remain closed to ensure consistency.

Whilst alongside any bunkering, taking of potable water, and discharge of sludge or oily water should be considered when completing the final draught survey. Where there is any notable difference in the constant between loading and discharge, then this is an indicator that there is an error somewhere in the draught survey, and this should be thoroughly investigated. Throughout a cargo voyage, the constant should be, as the name suggests, fairly constant.

In the event of a cargo discrepancy arising as a result of a draught survey, deck officers are advised to consider the possibility that one or more of the foregoing factors may have contributed to the difference. In particular any substantial change in the constant should be viewed with suspicion and investigated.

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Telephone: ***+44 (0) 20 7716 6000***
Web: ***www.westpandi.com***

UK BUSINESSES REGISTERED FOR VAT, ARE YOU READY FOR THE CHANGES IN APRIL 2019?

BY **FLEUR LEWIS**, BISHOP FLEMING PARTNER

With a relatively few short months to go before VAT registered businesses in the UK will have to keep digital records and use approved computer software to file their VAT returns online, it is time to prepare for the digital changeover writes Fleur Lewis from Bishop Fleming.

From 1 April 2019, UK VAT registered businesses with sales above £85,000 will have to keep electronic accounting records and submit VAT returns using software approved by HMRC.

Affected businesses will no longer be able to keep manual records in any part of their accounting system. For those who use software and spreadsheets, digital links must be in place to transfer data between each function.

VAT registered entities need to start getting their accounting records in a digital form to avoid panic later on as the deadline approaches.

Businesses need to contact their accountants and software suppliers to find out when they will receive an upgrade to deal with the changes.

The tax office is currently undertaking a pilot exercise with a number of volunteer businesses and software suppliers and are busy working to ensure they have the right updates in place.

The following steps can help preparations for the deadline:

- Read up on how Making VAT Digital will affect your business and what you need to do in advance of the date

- Check with your software supplier that your software is up to date or will be by April 1 2019.

- If you use a spreadsheet and wish to carry on doing so, you will need to add on an API enabled spreadsheet.

- Convert your record keeping to a digital format and make sure that your VAT returns can be created from those digital records.

- Some entities will not have to comply with digital accounting where they fall within one of the exclusions, but these are limited and rely on the discretion of the tax office. For example, some charities and academies may be exempt.

More information is available from the Government web site at **https://bit.ly/2xjRbaB.**

CONSISTENT TESTING STANDARDS ARE VITAL TO ENSURE BALLAST WATER COMPLIANCE

BY **DR BRIAN PHILLIPS,** MANAGING DIRECTOR,
CHELSEA TECHNOLOGIES GROUP

The entry into force of the Ballast Water Management Convention (BWC) in September 2017 after years of debate provided the maritime industry with a framework to deal with the increasing threat of invasive aquatic species. To date, 74 states have ratified the BWC, representing more than 75% of the world's merchant fleet.

Carried in ships' ballast waters, invasive aquatic species have had a significant economic impact throughout the world. Specific ballast discharge events have been held responsible for disasters such as outbreaks of deadly disease, complete collapse of fish stocks, mass blockages of internal waterways and even the total eradication of some species. It has been suggested that the total loss to the world economy as a result of invasive non-native organisms is as high as 5% of annual production. In 2008 it was estimated that the 57 non-native species introduced into the Great Lakes was costing the United States $200 million annually, or $2 billion over the last decade.

Examples of invasive species include the European Green Crab which has established populations on both coasts of North America, in southern South America, Australia, South Africa, and Japan. It is a predator of many forms of shore life including worms and molluscs and impacted the commercial shellfish industry in several regions. Killer Algae green seaweed, native to the Indian and Pacific Oceans, has spread widely in the Mediterranean, replacing native plants and depriving marine life of food and habitat.

To control the further spread of these species in vessels' ballast water tanks, the revised BWC introduced two standards for the handling of discharged ballast water. D-1 addresses the ballast water exchange standard and D-2 details the ballast water performance standard using an approved BWTS.

The D-1 standard requires ships to ensure that ballast water by volume is exchanged far away from the coast where it can be released without significant impact on the local environment, a result of the fact that coastal organisms will not survive in deep oceans or open seas due to different temperatures and salinity. This can be achieved by several means. The sequential method involves emptying the ballast tank and refilling with replacement ballast water equating to at least 95% volumetric exchange. The flow-through method involves pumping replacement ballast water into a ballast tank and the existing ballast escaping by overflow; at least three times the tank volume is to be pumped. The dilution method allows new ballast water to be filled from the top with simultaneous discharge from the bottom.

The D-2 standard requires ballast water management to restrict the amount and size of viable organisms allowed to be discharged and to limit the discharge of specified indicator microbes harmful to human health.

Ships under construction whose keel was laid on or after 8 September 2017 must conduct ballast water management that at least meets the D-2 standard from the date they are put into service. For existing ships, the date for compliance with the D-2 standard is linked with the renewal of the ship's International Oil Pollution Prevention Certificate after September 2019.

One year since its introduction, the shipping industry is still grappling with the impact of the BWC regulations and the array of available technologies. According to a recent report by Hexa Research, the Ballast Water Management Systems (BWMS) market is expected to reach $117 billion by 2025. In order to protect their investment it is critical that shipowners and operators have assurances that this significant capital expenditure has been allocated wisely.

Since the implementation of the regulation it has become clear that crews are struggling to ensure compliance, risking potentially significant fines and reputational damage, as well as the negative impact on the environment through the spread of invasive aquatic species. A large number of BWMS have been type approved in accordance with either IMO or USCG requirements, however it is estimated that up to 60% of those installed are not being operated correctly. The USCG recently noted in its Port State Control Annual Report that the number of BWM deficiencies doubled in 2017 compared to 2016, based on broadly the same number of inspections.

Logs and records accounted for the highest number of deficiencies, along with alternate management methods, mandatory practices, BWM plans and the discharge of untreated ballast water. The USCG noted a lack of familiarity among crews regarding the strategy and operation of a BWMS, as well as confusion around maintenance practices and procedures. All of this creates a significant risk of non-compliance, even if the shipowner has installed a type-approved BWMS.

A further complication creating risk for shipowners is the lack of an agreed IMO regulation or ISO standard for the accurate shipboard testing and analysis of ballast water. While ISO 11711-1:2013 provides guidance on the materials, design, and installation of equipment used to take samples of treated ballast water from the discharge pipe onboard a vessel, it does not yet include a standard on how to perform the representative sampling and analysis of ballast water.

Inaccurate testing and false readings could lead to delays with port state control and potentially significant fines, risking reputational damage, as well as the impact of non-compliant discharges on the environment. Indeed the USCG advised in its report that operational control restrictions had been imposed on 17 vessels due to the severity of deficiencies. In August 2017 the USCG issued a USD 5,000 fine to the operator of a freight vessel for unauthorised ballast water discharge into the Willamette River in Portland.

Having a robust and consistent standard in place eliminates ambiguity and provides assurance that compliance can be proven based on trusted and accurate data. A regulatory

standard that has been developed and agreed by leading experts will provide shipboard personnel, as well as port and flag state officials, with an agreed and robust standard for verifying whether the BWMS is working as intended.

Chelsea Technologies Group (CTG) is working closely with regulators including the IMO, ISO and port authorities as a trusted and workable international standard is developed for ballast water sampling and analysis, one that is based on a proven methodology for representative sampling and analysis of ballast water. The company has already initiated discussions with accreditation authorities and is undergoing a process of third-party protocol testing.

Unlike detailed analysis methods where samples need to be assessed in laboratories by specialists in water microbiology, testing with CTG's FastBallast compliance monitor can be carried out by any crew member at any stage during the ballast water discharge operation, producing results in under 10 minutes. CTG's FastBallast compliance monitor is the only systems to pair the most sensitive technical components with a statistical method to generate a cell density that is truly comparable with laboratory analysis across all species and water types. This approach allows a measurement to be taken independent of an assumed cell size, in order to achieve the most accurate and precise readings to provide operators and port authorities with the highest level of confidence in compliance. It is the only technology capable of operating in a flow-through mode, while providing a high degree of accuracy with a representative report on discharge compliance.

FastBallast uses the single-turnover method, rather than the PAM multiple-turnover method, which provides a much lower detection limit (< 1 cell per mL) as the 20ml sample size avoids sampling problems at low cell densities. It is capable of determining the phytoplankton cell density of ballast water to IMO D2 & USCG Discharge Standards (10 to 50 µm range), with an equal degree of

confidence as laboratory analysis. The single-turnover method was recently independently verified by the Chinese government as the most accurate method for portable ballast water testing, based on a series of benchmark tests that measured the accuracy of several methodologies against laboratory testing.

FastBallast was identified by Saudi Aramco's in-house marine biology experts as the most accurate solution in the market for the sampling and testing of ballast water, and is being used to conduct spot checks undertaken by third-party sampling companies. Since August 2017 Saudi Arabia has been conducting ballast water monitoring on vessels to ensure compliance. Sampling data was obtained from more than 500 vessels by Global Strategic Alliance (GSA) using CTG's FastBallast monitoring system, with a pass rate of 90% reported for vessels using the D2 standard.

CTG's FastBallast is setting the gold standard for effective enforcement of the BWMC, and will help dramatically reduce the impact of invasive species worldwide. As well as its established presence in Saudi Arabia, CTG is in discussion with leading port authorities worldwide to help drive industry change in developing portable ballast water testing standards.

Invasive aquatic species pose a significant economic threat across the globe. The far-reaching consequences impact aquaculture, tourism and biodiversity. As the number of ballast water treatment systems on the market nears 100 with a wide array of treatment solutions, there will be an increasing number of vessels equipped with BWM systems and an acceleration in the spread of compliance monitoring. To eliminate the risk of any ambiguity over results, potential fines, delays and reputational damage, it is vital that ballast water sampling and analysis is conducted using a proven methodology and is measured to a consistent industry standard. Failure to deliver this standard will risk undermining the spirit of the BWM Convention.

"FastBallast was identified by Saudi Aramco's in-house marine biology experts as the most accurate solution in the market for the sampling and testing of ballast water, and is being used to conduct spot checks undertaken by third-party sampling companies."

The Benefits of London Arbitration

More maritime disputes are referred to arbitration in London than to any other place where arbitration services are offered. In 2014 LMAA Full Members received about 3,582 new arbitration appointments and more than 584 awards were published by them.

Arbitrations in London are conducted under the Arbitration Act 1996. The LMAA Terms are the terms on which LMAA members usually accept arbitration appointments in maritime cases. Where the members of the tribunal accept the appointment on such terms they therefore apply to and govern the procedure adopted in the arbitration reference. The Terms have been altered from time to time and the current version is the LMAA Terms (2012).

The LMAA has also instituted its Small Claims Procedure (SCP), Fast and Low Cost Arbitration (FALCA) and Mediation Terms which together offer those involved in maritime matters a wide range of choice for the resolution of disputes.

London is the world's leading seat of maritime arbitration, and it has unique benefits, explains Ian Gaunt, President at The London Maritime Arbitrators Association (LMAA).

The LMAA is the world's leading body specialized in commercial maritime dispute resolution. With over 700 full and supporting members practicing in London, LMAA is admired for the promotion of practical procedures conducted under the English Arbitration Act 1996.

Gaunt was elected President of the LMAA in 2017, and has broad knowledge on commercial, technical and legal aspects of ship sale and purchase, shipbuilding and related financing agreements. Arbitration experience includes disputes concerning shipbuilding, ship repair and conversion contracts, charterparties, sale and purchase agreements and contracts of affreightment.

Why is London considered to be a main arbitration point?

London is the most popular venue for commercial arbitration generally and maritime arbitration in particular. In the recently published White & Case survey carried out by Queen Mary University 64 percent of those interviewed gave London as a preferred choice of arbitration venue or "seat". In the field of maritime arbitration (based on another report published recently by international law firm HFW) it is apparent that some 80 percent of international maritime arbitrations have their seat in London. Almost all are conducted as ad hoc rather than institutional arbitrations under the Terms or Procedures of the LMAA with a small number conducted under the institutional rules of the London Court of International Arbitration (LCIA).

The principal reasons cited are:

- **Availability of experienced specialist counsel, solicitors and experts.**
- **Availability of experienced specialist arbitrators (particularly in the maritime field).**
- **The experience of the English Commercial Court in exercising its supervisory jurisdiction and in ordering "interim measures" such as injunctions and document or property preservation orders.**
- **Relative cost and speed.**
- **The wealth of English commercial and maritime case law.**

What are the benefits of opting for arbitration with the LMAA?

Generally as above, particularly the number of experienced maritime arbitrators and the maritime law experience of Commercial Court judges.

Specifically in the maritime field, the availability of a right of appeal to the Commercial Court from arbitration awards on points of law. This is available almost nowhere else and is generally welcomed by the international maritime community (if not others, for example in engineering or construction cases, who often exclude the right of appeal by choice.)

How flexible is the arbitration process in adapting to each case?

Arbitrators have the right and duty under the English Arbitration Act 1996 to devise procedures suitable to the case. They are not bound by the more rigid rules applicable in the Commercial Court, for example regarding evidence and disclosure of documents. Nevertheless the LMAA Terms and Procedures set out procedural guidelines. These are flexible and are regularly updated.

What does an LMAA panel look like and what criteria are used for its formation?

It is up to the parties to decide if they want a panel of three arbitrators or if they can agree on a sole arbitrator. 80 percent of cases are decided on documents only without a hearing and if the two party-appointed arbitrators can agree on the result, it is not necessary under the LMAA Terms to appoint a third.

In many cases the arbitrators appointed will be members of the LMAA (full or aspiring) but, in general, there is no restriction on whom the parties may appoint. Sometimes though there will be qualifications built into the arbitration agreement such that the arbitrators appointed must be members of the Baltic Exchange or "commercial men or women" or "regularly involved in shipping operations."

Please describe the types of arbitration and what factors determine which one is used in each case:

The LMAA has three principal sets of procedural terms. The choice of which one will apply will normally depend on the amount in dispute (including the amount of a counterclaim). The Small Claims Procedure which mandates a sole arbitrator and eliminates the right of appeal is particularly popular for claims of up to $100,000.

For larger claims, over say $400,000 the main LMAA Terms provide that there will normally be three arbitrators and make provision for more formal submissions and evidence, and possibly an oral hearing. The Intermediate Claims Procedure sits in the middle and is generally considered suitable for claims of between $100,000 and $400,000.

What are the elements of an arbitration agreement?

An arbitration agreement is normally included in the body of the main contract but may be considered separately if there is an issue as to whether the main contract is itself valid (for example because of fraud or some other illegality). The arbitration agreement should ideally provide for the number of arbitrators and how they are to be appointed and

within what deadlines. It should also identify the place or "seat" of the arbitration an ideally the procedural rules to be applied (e.g. LMAA Terms, Intermediate Claims Procedure or Small Claims Procedure).

Is arbitration costly?

This depends very much on the procedure used and the way the case is conducted by the parties and their legal advisers. In the case of the Small Claims Procedure and the Intermediate Claims Procedures there are fixed caps on the fees which can be recovered by the successful party and the arbitrators' fees. Hearings tend to add significantly to the cost of the 20 percent of cases which involve an oral hearing. All the indications are that London is competitive with or cheaper than many other jurisdictions.

Are there any cases where arbitration is not recommended?

There are some types of cases which are not regarded as arbitrable, such as family cases but otherwise disputes under virtually all commercial contracts are regarded as suitable to be decided by arbitration. There are sometimes issues about consolidation of arbitration or the binding effect of arbitration on third parties who are not directly parties to the arbitration agreement but in most maritime cases these can be handled by orders for concurrent conduct, as for example in cases involving chains of charterparties of the same ship.

Please talk to us about the importance of the New York Convention:

The success of the New York Convention of 1958, which celebrates its 60th anniversary in June, is one of the principal reasons why international businesses choose arbitration rather than court proceedings for dispute resolution (another being confidentiality of arbitration). The Convention has over 150 signatories (including China, Russia, Turkey, Greece and Ukraine, among other important players in the maritime world). This means that an award obtained in an arbitration with a seat in one signatory country can be enforced effectively as a court judgment in any other signatory country (subject to some rather narrowly defined exceptions).

This is not the case with court judgments which can only be enforced in another country on the basis of a bilateral or multilateral treaty, such as exists between members of the European Union, or on the basis of reciprocity which may not be easy to establish.

What impact might Brexit have on London arbitration?

Brexit, whatever form it eventually takes, will have no impact on the way London arbitration is conducted nor on the international enforceability of London arbitration awards. International enforcement depends on the New York Convention, not on any E.U. legislation or Conventions.

SUPERYACHT MAINTENANCE TECHNOLOGY:

HOW WILL ON-BOARD SUPERYACHT MAINTENANCE PROCEDURES BENEFIT FROM ADVANCEMENTS IN AUTOMATION?

BY **BRYONY McCABE**

Automation plays an integral role in the daily running of a superyacht – from using autopilot in the bridge to an automated fuel shut-off in the engine room, the technology improves not only efficiency but also safety. However, there is even more advanced technology to come, and engineers in the maritime sector are on the cusp of a digital revolution regarding maintenance procedures and the way they monitor and track critical on-board equipment.

"The process of automation and, more specifically, the accessibility and delivery of data from control systems is going to more accurately guide on-board maintenance and shape future development by OEMs [original equipment manufacturers]," explains Sam Wheaton, commercial director and co-founder of Seahub, an intuitive cloud-based yacht-maintenance software. "The data has always been there – it is collected in control systems and we are now realising the benefits of effective delivery of that data to understanding the condition of the equipment, any systematic flaws, as well as assisting manufacturers in improving equipment reliability through innovation and componentry-based data feedback."

Imagine operating a vessel while constantly keeping track of all of the different equipment and systems that are running. In reality, this technology is simple data collection, but the amount of data produced can be overwhelming and almost useless if the user doesn't know what is relevant and what isn't. A number of forward-thinking engineering companies have realised the potential power of this data collection and have rolled out their own intelligent monitoring and analytics systems. Unlike typical remote monitoring diagnostic systems, these focus on using automated analytics to turn raw data into relevant information that can

be used by owners and operators to make better decisions and improve maintenance and operations, as well as crucially identifying potential issues before failure.

Caterpillar Marine, for example, offers technology-enabled services and solutions using data analytics and expert advisory services to predict and avoid equipment failures, optimise maintenance procedures and reduce fuel and energy consumption. The technology automatically collects data from existing on-board sources, such as sensors, the ship's control system or from the equipment itself. Automated analytics then qualify, validate and analyse this data to identify potential problems and provide potential solutions.

Caterpillar's technology originated from ESRG Technologies Group, a company that for 15 years had installed sensors on board US Navy ships that not only collected data, but also had a processing system to make a prognostic evaluation of what was actually happening within the system. At the time, this was new territory for the maritime sector. Realising its potential, Caterpillar acquired ESRG in 2015 and integrated it into the company as Caterpillar Marine Asset Intelligence (AI).

On-board analytics are valuable for the maritime sector because they provide crew with real-time information about the condition of their equipment and what they should do about potential issues that have been identified. Qualified data can also be sent ashore, where additional automated analytics are used for further analysis – from both an individual vessel and fleet perspective – and where experts are on hand to review the analytic output and apply their experience to it. Therefore, fleet advisors can monitor this information and help owners and operators use it effectively.

Importantly, the technology can monitor any range of equipment that has electric sensors. For Caterpillar's AI, this means both Caterpillar and non-Caterpillar equipment. Therefore, the monitored equipment can range from diesel engines and generator sets to propulsion systems, fin stabilisers, ECDIS, HVAC and refrigeration – essentially any critical

system on board. The first job for the AI team is to sit down with the owner or operator to understand their specific objectives and how data analytics could help them to increase performance. Although every system can be monitored, this doesn't mean they all should be: efforts are focused on what is critical to that specific application and that specific client.

Superyacht owners, for example, will have different priorities regarding the systems they wish to monitor compared to a commercial ship. "Our role is to introduce a suite of analytics solutions to our customers which are tailored to their individual pain points," explains Leslie Bell-Friedel, global business manager at Caterpillar Marine Asset Intelligence. "Some customers will want to focus on increasing the reliability of machinery operations, while others will be focused on optimising vessel productivity, ensuring safety and/or operating more sustainably. This technology not only monitors running conditions, but [also] it leverages analytics to understand the interrelations of different variables on the overall system and incorporates historical data to predict future failure modes."

Therefore, the benefits of such technology for superyachts would be improved operations and equipment maintenance, increased fuel and energy efficiency and ensured safety and compliance with regulations, including water treatment, emissions and waste discharges. David Shannon, business development manager – Americas at Caterpillar Marine Asset Intelligence, says the technology could be easily integrated on superyachts. "We are used to having 120 military vessels or large commercial customers that need to roll into a single user interface," he explains. "This fleet approach can be brought down to the micro level: you have a superyacht with multiple systems and want one user interface to look at."

Although Shannon believes that AI would fit extremely well within superyacht operations, there would certainly be barriers given the variety of applications, systems and components. "In theory, superyachts should be our easiest opportunity from a new-build standpoint but the challenge is that there is so much customisation in the components and systems in this sector," he explains. This level of customisation would mean creating a new baseline analytics model for each vessel.

While automation is undoubtedly incredibly valuable technology, it does still depend on individual components and, by their very nature, these are susceptible to failure. Only this year, Uber's autonomous vehicle-testing made headlines following a crash that killed a woman in Arizona. On yachts, safe operation will rely on using automation alongside a documented and structured manual check process. These future solutions will then not only increase safety on board, but also eventually reduce the need for human-machine interaction by automating selected tasks and processes, while the captain and crew remain at the centre of critical decision-making and on-board expertise. In the longer term, efforts in remote and autonomous operations will pave the way to autonomous ships.

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THE RISK OF LIQUEFACTION FROM NICKEL ORE CARGO REMAINS HIGH

BY **JANICE DAO YEUNG YEUNG**

Janice Dao is a Senior Claims Executive, Lawyer of Skuld Hong Kong. She joined Skuld in 2014 and works on both P&I and FDD matters. Before joining Skuld Janice was an associate of the shipping litigation department of Reed Smith Richards Butler.

Nickel ore liquefaction remains a key point of concern for shipowners and charterers, argues Janice Dao Yeung Yeung, Senior Claims Executive, Lawyer, Skuld P&I Club, who has provided a detailed analysis of the regulatory obligations surrounding the nickel ore cargo from the Philippines and Indonesia for masters, charterers, owners, shippers, as well as insurers.

Liquefaction risks of nickel ore cargoes from Indonesia and the Philippines have been a long-standing prominent issue which require constant vigilance and review by shipowners and charterers.

Since 2010, the liquefaction of nickel ore cargoes has caused the capsize of seven vessels. The recent capsize of MV Emerald Star in October 2017 once again demonstrated the importance of strict compliance with the IMSBC Code (2016 edition) and the other relevant international conventions.

The Philippines and Indonesia are the major suppliers of nickel ore cargoes. For the Philippines, the popular loading areas are

Surigao, Tubay and Davao where the traditional dry season is usually from November to April. However, global warming and fluctuations in weather patterns have long since extended the rainy season and shortened the traditional 'dry season'.

Like the Philippines, the dry season for loading in Indonesia at ports such as Buli, Gebe and Pomalaa runs from November to April, but this too has been curtailed due to changing weather patterns.

One major difference between the nickel ore loading industries in these two countries is, however, that while IG Clubs have been able to establish close connections with their approved and qualified local correspondents/surveyors in the Philippines throughout the years, such connections remain less developed in Indonesia since the ban of nickel ore exports in 2014. This ban was only lifted in 2017. It will therefore take time to establish the same intelligence level as in the Philippines.

What is the IMSBC Code?

The IMSBC Code is the convention that governs the safe carriage of solid bulk cargoes. This became a mandatory instrument under SOLAS Convention in 2011.

To address any new risks arising from the carriage of solid bulk cargo/enhance the safety in such carriage, the IMSBC Code is revised from time to time to ensure any prominent risks to the crew and the ship are properly managed and safeguarded. The latest edition of the IMSBC Code was published in 2016.

What are Group A Cargoes?

Under IMSBC Code (2016 edition), solid bulk cargoes can be classified into three categories and among these, Group A cargo is that which may liquefy if shipped at a moisture content (MC) in excess of their transportable moisture limit (TML).

Is nickel ore a Group A cargo?

By its nature, nickel ore is a cargo which may liquefy if the MC of the material exceeds its TML. As such, this belongs to the Group A cargo under the IMSBC Code (2016 edition).

What sections of the IMSBC Code are relevant?

For easy reference we set out herewith the relevant sections of the IMSBC Code (2016 edition) below:

Nickel ore mines in Indonesia

Stockpiles in the Philippines

SECTION 1 – GENERAL PROVISIONS
1.4.1.
The provisions contained in this Code apply to all ships to which the SOLAS Convention, as amended, applies and that are carrying solid bulk cargoes...

1.4.2
...this Code is legally treated as a mandatory instrument under SOLAS Convention...

SECTION 4 – ASSESSMENT OF ACCEPTABILITY OF CONSIGNMENTS FOR SAFE SHIPMENT
4.2.1.
The shipper shall provide the master or his representative with appropriate information on the cargo sufficiently in advance of loading to enable to precautions which may be necessary for proper stowage and safe carriage of the cargo to be put into effect.

4.3.1.
To obtain the information required in 4.2.1, the shipper shall arrange for the cargo to be properly sampled and tested. The shipper shall provide the ship's master or his representative with the appropriate certificates of test, if required in this Code.

4.3.2.
When a concentrate or other cargo which may liquefy is carried, the shipper shall provide the ship's master or his representative with a signed certificate of the TML (Transportable Moisture Limit) and a signed certificate or declaration of the moisture content, each issued by an entity recognized by the Competent Authority of the port of loading

4.4.2.
Sampling shall be conducted only by persons who have been suitably trained in sampling procedures and who are under the supervision of someone who is fully aware of the properties of the consignment and also the applicable principles and practices of sampling.

4.4.3.
For a concentrate or other cargo which may liquefy, the shipper shall facilitate access to stockpiles for the purpose of inspection, sampling and subsequent testing by the ship's nominated representative

CARGOES THAT MAY LIQUEFY
7.1.2.
A ship's motion may cause a cargo to shift sufficiently to capsize the vessel. Cargo shift can be divided into two types, namely, sliding failure or liquefaction consequence. Trimming the cargoes in accordance with the Code can prevent sliding failure.

7.2.3.
A cargo shift caused by liquefaction may occur when the moisture content exceeds the TML. Some cargoes are susceptible to moisture migration and may develop a dangerous wet base even if the average moisture content is less than the TML. Although the cargo surface may appear dry, undetected liquefaction may take place, resulting in shifting of the cargo.

7.3.1.1.
Concentrates or other cargoes which may liquefy shall only be accepted for loading when the actual moisture content of the cargo is less than its TML.

What are the shippers' obligations?
Shippers are obliged to:

1. Provide Owners/Master with:
   (i) accurate information of the cargo before loading
   (ii) signed certificate of the TML of the cargo
   (iii) signed certificated or declaration of the moisture content of the cargo
2. Facilitate access to stockpiles for sampling
3. Arrange samples to be properly tested

The reality

Although the Code sets out shippers' obligations very clearly, in reality they were rarely complied with. For instance:

1. **Shippers certificates:**
   Very often the shippers' certificates are forged. The MC or TML declared by shippers are often inaccurate and the error can be as much as 10%.

2. **Sampling during loading:**
   Local shippers/mines are very influential organisations and they are often armed. When a Master or local surveyors keep rejecting bad cargo, local surveyors might receive death threats from shippers. Moreover, dry cargoes can be placed onto wet cargo as disguise. From our experience, even for samples collected at dry season, they still failed the lab test.

3. **Stockpiles:**
   The stockpiles are also owned by the powerful shippers/mines. The stockpiles are normally located in remote locations and access is often rejected. The stockpiles are seldom covered hence are exposed to the prevailing weather.

4. **Location of loading areas:**
   As mentioned above, the stockpiles and loading areas are usually located in very remote areas with restricted access. The loading areas are often ill-equipped and loading often takes place at anchorage owing to the absence of any proper loading port.

5. **Loading from barges:**
   Owing to the lack of proper loading facilities, loading often takes place at anchorage using barges. Like the stockpiles, the barges are seldom covered and are also exposed to the weather. Moreover, where there is more than one vessel loading in one area, a barge being rejected by one vessel will be presented to another. In the absence of a good surveyor onboard, one may end up having to load cargo that has been rejected by other vessels, without any treatment or sun drying.

Loading at anchorage by barges

Photo from www.skuld.com

6. **Commercial pressure:**
   Masters are always under tremendous commercial pressure from local shippers or Charterers to load the off-spec cargoes since any stoppage causes delay and time loss. During rainy seasons, there may be 24-hour non-stop loading, with wet cargo being dumped into cargo holds at night. As such, although legally (under SOLAS) the Master has overriding authority not to load or to stop loading off-spec cargo, this is easier said than done.

7. **Value of can test:**
   The can test remains the conventional method adopted by Masters/local surveyors to decide whether a cargo should be rejected or not. However, can tests are only be able to identify samples with obvious signs of moisture; the actual moisture content and TML can only be ascertained under lab tests - not with the naked eye. One reason being that clay, an essential element of nickel ore, holds considerable moisture and naturally absorbs water. With the continuous vibration of a vessel during sea passage, cargoes that contain high moisture content and TML become unstable which may lead to a change in the cargo structure, from solid to liquid form. This would cause instability to the vessel, resulting in listing or even capsizing.

Guidance for Master

Skuld has prepared a guidance to Masters/local surveyors on what they should do when loading nickel ore.

It is a mandatory requirement for Members loading Group A cargo to notify their P&I Club to avoid any prejudice to their insurance cover.

When deciding whether or not to load the cargo, the Master should check for any red flags:

a) Rainy weather or typhoon seasons
b) Mines, stockpiles and barges not covered
c) Forged or inaccurate moisture content and TML level in the cargo certificates or declaration
d) Absence of proper loading facilities
e) Intimidation or death threats to local surveyors by local shippers or mines
f) 24-hour continuous loading and dumping of wet cargo at night
g) Long sea passage for the voyage

If any of the above exist, Members are strongly recommended to contact their P&I Club immediately and appoint the local correspondent, surveyor and/or cargo expert (where appropriate) to assess the situation.

What happens if loading has already commenced when these red flags emerged?

If red flags are evident once loading has begun, the Master should order loading to stop at once, and get the local correspondent and surveyor appointed via the P&I Club as soon as possible. In the worst-case scenario, the wet cargo onboard may have to be off-loaded; where off-loading is impossible, it may be necessary to arrange a cargo expert to see whether any measures can be taken to treat the cargo to bring it within the IMSBC Code parameters. A naval architect may also need to be involved since the liquefaction of cargo would have an impact on the stability of the vessel.

Needless to say, in such circumstances further delay and time loss will occur.

What is the Charterers' obligation?

Having already examined shippers' obligations in loading Group A cargo, it remains apparent how difficult it is in reality to make shippers comply with their obligations. As such, if you are a Charterer in the charterparty chain, you need to understand your legal obligations and ensure that you have fully discharged them.

Under English law, the House of Lords decision The Giannis NK [1998] A.C. 605, held that dangerous cargo refers "*to cargo which directly or indirectly causes some sort of physical damage to life, the ship or other cargo, or raises a threat of it, leading to delay and/or other expense for the carrier*".

Generally speaking, a Charterer is under a strict liability only to load safe cargo onto a vessel even in the absence of any express terms/requirement in that respect. Pursuant to The Giannis NK, the "*shipper undertakes not to ship goods which are liable to cause damage to the vessel or other cargo shipped thereon without giving notice to the shipowner of the character of the goods*".

Meanwhile, as mentioned above, the Clause Paramount imposed an absolute liability on Charterers only to load safe cargo.

What are the Owners' obligations?

Owners are obliged to provide a seaworthy vessel under the charterparty.

At the same time, Owners (being, in practice, the Master) bear the primary responsibility to allow only safe and compliant cargoes to be loaded.

BIMCO has recommended the following clause for solid bulk cargo that can liquefy:

(a) The Charterers shall ensure that all solid bulk cargoes to be carried under this Charter Party are presented for carriage and loaded always in compliance with applicable international regulations, including the International Maritime Solid Bulk Cargoes (IMSBC) Code 2009 (as may be amended from time to time and including any recommendations approved and agreed by the IMO).

(b) If the cargo is a solid bulk cargo that may liquefy, the Charterers shall prior to the commencement of loading provide the ship's Master, or his representative, with all information and documentation in accordance with the IMSBC Code, including but not limited to a certificate of the Transportable Moisture Limit (TML), and a certificate or declaration of the moisture content, both signed by the shipper.

(c) The Owners shall have the right to take samples of cargo prior to loading and, at Charterers' request, samples to be taken jointly, testing of such cargo samples shall be conducted jointly between Charterers and Owners by an independent laboratory that is to be nominated by Owners. Sampling and testing shall be at the Charterers' risk, cost, expense and time. The Master or Owners' representative shall at all times be permitted unrestricted and unimpeded access to cargo for sampling and testing purposes.

If the Master, in his sole discretion using reasonable judgement, considers there is a risk arising out of or in connection with the cargo (including but not limited to the risk of liquefaction) which could jeopardise the safety of the crew, the Vessel or the cargo on the voyage, he shall have the right to refuse to accept the cargo or, if already loaded, refuse to sail from the loading port or place. The Master shall have the right to require the Charterers to make safe the cargo prior to loading or, if already loaded, to offload the cargo and replace it with a cargo acceptable to the Master, all at the Charterers' risk, cost, expense and time. The exercise by the Master of the aforesaid rights shall not be a breach of this Charter Party.

(d) Notwithstanding anything else contained in this Charter Party, all loss, damage, delay, expenses, costs and liabilities whatsoever arising out of or related to complying with, or resulting from failure to comply with, such regulations or with Charterers' obligations hereunder shall be for the Charterers' account. The Charterers shall indemnify the Owners against any and all claims whatsoever against the Owners arising out of the Owners complying with the Charterers' instructions to load the agreed cargo.

(e) This Clause shall be without prejudice to the Charterers' obligations under this Charter Party to provide a safe cargo. In relation to loading, anything done or not done by the Master or the Owners in compliance with this Clause shall not amount to a waiver of any rights of the Owners.

Where this BIMCO clause is incorporated, Owners would be in a much better position since it does not only allow the Master to reject cargo at his sole discretion, but also that any delay or time loss whatsoever related to the cargo quality issues will arguably be on Charterers' account. Further (by virtue of paragraph (d) above) Charterers expressly agree to indemnify Owners for all the resulting losses. This clause would make Owners' lives much easier and a Master would be in a stronger position to reject off-spec cargo.

Charterers in the middle – time charter in and voyage charter out?

Even in the absence of the aforesaid BIMCO clause, the un-amended NYPE form imposes on time charterers the primary responsibility for loading, stowing and trimming the cargo. If shippers fail to provide accurate cargo certificates and the cargo liquefies, time charterers will also be liable to Owners under the express charterparty terms/breach of IMSBC Code and SOLAS Convention.

Furthermore, time charterers are under a general implied indemnity to Owners against the consequences of following time charterers' orders, including orders to carry a particular cargo.

As such, there are more than sufficient grounds on which an Owner can hold time charterers liable for their losses resulting from cargo liquefaction. That is probably the reason why Owners sometimes may not appoint a local surveyor to monitor the loading as they would have fairly high chance of success in passing any claims and/or losses down to time charterers.

By contrast, unlike time charterparty, English law does not generally find such an implied indemnity under a voyage charterparty. Thus, when time-chartering in the vessel, and voyage-chartering her out, the time charterers should incorporate the Clause Paramount and where possible, the BIMCO clause for solid bulk cargo that can liquefy (mentioned above), to maintain a back to back position.

Prior to fixing the voyage charterparty, the time charterers should also make sure that the voyage charterers are of good financial standing and that they are entered with a reputable P&I Club (preferably an IG Club).

The insurer

To summarise, Members can now see that they should strictly follow the IMSBC Code, SOLAS, ISM etc., and the recommendations made by their P&I Club (and the IG). In loading this kind of volatile cargo Members should put their P&I Club on notice well in advance, as failure to do so could cause severe and adverse consequences, including the invalidation of the P&I insurance cover.

For example, the removal of off-spec cargoes itself cost several millions of US dollars; in the event of a capsize, the cost of the loss of life goes well beyond monetary terms.

Prevention is always better than cure.

In short, in view of the catastrophic outcome that a cargo's liquefaction can cause, Members should notify their P&I Club well ahead of time if they are going to load nickel ore cargoes. And Members should always act in accordance with the recommendations of their P&I Club - arrange a pre-loading survey well in advance so that local correspondents and surveyors can be appointed to guard against any bad cargo being loaded in the first place.

Meanwhile, at the stage of fixing the charterparty Members should ensure that all necessary protective charterparty clauses are incorporated and where there is any doubt, please contact your P&I Club at once for assistance.

Stockpiles during typhoon or rainy season

Photo from www.skuld.com

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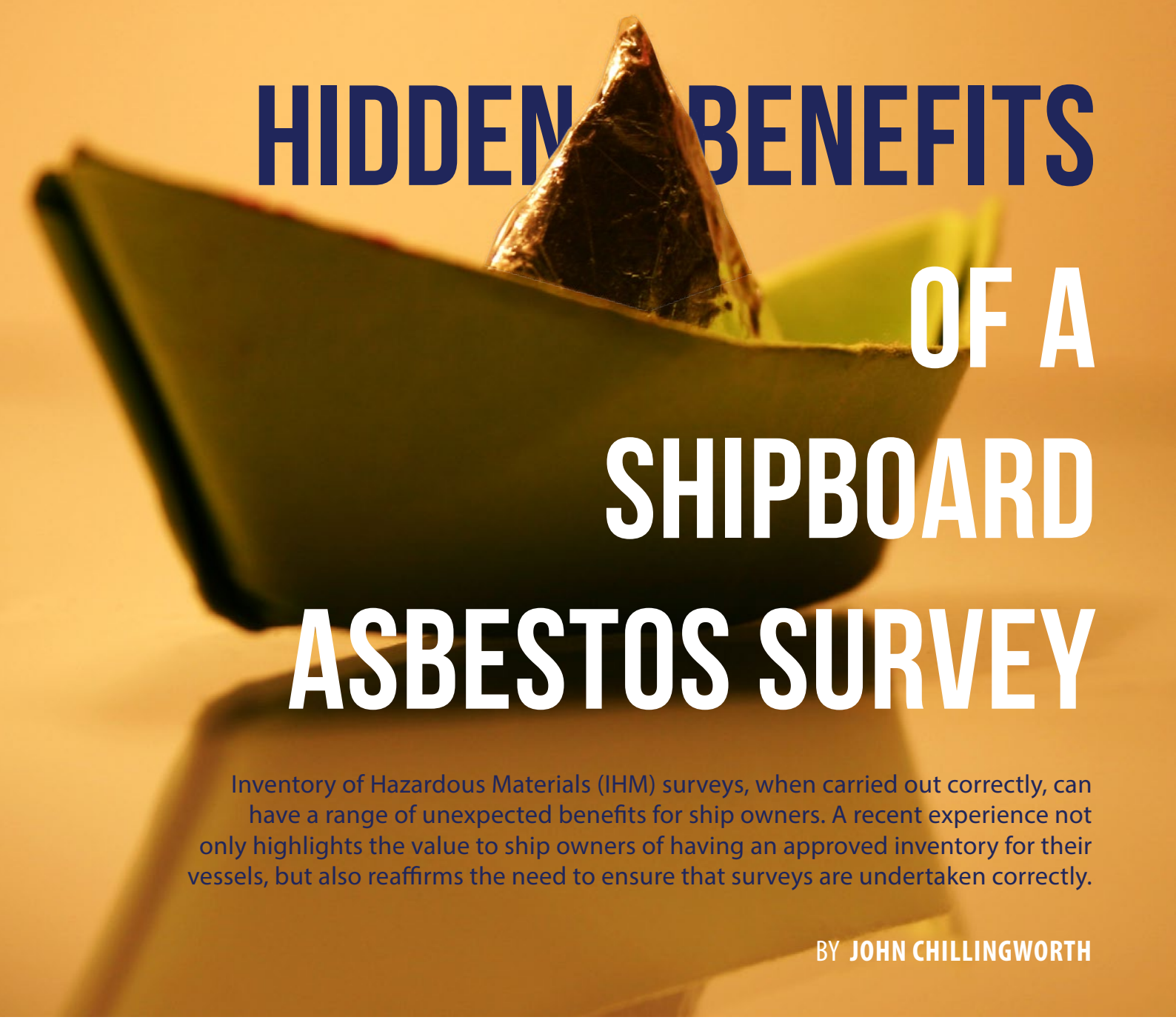
Janice Dao Yeung Yeung is Senior Claims Executive, Lawyer, Skuld P&I Club in Hong Kong.



HIDDEN BENEFITS OF A SHIPBOARD ASBESTOS SURVEY

Inventory of Hazardous Materials (IHM) surveys, when carried out correctly, can have a range of unexpected benefits for ship owners. A recent experience not only highlights the value to ship owners of having an approved inventory for their vessels, but also reaffirms the need to ensure that surveys are undertaken correctly.

BY **JOHN CHILLINGWORTH**

Hazardous materials consultancy Lucion Marine was recently appointed to assist a major cruise line with work on a 2008-built cruise vessel. In this particular case a shipyard, on a pre-refit visit, claimed that an area where a new scrubber installation was planned contained asbestos in the bulkhead fire insulation.

At the request of the ship's technical manager, Lucion Marine met the shipyard and its asbestos surveyor on board the ship in Jamaica. Following discussions, we then took mutual testing in three on-board locations where the shipyard claimed asbestos was present. In addition, over the course of six hours, we took an additional 90 samples throughout the uptakes and rushed the samples back to our laboratory for analysis.

Within two days of leaving the ship and completing our testing, we were able to confirm to the vessel owner that no asbestos was present. In our opinion, we believe that the situation was caused through the initial use of an inexperienced company involved in the first assessment; in fact we have learned that it was the surveyor's first time on a ship.

We also suspect that some of the sampling equipment used in the initial ship survey may have been contaminated from a previous job and subsequently contaminated the samples taken from the cruise liner.

In the end, this may appear to be a satisfactory outcome for the cruise liner, with work on the refit being able to proceed unhindered, but that does not take into account the extra costs and working disruption involved. For example, there is the lost time and additional surveying costs incurred, as well as the travel expenses involved in sending specialist surveyors to the shipyard, not to mention the lost management and working time after the shipyard first mentioned their concerns.

Unfortunately, this sort of situation is not an isolated case. Lucion has been involved with two other shipowners who have been accused of having asbestos insulation in a work area. These other situations proved to be more aggravating: the claims happened during refit work, which was then stopped, causing considerable delays and costs until thorough testing had been carried out.

During our work, we have found asbestos in over 80 percent of new ships, and we work regularly with prudent ship owners such as Maersk, BP and the Royal Navy to have their new ships surveyed before delivery from the shipyard. Many government marine authorities recommend that all ship owners should have an ISO17020 specialist asbestos survey carried out to eliminate the asbestos risk to demonstrate that a ship is asbestos free. The need for this has been created because shipbuilders only base their "asbestos free certificate" on suppliers' material declarations, with no direct testing of supplied parts or components.

In addition, the term "asbestos free" can be misleading as a result of different international thresholds that govern and control its precise definition. For example, in the USA up to 1.0 percent asbestos content can be permitted, while it is 0.1 percent in the EU and 0.0 percent in Australia. In China, there is no official standard, and in our work with ship owners and shipyards there we have found as much as 15 percent asbestos in materials that have been declared "asbestos free."

On the same theme, it cannot be assumed that sister ships built to the same design by the same shipyard will be the same in terms of potential asbestos content. Recently we surveyed a series of six French newbuilds in South Korea and found asbestos in the fire door seals of the fourth ship, highlighting that the supply chain can be affected at any time. It is worth noting that 60 percent of an IHM inspection is an asbestos survey, so having a professional and effective IHM completed will eliminate the risk of any contamination claims during a refit or with owner-supplied items.

With reference to the regulations, the Hong Kong Convention requiring all ships to have an IHM was implemented to ensure a ship had a formal record of any hazardous materials on board. This ensures that when the ship is recycled, an accurate ship demolition plan can be produced, with specific attention to the safe handling of any hazardous materials present.

This regulation is still awaiting ratification, and if the Ballast Water Treatment regulation is a guide, we expect that this could be achieved by 2022. In the meantime, the EU has issued a regulation that all ships with EU flag, or any ship visiting an EU port, must have a classification society-approved IHM by December 2020.

It is important that a ship owner selects an experienced ISO 17020-accredited marine specialist company, as the IHM process requires that the sampling plan has to be first approved by class prior to the survey being undertaken. This can be timely and costly if the plan is not approved on the first submission. After the survey, the class society will then review the report and either approve or make recommendations on the report, so it is cost effective to get the report correct on the first submission. Once the survey is completed and approved, class can issue a certificate of compliance, which is a component of the ship's annual certification.

In summary, it is shortsighted for ship owners to take the view that only those vessels visiting EU ports require an IHM. In time, all ships will have to be compliant with the Hong Kong Convention. In addition, the benefits of an IHM can go much further. In the longer term, proving a ship is asbestos free can remove the risk of potential exposure claims from crew members. And as Lucion's recent experiences have shown, a proactive decision to implement IHM surveys across a fleet can remove the possibility of the wrong diagnosis of a shipyard or contractor during refit or repair works, avoiding additional costs and unnecessary delays.

John Chillingworth is senior marine principal at Lucion Marine. Lucion Marine provides specialist hazardous material management services to the global marine industry and has done so for the past ten years. Supported by internationally recognised and accredited laboratories, the company works with leading owners and operators of ships, offshore platforms and all types of marine vessels, assisting in compliance with SOLAS, the Hong Kong Convention and the EU Ship Recycling Regulations.

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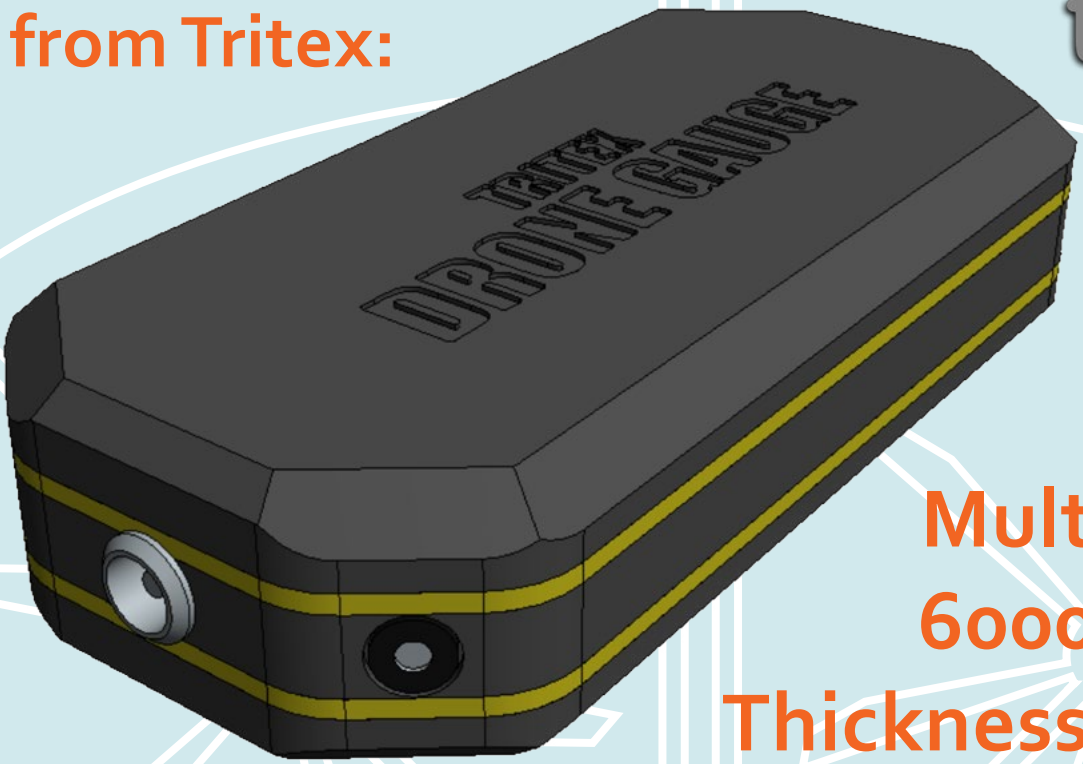


The Multigauge 6000 Drone Thickness Gauge

1. INTRODUCTION

Inspecting steel ships for corrosion has always been necessary and over the years, various methods have been utilised for this purpose. Also, inspection times are becoming shorter because time is money. It is obviously important to prevent corrosion occurring in the first place and therefore essential that good coatings are used. However, the problem then arises when there is a requirement to measure the metal thickness or to check for corrosion on the vessel without disturbing or damaging the protective coatings.

Tritex NDT are manufacturers of ultrasonic thickness gauges used to measure metal thickness to determine corrosion rates over time, without removing any coatings as long as they are solidly adhered to the surface. Thickness gauges are a useful tool in aiding surveyors to assess the condition of ships and small craft quickly and efficiently with minimum disruption. The metal thickness can be measured from one side only and corrosion levels checked to build up a good understanding of the overall condition of the vessel. In some cases, on large ships, measurements are required in in high or difficult to reach places and so either rope access or scaffolding is used.

However, the Tritex Multigauge 6000 Drone Thickness Gauge means that measurements can now be taken in these places, and in some cases, negating the need for rope access or scaffolding. Tritex NDT are pleased to be the first company offering a dedicated commercially available drone thickness gauge to overcome these problems.

2. HOW ULTRASONIC THICKNESS GAUGES WORK

Ultrasonic Thickness Gauges transmit an ultrasonic pulse into the material being measured and the time is recorded for the ultrasound to travel through the material and return back to the probe. The gauge then calculates the metal thickness using this information, as well as the pre-programmed velocity of sound of the material being measured.

It is therefore important that the gauge can be calibrated to account for different velocities of sound. For example, mild steel can vary from 5890 m/s to 5960 m/s.

The basic principle of ultrasound, known as single echo, works well on steel with no coating. But if a coating is present then this has a different velocity of sound to that of the steel, generally in the region of 2000 m/s. The slower velocity of the coating will affect the accuracy of the thickness reading giving a false measurement.

There are two options to overcome this problem; the first is to remove the coating, but this is costly, time consuming and means that the coating has to be re-applied wherever a reading has been taken. In some cases, where there is an excess of corrosion, it is common to take additional measurements in that area. This would inevitably mean that more of the coating has to be removed to achieve accurate measurements. Removing coatings is impossible to do with a drone.

A much simpler and cheaper solution is to use a gauge with multiple echo capabilities. Multiple echo gauges measure just the metal substrate and completely ignore coatings up to 20mm thick, depending on the coating type and as long as they are solidly adhered to the surface. They work by 'looking' at three or more consecutive ultrasound pulses. The first returned echo is used as a reference and the subsequent echoes are used to measure just the metal thickness. A reading is only given if these are equal, which ensures the gauge is definitely measuring to the back wall and not a pit or flaw in the material. Multiple echo gauges also do not require zeroing before use.

3. ULTRASONIC PROBES

There are two common types of probes used with ultrasonic thickness gauges. These are twin crystal and single crystal probes. Twin crystal probes have a separate transmit and receive crystal on their face, which are angled towards each other, resulting in a 'V' shape ultrasound path. The 'V' shape means that the probe has to be in a certain orientation on curved or round surfaces, such as pipelines, because the angle at the bottom is otherwise affected. This is also the case over varying measuring ranges and corrections are often programmed into the gauge to compensate.

Single crystal probes however, as their name implies, have a single crystal which transmits and receives the ultrasound pulse. The ultrasound travels straight up and down ensuring there is no V-beam error, and it means they have a linear accuracy throughout their measuring range. Single crystal probes can be rotated through 360° without any change in measurement accuracy, even on curved surfaces. This is essential when using a gauge on a drone because it is very difficult to always ensure the orientation of the probe on the surface being measured.

All probes manufactured by Tritex NDT have a microchip installed which contains specific information relating to the probe, such as its sensitivity, gain setting and frequency. This information is transferred to the gauge when the probe is connected, resulting in a perfectly matched probe and gauge combination for improved performance.

4. MULTIGAUGE 6000 DRONE THICKNESS GAUGE

Multiple echo is therefore ideally suited for using on a drone because coatings do not have to be removed. This also means that probes can have protective membranes on their face which in no way affect the accuracy of the measurment. The Multigauge 6000 Drone Gauge takes advantage of this with the addition of a special membrane material which allows measurements to be taken without the need for wet couplant. However, the dry couplant membrane does have some limitations in that extra pressure has to be applied and it is only suitable for use on smooth surfaces.

For this reason, Tritex NDT have also developed a gel dispenser which is controlled wirelessly from the dedicated communicator software. Simply clicking on the button within the software will dispense a pre-determined quantity of gel onto the face of the probe prior to taking any measurements.

The gauge weighs just 130 grams and the plastic probe weighs only 15 grams. The weight is kept to a minimum because the 10 – 32 Vdc power supply is taken from the drone itself and there are no displays to add weight to the gauge. The gauge can be easily fitted to most drones.

In addition, Tritex NDT have developed a clever lightweight probe holder which allows the probe to flex in all directions to help with alignment on the surface. It also has a damping effect to protect the probe in case the drone hits the surface too hard.

Photo courtesy of AAA Drone Inspection - Airsonix

5. CONCLUSION

The new Tritex Multigauge 6000 Drone Thickness Gauge makes inspection of high or difficult to reach places within the marine industry much easier and quicker. It can be used in conjunction with traditional techniques to speed up the inspection process.

Tritex NDT consider performance to be the most important feature of their ultrasonic thickness gauges. The gauge should give reliable, accurate measurements in the most demanding of applications. Whether it's coated, bare metal, corroded or clean, the Tritex Multigauge range has proven to be reliable, simple, accurate and robust.

All gauges come with free annual calibration for the life of the gauge and a 3-year warranty.

For further information please go to **www.tritexndt.com** or contact Mr Jon Sharland by email at sales@tritexndt.com or call +44 1305 257160 (UK office hours) or write to Tritex NDT UK Ltd, Unit 10, Mellstock Business Park, Higher Bockhampton, Dorchester, Dorset DT2 8QJ, United Kingdom.

Cost efficient engine launched by Cummins

Cummins has launched a fuel and cost-efficient version of its X15 engine for the marine market featuring its latest fuel system product with high injection pressure for fuel optimisation.

The X15 marine includes common rail system XPI, which provides the highest injection pressure of any other common rail system for an efficient fuel burn and cleaner emissions. X15 for marine also uses engine control module CM2350, which provides diagnostic and monitoring capability, de-rates and automated engine shut downs, fuel sensor monitoring, digital engine start/stop functionality and gear pressure and temperature.

Designed to withstand high hour, continuous duty operation, the engine will offer variable speed and fixed speed ratings between 336kW and447kW. It will also meet US Environmental Protection Agency (EPA) Tier 3 and International Maritime Organisation (IMO) Tier II emissions standards.

U-SAFE remote control buoy showcased

A self-propelled, remote-controlled man overboard (MOB) rescue buoy designed for speedy recovery has been showcased recently.

Developed by Portugal based Noras Performance, the 8kg battery-powered U-SAFE has a range of three miles, maximum speed of 15 knots and can handle up to 200kg, enabling it to reach someone in the water and bring them back to a boat quickly while minimising the safety risk to the rescuer(s).

Miguel Paulo, director of manufacturing at Noras Performance, said: "You don't need any specific instructions. It starts to work immediately after it enters the water. The device lets the person being rescued rest and doesn't put anyone else in danger."

The lightweight plastic float has its own navigation and guidance system and doesn't require any training to operate. It also enables those onboard to launch the device without the need to turn the boat around, meaning no time is lost at the start of the rescue operation.

C-Quip brings new electronic bilge pump to market

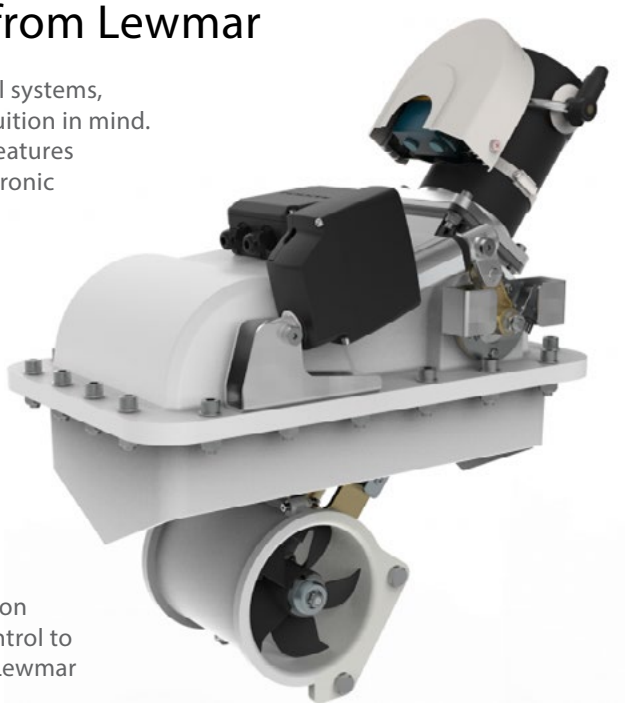
C-Quip has introduced a new electronic bilge and shower pump that incorporates stainless steel sensors in place of a standard electronic float switch.

"If there is oil or water in the bilges the pump won't switch on and discharge the contaminated water," explained Ian Cooke, C-Quip MD. "It works with sea water and fresh water."

Self-priming

The pump has an LED on top to tell users when the pump is engaged. In addition, it's designed to be quiet, self-priming and efficient. It can also run dry without causing any damage. The pump incorporates automatic switching from 12 to 24V.

New thruster control system from Lewmar



Lewmar has introduced its Generation 2 thruster control systems, developed with easy installation and improved user intuition in mind. Unlike conventional motor mounted units, the system features a remote mounted 'Blue Box' that houses the main electronic component of the installation.

Lewmar's Blue Box thruster technology not only handles the port and starboard thrust commands from the helm controller, but also monitors, protects and handles the safety features of the thruster itself.

Lewmar has redesigned its range of pad and joystick thruster controllers to be both ergonomic and tactile, fitting in the same aperture as their predecessors.

"The new dual thruster controller has a multi-axis function pad giving a very simple but powerful manoeuvring control to both bow and stern thrusters," explained Alex Thorsby, Lewmar sales distribution manager.

"In addition, the controllers incorporate a colour LED visual monitoring feature providing easy indication of the direction of thrust and fault feedback from the controller such as low voltage and motor overheat."

New dry dock invention from Tugdock

Tugdock is a new invention that promises to save cost and time by taking the dry dock to the vessel rather than vice versa.

Tugdock is a patented modular floating dry dock capable of lifting any vessel or floating structure from 50 to 2,000 tonnes clear of the water at a fraction of the cost of standard dry docks. The Tugdock is road transportable in standard shipping containers, so is taken to the vessel.

The Tugdock uses individually controlled buoyancy bags contained within an open steel space frame structure. All the components arrive on site and are quickly assembled in dimensions to suit the size and shape of the vessel to be lifted.

Tugdock is designed and built to Lloyds, Det Norst Veritas and BS6349 standard.

Single coat protection for topsides

BoatSheen's has added to its range with the launch of a Marine GlassCoat ceramic paint and bodywork coating system. The system has been developed to produce a hard 'glass-like' finish to help protect topsides, exposed paintwork and hulls above the waterline from fading, scuffs, scratching and weathering.

"Marine GlassCoat was created and formulated as a high quality professional grade product," said BoatSheen MD Mark Wibberley. "A single coating is all that is required and once cured the boat will enjoy a high gloss smooth finish that is resistant to fading, oxidisation, corrosion, scratching, solvents, UV and extreme temperatures and water."

The product uses silicon dioxide ceramic coating technology and will adhere to painted and GRP surfaces creating an ultra-hard 9H rated three-micron thick barrier.

It is suitable for use on painted surfaces, chrome, alloy and stainless steel, while also safe to use on all glass, vinyl, stickers, plastics and exterior lights. It is said the system has a typical lifespan of five years.

New waterjets set to reduce power demand and weight

Marine Jet Power (MJP) has unveiled its new waterjet X Series which reduces power demand by up to 20% and can reduce weight by up to 10% compared to axial flow jets.

"We've really taken the time to design and engineer this product with designers, builders and operators in mind," said Magnus Sörenson, MJP's CEO. "This product is easy to install and even easier to maintain in the field, saving time and money over the total lifecycle of the product."

With key features such as one-piece skidded installation and easily accessible inspection hatches, the X Series has been designed from the start to be easily installed and maintained in the field.

IACS type approval for Fischer generators

Fischer Panda UK's range of generators has passed type approval by members of the International Association of Classification Societies board. The IACS type approval includes certifications from organisations including Lloyd's Register, Bureau Veritas and DNV GL as well as several country-specific bodies.

The certification covers the fixed-speed Panda 4000s Neo and Panda 5000i Neo, which both use Fischer Panda's in-house designed water-cooled FPE320 single cylinder diesel engine. The next generation iSeries Panda 45i genset is also certified.

"As part of our continued commitment to meet international standards and maintain high levels of performance and satisfaction, this new endorsement will be very valuable to us in assuring new customers and dealing with projects that require recognised approval, such as Lloyd's or DNV," said Chris Fower, Fischer Panda UK sales and marketing director.

Self-recovery ladder makes rescue operations simpler

A new self-recovery ladder allows casualties who have fallen overboard a vessel to climb back on easily and independently. Designed as a life-saving device for fishermen operating vessels on their own or with limited crews, the CQC Fibrelight Self-Recovery ladder has a length of 1-3m and a safe working load of 600kgs.

A representative of CQC said: "We chose to make this product out of polyester material because of its longevity and ability to withstand water.

"The object was to make a device that was light, requires no servicing and is compact when it's not being used."

The top part of the SOLAS-approved ladder is permanently attached through the bag to the boat. The bag has a burst zip and the cord is fed through the centre of the burst zip and hangs down to a point where it can be reached from the water, where the casualty can tug on it to deploy the ladder.

CQC has already delivered 55 ladders to the Dorset and East Devon FLAG, which is an initiative of the Marine Management Organisation and part of the European Maritime Fisheries Fund.

Chapter 3 Fifty Shades of Law

A FAIR REPRESENTATION

Why is it important

Whether we are beginning the process of obtaining quotations for you for professional indemnity insurance or obtaining renewal terms from insurers on your behalf, we will request the completion of either a proposal form or renewal declaration. Both these forms request comprehensive information including details of your business activities, qualifications and experience, income and claims history.

You may wonder why underwriters need so much information. When you are busy doing your day job it can be a tedious task to fill out a long form and hopefully we can help to explain why such information is necessary and how it can impact on your insurance cover.

At the bottom of the proposal or renewal form there is normally a declaration which requires your signature. By signing this you are usually confirming that you have made a fair presentation of the risk by disclosing all material circumstances or that you have given sufficient information to put a prudent insurer on notice that it needs to make further enquiries in order to reveal material circumstances. A matter is material if it would influence the judgement of a prudent insurer as to whether to accept the risk, or the terms of the insurance. The details requested on the proposal are therefore important in providing insurers with the details necessary for them to assess the risk, or the terms of the insurance (including premium).

So what are you expected to know and provide

The Insurance Act 2015 (Act) abolished the basis clause which operated to turn insured's pre-contractual representations into warranties and replaced with the requirement of fair presentation.

"The duty of fair presentation"

1. Before an insurance contract is entered into, the Insured must make a fair presentation of the risk to the Insurer, in accordance with Section 3 of the Insurance Act 2015. In summary, the Insured must:

   a) Disclose to the Insurer every material circumstance which the Insured knows or ought to know. Failing that, the Insured must give the Insurer sufficient information to put a prudent insurer on notice that it needs to make further enquiries in order to reveal material circumstances. A matter is material if it would influence the judgement of a prudent insurer as to whether to accept the risk, or the terms of the insurance (including premium); and

b) Make the disclosure in clause (1)(a) above in a reasonably clear and accessible way; and
c) Ensure that every material representation of fact is substantially correct, and that every material representation of expectation or belief is made in good faith.

2. For the purposes of clause (1)(a) above, the Insured is expected to know the following:

a) If an Insured is an individual, what is known to the individual and anybody who is responsible for arranging his or her insurance(s).

b) If an Insured is not an individual, what is known to anybody who is part of the Insured's senior management; or anybody who is responsible for arranging the Insured's insurance.

c) Whether an Insured is an individual or not, what should reasonably have been revealed by a reasonable search of information available to the Insured. The information may be held within the Insured's organisation, or by any third party (including but not limited to the broker, subsidiaries, affiliates or any other person who will be covered under the insurance). If an Insured is insuring subsidiaries, affiliates or other parties, the Insurer expects that the Insured will have included them in its enquiries, and that the Insured will inform the Insurer if it has not done so. The reasonable search may be conducted by making enquiries or by any other means.

So what are you expected to know and provide

Since the basis clause was abolished insurers are relying more on condition precedent clauses to require insured's that certain matters listed are true and accurate at the time of inception of an insurance contract; this provides a contractual promise that a particular matter is true. If this is breached it may entitle an insurer to reject a claim regardless of whether prejudice is suffered by them, or may mean that cover never attached.

Prior to the Act a breach of warranty discharged insurer's liability under a policy entirely. The introduction of the Act improved the position for insured's as it makes warranties "suspensive conditions". This means that an insurer's liability is suspended only while the insured remains in breach of a warranty.

Insurers Remedies for breach of the duty of fair presentation

1. If, prior to entering into this insurance contract an Insured breaches their duty of fair presentation the remedies available to Insurers are as follows:

a) If an Insured's breach of the duty of fair presentation is deliberate or reckless:

i) The Insurer may avoid the contract, and refuse to pay all claims; and,
ii) The Insurer need not return any of the premiums paid.

b) If an Insured's breach of the duty of fair presentation is not deliberate or reckless, the Insurer's remedy shall depend upon what the Insurer would have done if the Insured had complied with the duty of fair presentation:

i) If the Insurer would not have entered into the contract at all, the Insurer may avoid the contract and refuse all claims, but must return the premiums paid.

ii) If the Insurer would have entered into the contract, but on different terms (other than terms relating to the premium), the contract is to be treated as if it had been entered into on those different terms from the outset, if the Insurer so requires.

iii) In addition, if the Insurer would have entered into the contract, but would have charged a higher premium, the Insurer may reduce proportionately the amount to be paid on a claim (and, if applicable, the amount already paid on prior claims). In those circumstances, the Insurer shall pay only X% of what it would otherwise have been required to pay, where X = (premium actually charged/ higher premium) x 100.

2. If, prior to entering into a variation of an insurance contract the Insured breaches the duty of fair presentation the remedies available to the Insurer are as follows:

a) If an Insured's breach of the duty of fair presentation is deliberate or reckless:

i) The Insurer may by notice to the Insured treat the contract as having been terminated from the time when the variation was concluded; and,

ii) The Insurer need not return any of the premiums paid.

b) If an Insured's breach of the duty of fair presentation is not deliberate or reckless, the Insurer's remedy shall depend upon what the Insurer would have done if the Insured had complied with the duty of fair presentation:

i) If the Insurer would not have agreed to the variation at all, the Insurer may treat the contract as if the variation was never made, but must in that event return any extra premium paid.

ii) If the Insurer would have agreed to the variation to the contract, but on different terms (other than terms relating to the premium), the variation is to be treated as if it had been entered into on those different terms, if the Insurer so requires.

iii) If the Insurer would have increased the premium by more than it did or at all, then the Insurer may reduce proportionately the amount to be paid on a claim arising out of events after the variation. In those circumstances, the Insurer shall pay only X% of what it would otherwise have been required to pay, where X = (premium actually charged/higher premium) x 100.

iv) If the Insurer would not have reduced the premium as much as it did or at all, then the Insurer may reduce proportionately the amount to be paid on a claim arising out of events after the variation. In those circumstances, the Insurer shall pay only X% of what it would otherwise have been required to pay, where X = (premium actually charged/reduced total premium) x 100.

Section 11 of the Act provides that an insurer may not rely on the policyholder's breach of a risk mitigation term (including warranties and conditions precedent) to reject a claim if the breach could not have increased the risk of the loss.

Section 11 does not apply to terms which define the risk as a whole. Insureds should be on the lookout for attempts to frame policy provisions, including conditions precedent, in a way that increases their chance of being found to apply to the risk as a whole, thereby falling outside the scope of section 11. In addition, section 11 is unlikely to assist with regard to conditions precedent that relate to notification, so particular care needs to be taken in relation to these.

We hope that this article has helped you to understand the importance of completing the forms requested and sometimes having to provide additional information for insurers so they may properly assess the risk. It may take some time to complete but far better to spend the time doing so than to wreak the consequences for failure to present material circumstances.

So we ask, when we request you complete a form or provide further information please have patience with us and understanding as the purpose is a benefit to you to ensure you have the correct insurance cover in place which is always our aim.

Karen Brain

Managing Director

Matrix Insurance Services Ltd

Tel: 01892 724060

Enquiries @matrix-ins.co.uk





A day in the life of...

Geoff Waddington FIIMS

A sitter appreciating his portrait by Geoff

Mike Schwarz went in search of Geoff Waddington, recently elevated to the role of Vice President and due to succeed Capt Zarir Irani in 2020 as the next IIMS President. Geoff formally sold his successful south coast UK marine surveying business earlier this year and set off with the idea of retiring in Portugal. But as you will shortly read, whilst Geoff and his wife Jan have relocated to Portugal, his services as a surveyor have been in great demand since his arrival and 'retirement', (at least for now), seems to have been put on the back burner. Additionally, Geoff is a long standing member of the IIMS management board and a past Chairman of the Education committee.

Geoff's new toy

Q1. Before we talk more about your life and work as a marine surveyor, please turn your mind back briefly to the events of 12th May 1982 when you experienced something in the Falklands that probably no-else reading this article has ever experienced, nor are they ever likely to. In brief, what happened?

At the time I was a young Chief Petty Officer engineer serving on board HMS Glasgow. She was the first ship into the war zone and the ship was the sole survivor of the three air defence ships Glasgow, Sheffield and Coventry. On May 12th we were carrying out an NGS (Naval Gunfire Support), basically shelling the Argentinian troops ashore. This apparently wasn't going down too well and as a result we were attacked by aircraft, several of which were shot down, but one managed to hit us with a 1,000 lb bomb. I was at action stations in the aft engine room when the bomb passed through without stopping and fortunately without going Bang! The bomb travelling at about 500 mph carved a path through everything in its way, machinery, systems, fuel and oil tanks, missing me by a few feet (hence my nick name 'Head the Bomb' or 'Bomb Head') and then turning me into a human wick with diesel fuel in the process. We had two large holes on the water line, in and an out. My job was now to isolate systems and then try to reduce the flooding and later effect more permanent repairs. To cut a long story short we succeeded and continued to fight until relieved and as they say 'Limped Home'.

Q2. Now as you look back many years later, how did those events of more than 30 years ago change your outlook on life?

I was amazed by the resilience of the even younger engineers around me, some of whom were only 16 years old and still in training, only six to eight weeks since joining up. An example was one such lad standing holding a mattress into the starboard hole in the side with a length of 4 x 4 against his chest with sea water at freezing point pouring over him. He turned to me and said 'Can you sign this off in my task book now Chief'. To be brutally honest my control of emotions has never been the same. Call it PTSD if you like - it did take quite a few years to take effect; but even now an act of selfless dedication can soon reduce me to tears.

Q3. How easy was it when you left the Royal Navy to finally transition into the life of a marine surveyor and what new skills did you need to acquire for you to make it a success?

Leaving the Navy was awful. Having spent 24 years in an elite organisation, I handed my ID card to a young wren and was told to 'leave by that door over there Chief'. I had no time to even think about transition. I applied and got a job as a Ship Repair Manager at a shipyard in Southampton and actually started work whilst still serving under the Royal Navy's resettlement program and ironically enough my fist MOD contract was one of my own Royal Marines landing craft.

HMS Glasgow

Q4. I recall joining you for my first survey experience in Southampton Docks soon after I joined the organisation and I was astonished at both the clout a surveyor has and the importance of his/her role. Why then, do you think, that surveyors are not given the credit sometimes they deserve and that surveyors are sometimes seen in a dim light?

If you want to be liked and have a stress free existence then marine surveying is not for you! Surveyors are often considered the 'Enemy', because in loading operations, for example, it is a surveyor's job to record events and the actions of others and advise and record on any shortfalls. In condition surveys it is our job to report on the 'true' condition of a vessel and unfortunately as you know the truth hurts. It is human nature not to like someone looking over your shoulder and making notes, or telling you that the vessel you consider to be your pride and joy is in fact considerably less than that. Perhaps the only time surveyors receive any real respect is when involved in expert witness work, but with that comes the realisation that your reputation rides on a knife edge.

Q5. When you were headquartered in Southampton, you often spoke to me of your frustration with the attitude of young, aspiring surveyors who were not prepared to put in the necessary commitment and graft. What message do you have for younger surveyors looking to make their mark in this profession and what attributes would you look for now if employing a younger surveyor?

My previous answer pretty much covers it, but hey let us rub salt in the wounds. To go with the unpopularity and stress, there are also long hours and lots of travel for what seems like little reward at times. When recruiting young 'would be' surveyors, at first they see it as a glamorous and exciting job to be sent at short notice half way round

the world to find a ship and achieve a satisfactory job as a result. But when this happens once or twice a week it starts to wear a bit thin. Couple that with standing inert on deck or dockside in the freezing rain throughout the night just to be told that the job has been cancelled, or postponed until later that day. There are probably some correct words to describe the requirements such as resilient, pragmatic, honest, adaptable and flexible, or perhaps more commonly tough, hardnosed, stubborn, be able to think on your feet and above all be good at personnel management.

Q6. I understand for some while you were responsible for surveying the historic fleet based at the Portsmouth Historic Dockyard. What key challenges as a surveyor did that job present you?

Historic vessels are by nature normally managed by Charitable Trusts and previously as a Ship Repair Manager that term would strike fear in your heart. As a surveyor we would consider that It is not the fault of the vessel operators as they are restrained by the very organisation of which they are a part. But to be polite they will expect something for nothing, or to be fair, "the best they can get for the least capital outlay" - (sounds like surveyor speak to me). From a technical point of view Historic Craft pose challenges of a different kind because the rules of today are not the rules of yesterday. Let us take an extreme example. Old life boats had inboard petrol engines contained within a metal lined engine compartment. Try and make that fit today's rules. I have had flush decked, fast craft with no guardrails, non deployable anchors without windlass, open bilges, non-draining cockpits. How many surveyors remember kitchener gear? Driving a naval pinnace with kitchener gear was an art in itself.

Q7. You are one of a rare breed in some respects, a surveyor who has worked surveying small pleasure boats right up to some of the largest container ships that sail the world. But which aspect of marine surveying gives you the most pleasure and why?

I'm not sure that pleasure is the best word to use. The job has had its moments, including the joy of standing on one of the world's biggest superyachts in Monaco or Antibes, sea trialling a new version of the classic Riva on Lake Maggiore in midsummer, surreal, or being craned in a cage into the hold of one of the world's biggest container ships and, scarily, dropping through a manhole onto a ladder 60 feet down into the black cavernous cargo tank of a huge oil tanker. But one particular moment of personal pleasure does stick in my mind. I was as a ship repair manager asked to attend a vehicle carrier, which had run aground and split her outer bottom. The damage was within a double bottom ballast tank and the pumps were holding it, but the attending class surveyor was out of his depth, (so to speak). To effect a repair internally, we needed to stop the water from coming in, obviously. I requested a sack full of soft wood wedges and despite the lack of confidence of the spectators, (you have to picture a fifteen to twenty foot long curtain of water spraying up and bouncing off the deckhead), I started at one end of the split hammering them in until the final wedge was beaten into place and all was quiet. There was no rushing water - nothing - apart from I am sure someone said "I don't f**ing believe that.

Algarve sea trial

Q8. You are very much in favour of the accreditation scheme that IIMS is starting to develop in more detail. Why do you think this is so important?

Now, you have touched a raw nerve! I am not just in favour, I believe that this is the only way forward for our industry. It has long been a concern of mine that the marine surveying fraternity is not regulated in the same way that the building surveying fraternity is. Our jobs are often of greater value than bricks and mortar. Houses, as a rule don't sink! Anyway, as has been proved over and over again across the years the lives of the general public are at stake when at sea. During my time as a surveyor, as an instructor and later as Chairman of the Education Committee I have seen people from all walks of life consider themselves as suitable marine surveyors, predominantly in the small pleasure craft sector. I have both successfully and unsuccessfully trained young surveyors. Trained is the operative word here. I was a marine engineer for ten years before I considered myself experienced enough to operate commercially in the public sector. A technical background in a related discipline and/or significant technical training and work experience is the best route to becoming a marine surveyor. Taking a lead in this and hopefully at some stage having a white paper produced and legislation passed in Parliament should be the Institute's eventual aim. Then and only then will this largely un-regulated profession receive the recognition that it deserves. OK I will get off my soap box now.

Q9. I joked in the introduction that you were never busier surveying since 'retiring', which was clearly not your original plan. What sort of surveying work are you doing in Portugal and on what type of vessels?

Now let us get something straight here. I have not retired and like most of the ex-pats out here I have run away, run away to a less hectic life in a pleasant climate. I was working off and on out here before deciding to spend half my time out here and so up to now it has worked quite well. My work out here is mostly small pleasure and small commercial craft with some Expert Witness work thrown in for good measure, again in the Small Craft sector. Large ship and cargo are now a thing of the past. In any event, I was finding the gangways of the new container ships akin to an assent on Everest before I left the UK.

Q10. How hard was it to make the decision to leave the UK behind and to head to Portugal?

Easy! During my time as a surveyor I have seen so many people with dreams of selling up and sailing the world and then never living long enough to realise it. I just wanted to make sure that Jan and I had some time, originally it was to be a boat, but now it's a property, which enables me to continue working. I believe continuing to work is important because I have seen another portion of the population suffer an early demise due to giving up working altogether. My company is UK based and we still have property in the UK and a small residence that we can share our time in (183 days a year by the rules and there are lots of rules)! Being in Portugal is not a long term plan. It is our intention to return to the UK full time in a few years.

Q11. Since your relatively recent relocation to Portugal, what do you most like about the area you are based in and the country itself?

Portugal is a lovely country with nice people. English is widely spoken and the cost of living is very reasonable. Tavira is very Old Portugal - no night clubs, no stag parties, no hen parties and no badly behaved half naked Brits in union jack shorts. We are 20 minutes from the Spanish border and three hours or so from Gibraltar. We live within the Ria Formosa National Park with the best beach in Portugal and game fishing - apparently some people play golf out here too.

Q12. Should an IIMS member find him/herself in your neck of the woods, where would you take them for a night out and what would you recommend from the Portuguese menu?

That's a good question. I would recommend our village of Santa Luzia, (Capital De Polvo), which means the capital of the octopus. Being a fishing village, fish and/or shell fish is top of every menu. Portuguese cuisine itself is a bit limited. It is mostly Sardines, BBQ fish or BBQ chicken (Piri-Piri of course), but there is an abundance of fresh fruit and vegetables with restaurants serving food from most other nationalities well represented. Let us not forget to mention the barking dogs.

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