IIMS NEWS BULLETIN

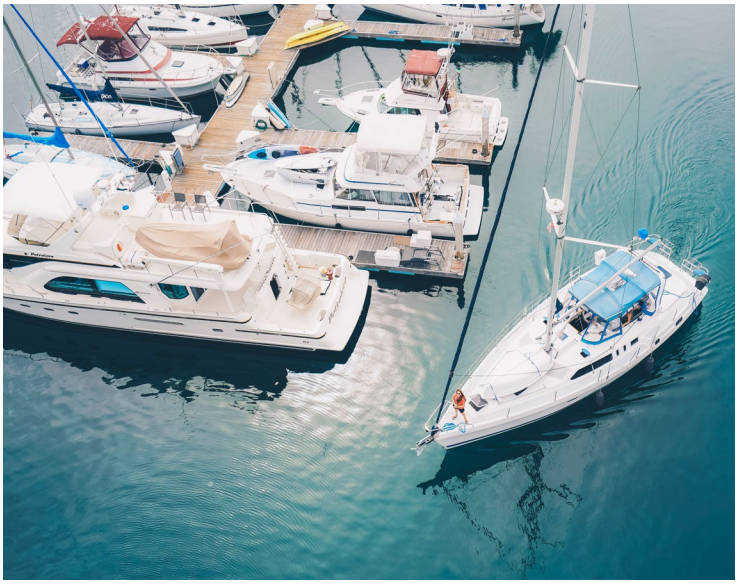
FEBRUARY 2021

Dear Member

Welcome to this News Bulletin from the International Institute of Marine Surveying (IIMS). This bulletin is available in PDF and eReader format from the IIMS website. It aims to keep members and non-members up to date with information on a monthly basis. Members are encouraged to share and forward this newsletter to colleagues, who they think might like to join the Institute, or who may be interested in its content. For more information about the Institute visit:

www.iims.org.uk

CEO *Chat*



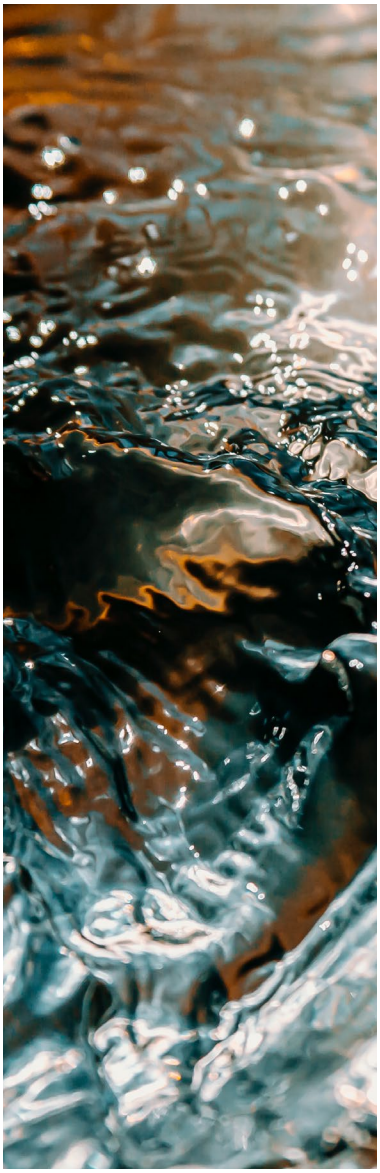
Dear Colleague

As I look back over the past month, I realise that life has got yet more challenging for many people, not just in the UK, but worldwide. I had hoped that the COVID-19 word might have been less prevalent in 2021, but sadly that has not been the case yet. With infections and deaths racing ahead in the UK as we remain firmly in lockdown for the foreseeable future, these are tricky times, not just for working marine surveyors and the maritime industry, but for the Populus as a whole to deal with.

In the UK we have faced the added challenge and double whammy of Brexit, now officially done and dusted apparently! And if you wondered how long it would take for the B word to raise its head in practical terms, the answer is only a matter of two weeks. I am grateful to Ross Wombwell from British Marine, who spoke last month to an audience of around 50 delegates about the *Recreational Craft Directive* post Brexit. It is complex stuff and Ross showed just what an expert he is in this area of regulation. If you missed it, a copy of Ross' video can be purchased at **http://bit.ly/39iSCe9**.

But IIMS, the British flag and some of our coding examiners suddenly faced a bigger challenge. News reached the Institute that the Croatian government is allegedly excluding British flagged vessels under 24 metres from operating commercial charters in their waters post Brexit. At the time of writing it seems other EU states, including France, Spain and Greece, are considering doing the same. This is a fluid and fast-moving situation, changing almost on a daily basis as new information emerges. Such actions pose a challenge to the British fleet in the Mediterranean and, worryingly, a potential loss of business to many surveyors.

The ramifications could be significant which is why IIMS President, Geoff Waddington, has written a plethora of emails to highlight and bring this matter to attention at the highest possible level from the UK Department of Transport, to the MCA, local politicians and national media journalists. Just as we are about to go to print with this bulletin, the



CEO *Chat (continued)*

question Geoff posed via his local Member of Parliament to the Secretary of State for Transport has been responded to. I leave Geoff to take this up in his own words elsewhere in this bulletin.

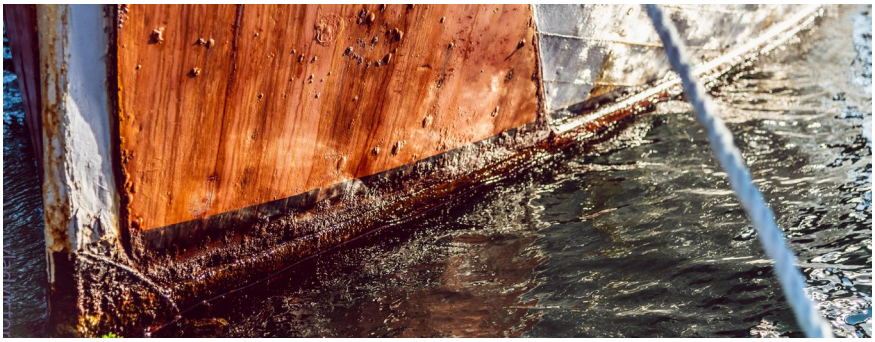
The recent two-day online US Conference, broadcast via Zoom, drew an attendance of more than 50 delegates, the largest IIMS US event to date. Thanks are due to James 'Randy' Renn for arranging a quality line up of speakers and to those who gave up their time to share their extensive knowledge with online delegate. Check out the videos on YouTube at **http://bit.ly/2M4FbFN**.

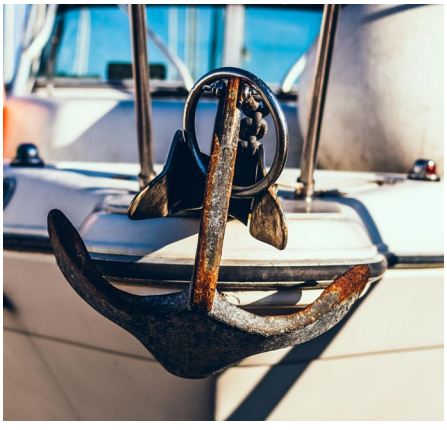
In other news, I am delighted to inform you that IIMS has today announced a new standalone Professional Qualification in Marine Corrosion. You can read much more about this new development in this bulletin, but in short it is a 10 module programme, delivered over 10 half day by an expert in the field of corrosion. Whilst not the sexiest of topics, corrosion remains the bedrock of what a surveyor must understand and this professional qualification has been carefully tailored to meet that need. The qualification, managed by the Institute's subsidiary, the Marine Surveying Academy, and awarded by IIMS, is open to anyone who comes across corrosion in the course of their day to day working life from yacht and small craft to commercial ship surveyors and those inspecting offshore installations. Full details can be found on the web site at **http://bit.ly/2M2FVeH**.

And finally, we have brought our 26th handy guide to market with the publication of ***What a marine surveyor needs to know about metacentric stability, the inclining experiment heel and rolling tests***. This publication is only available in downloadable pdf format. For more information and to purchase a copy go to **http://bit.ly/2M9zaYe**.

Stay safe and survey well.

Mike Schwarz
Chief Executive Officer





An open letter from the IIMS President, **Geoff Waddington**

Dear Member

To state the obvious, this winter has been a difficult time for us all and a nightmare for some.

COVID-19 has dominated the news with lockdowns and yet more travel restrictions, which despite surveyors still being able to travel under Section 256 of the Merchant Shipping Act 1995, has made overseas working difficult to say the least.

Another crucial headline, which has been somewhat overshadowed by the pandemic, is Brexit – Britain's formal exit from the European Union (EU). In the last few weeks the implications of Brexit are now starting to become apparent. It appears at the moment that there are more questions than answers, and to be fair to government departments and British business alike, the inner workings of the Brexit agreement will take some time to come to grips with and fully comprehend.

We were informed that 'allegedly' there may be restrictions imposed by some EU member states, which will affect businesses that are dependent on British registration and MCA Commercial Certification of vessels and crews operating in their waters. Therefore, I have been busy writing letters the past few days to everyone I think may be able to give some clarity and have been asking questions of government for their take on any possible restrictions.

Yesterday, the 25th January, I received an answer by email to my Parliamentary question from the Department of Transport (DoT), the contents of which I perceive to infer that within the EU Brexit trade agreement, there will be no discrimination in regard to UK vessels having access to ports or the use of port services. However, the free trade agreements exclude 'Cabotage', which is down to the policies chosen by each individual member state, which means that it is a directive rather than a regulation.

For your information, here is a definition of cabotage:
Cabotage is defined by the Cambridge Dictionary as a set of laws made by a government of a country to prevent or limit the transport of goods or people within the country's borders by foreign vehicles, ships, or aircraft.

The answer from the DoT also stated that the government will continue to negotiate with countries which restrict maritime cabotage in an effort to unblock any restrictions; however in the interim local country restrictions may apply and should be adhered to.

My take on this is that within these negotiations, I hope, that the UK government can argue on the grounds that to restrict British flagged charter vessels sub 24 metres operating in the EU should be considered under any relevant free trade agreement as a restriction imposed on British business based within their borders as opposed to purely cabotage in regard to UK red flag commercial vessels; but we will probably just have to wait and see how things develop.

Research into EU/EC directives revealed some interesting information in regard to the operation of commercial vessels in EU waters by UK Certificated Masters and Crew:

- Article 5b of Directive 2008/106/EC provides that every Member State is to endorse ("endorsement attesting recognition") or to accept, as applicable, the certificates issued to seafarers by the other Member States;
- Article 19(4) of Directive 2008/106/EC provides that a Member State may, with respect to ships flying its flag, decide to endorse the certificates issued by the recognised third countries.

"Acceptance" under Article 5b of Directive 2008/106/EC: The certificates issued to seafarers by the United Kingdom are no longer "accepted" by an EU Member State under Article 5b of Directive 2008/106/EC after the end of the transition period, (which was 1st January 2021).

It would be all too easy to have a knee jerk reaction to all this, but once again it would appear that it is down to individual member states to allow endorsed certificates to remain valid but only until they run out. Thereafter, UK certificates will not be accepted or endorsed; however these restrictions also appear to be under negotiation in regard to the IMO / SCTW (International Convention on Standards of Training, Certification and Watch keeping for Seafarers, 1978). So, once again, I guess we will just have to wait and see.

Next up is the matter of VAT. The end of last year saw a rush of vessels owned by UK citizens and purchased in the EU to return to UK waters before 31st December 2020, to avoid having to pay UK VAT on return after the transition period. But due to COVID-19 travel restrictions this has now been extended until 31st December 2021. This year is looking even worse than last year in regard to restrictions, so once again watch this space!

While we are waiting patiently for things to develop I would be grateful for any feedback from anyone reading this news bulletin, either based in the EU, or working in the EU, who has any local news on any restriction and / or the direction that any country appears to be taking. Please contact either myself or Mike Schwarz by email at head office on **info@iims.org.uk**.

Regards

Geoff Waddington, FIIMS
IIMS President

The **IIMS standalone** Professional Qualification in **Marine Corrosion**

After many months of detailed discussion and product development behind the scenes, IIMS is pleased to announce the launch of a new standalone professional qualification in marine corrosion - subtitled ***marine corrosion and prevention in small vessels, ships and offshore structures***. The programme has been written primarily with marine surveyors in mind, those whose job it is to inspect, understand and report on corrosion. The new qualification is pitched at education level 4, examples of which are certificate of higher education (CertHE), higher apprenticeship, or higher national certificate (HNC).

The developer and content producer behind this new qualification is Mike Lewus, a name known to some members as he has presented at various IIMS events and seminars in recent years. Mike has an encyclopaedic knowledge of corrosion and has spent many years as a technical lead with the British Stainless Steel Association.

Each module will be presented in person by Mike, who has an engaging presentation style, over half a day and an online multiple choice test for each module will follow, requiring a 70% pass mark. The lecture schedule will be published soon and modules will be presented at different times of day, night and at weekends to facilitate students. If for any reason you cannot take the lecture live, you can study the video recording that will be made and then sit the module test. Download the course Prospectus at **http://bit.ly/2M2FVeH**.

Who should study for this qualification?

The course is intended for marine surveyors of ship, small craft and off-shore structures. It is also relevant for design engineers, material specifiers, other professional engineers and students of marine science and engineering. To gain the professional qualification 7 of the 10 modules must be undertaken and passed to achieve the IIMS professional qualification. Assessment is by multiple choice tests, with a pass mark of 70% required for each module.

There are four core modules that all students are required to study and they are modules 6, 7, 8 and 9. In addition to the four core modules, commercial ship marine surveyors will be required to study module 1 and then choose two others from modules 2 to 5 or module 10. And, in addition to the four core modules, yacht and small craft surveyors are required to study module 3 and to choose two others from modules 1, 2, 4, 5 or 10.

MODULE 1 - Ship types, structure, strength, stability and corrosion control strategies

Examples of some of the learning outcomes from Module 1 are:

- Appreciate the architectural requirements of a 'typical' merchant, passenger and military ship.
- Be able to explain quantities such as centre-of-gravity, centre-of-buoyancy, meta centre, metacentric height, righting moments and how these relate to stability.
- Understand how a ship is affected by wave motion, sea state and how buoyancy and ship weight vary along ship length.
- Understand how ship design and propulsion affects stability.
- Be clear about safety regulations for 'freeboard', subdivision and floodable length and the situation expected after damage.
- Know how poor design can undermine the corrosion resistance of materials and what other corrosion control strategies are used on ships.

MODULE 2 - Processing, construction methods and testing of steel products used in ship building

Examples of some of the learning outcomes from Module 2 are:

- Know the process steps for flat and long steel products and understand how these affect metallurgical structure, surface finish, presence of defects and, influence strength and corrosion properties.
- Describe the underlying principles of welding techniques commonly used in ship building including SMAW, SAW, GMAW (MIG/MAG), GTAW (TIG) and OAW and appreciate the benefits of 'best practice'.
- Be able to describe the mechanical testing techniques carried out on metal alloys used in ship building and know the meaning of specific strength, toughness and ductility parameters.
- Know how shipyard practices impact material quality and how to minimise costs associated with remedial measures for improving surface condition

MODULE 3 - Small craft structure, strength, stability and corrosion control strategies

Examples of some of the learning outcomes from Module 3 are:

- Be able to describe the key features of a yacht including hull form, keel and rudder shape, sails and rigging and understand how they influence the forces, moments and performance.
- Explain what is meant by the centre of effort of the underwater body and centre of effort of the sails and the relevance for stability.
- Describe the factors that influence corrosion rates in atmosphere, splash zone and subsea and know which materials are used to mitigate the corrosion risks in these zones.
- Identify common corrosion mechanisms that occur on yacht components; and suggest how these can be minimised.
- Explain the corrosion control strategies that are used to protect critical yacht parts.

MODULE 4 - Off-Shore structures, strength, stability and corrosion control strategies

Examples of some of the learning outcomes from Module 4 are:

- Be able to describe the different types of offshore platforms and comment on their purpose, structure and stability.
- Appreciate the wind and wave loading on offshore structures and explain how mass damping can provide a benefit with respect to stability.
- Explain the corrosion control strategies used to protect offshore platforms and wind turbines.
- Explain why fatigue and fracture of structural components is an issue and what measures are used to mitigate the risks.
- Understand what techniques are used to assess the reliability of marine structures.

MODULE 5 - International regulations for the construction of ships, safety and environmental protection

Examples of some of the learning outcomes from Module 5 are:

- Be familiar with the national and international maritime regulatory authorities, their jurisdiction, regulation scope and the details.
- Know how to use safety analysis and risk assessment techniques i.e. failure probability distributions, hazard analysis, Boolean algebra, what-if and fault tree analysis.
- Appreciate how classification societies rules on weld inspection differs, including ABS (American bureau of shipping), RINA (Italian naval register), KR (Korean Classification org.), NK (Nippon Kaiji Kyokai CR: Central Research of Ships), DNV (Norway) and Lloyds Register (UK classification society).
- Recognise weld types in different ship members and be able to suggest a non-destructive inspection plan, based on a classifying organisation.

MODULE 6 - The marine environment

Examples of some of the learning outcomes from Module 6 are:

- Identify the zones that make up the marine environment and know how the characteristics of each zone influence engineering and corrosion control decisions for sea going vessels and off shore structures.
- State the definitions of fresh, brackish and sea water and know how their physical, chemical and biological properties differ in terms of impacting corrosion and preventative measures used.
- Be familiar with the meteorological conditions that impact performance of sea going vessels, how risks from these conditions can be minimised through design and where data can be sourced.
- Appreciate how marine pollution from marina management, ships (fuel and dumping), air and land affect corrosion can detrimentally affect the environment.

MODULE 7 - Steels and non-ferrous alloys used in marine applications; composition and properties

Examples of some of the learning outcomes from Module 7 are:

- Familiarity with the common designation systems relating to iron, non stainless steel, stainless steel and non-ferrous alloy grades.
- Know how compositions, mechanical properties and corrosion resistance change for alloy types suited to different marine conditions (zones).
- How to set about the task of specifying a suitable grade for a specific marine application i.e. basic knowledge of some material selection methods.
- Insight into the manner in which established grades can be attacked by corrosion processes and how such outcome affects further selection.
- Appreciate the corrosion mechanisms that undermine different alloy types and alternative materials that offer improved performance.

MODULE 8 - Corrosion mechanisms that degrade metals in the marine environment

Examples of some of the learning outcomes from Module 8 are:

- Understand the basic conditions that need to be established for corrosion to occur and explain what Redox reactions are and what forms/evolves at the anode and cathode during an electrochemical reaction.
- Categorise the spectrum of corrosion mechanisms, what conditions give rise to their initiation, which marine metals are affected and hence, how material selection in specific marine environments can be used to optimise performance.
- Understand how design can reduce and/or eliminate certain corrosion mechanisms.
- Know what material defects can facilitate early onset of cracking processes.
- Know the principles of and discuss approaches used to mitigate the risks of different forms of corrosion.

MODULE 9 - Corrosion control and prevention of metals used in the marine environment

Examples of some of the learning outcomes from Module 9 are:

- In what circumstances do metals behave in an anodic or cathodic manner, which one corrodes and how could the corrosion rate be estimated by calculation.
- Know how design features for open and closed structures can accelerate the onset of corrosion and consequently, explain what changes can be made to decrease risk and improve material performance.
- Differentiate between different types of inhibitors where they are used and how they suppress corrosion.
- Be able to calculate the mass of an anode needed to protect a ships stern gear and hull and, suggest an arrangement for the anode(s).
- What maintenance strategies are typically used to protect metal structures and components.

MODULE 10 - Failure analysis

Examples of some of the learning outcomes from Module 10 are:

- Distinguish between ductile, brittle and intergranular metal failures.
- Be able to set up a failure analysis strategy, identify microscopic investigations that can assist and identify the most appropriate spectroscopic and/or other techniques that can be employed.
- Know about the characteristics of different cracking mechanisms including fatigue, stress corrosion cracking, hydrogen cracking and mechanisms that occur in weld seams.
- Know how to assess toughness of metals and the metrics that quantify resistance of a material to crack propagation.
- Design and implement an appropriate strategy for investigating the likely cause of a failure in an engineering component.

Your investment in the Professional Qualification and the next step

The cost of the qualification is £850, which covers live lectures or video recorded delivery of the seven modules and tests (including resits) you are required to study. IIMS members and students are offered a discounted price of just £795. You can either pay up front on enrolment, or in two equal instalments with 50% payable on booking and 50% due before the start of the programme.

At this stage IIMS is not seeking your commitment to study, rather we want you to lodge your expression of interest to study for this professional qualification. Registering your interest does not obligate you in any way. The first course is to be held around June and the second one in November 2021. Once you have expressed your interest, we will be in touch in the coming weeks to see if you wish to progress on to formally enrol for the Professional Qualification or not.

The qualification will be managed by the Institute's wholly owned subsidiary, the Marine Surveying Academy, but formally awarded by certification by the International Institute of Marine Surveying.

To register your expression of interest go to **http://bit.ly/39gVOGV**.

100 global **female maritime professionals** speak in one voice as part of **Mission 100**

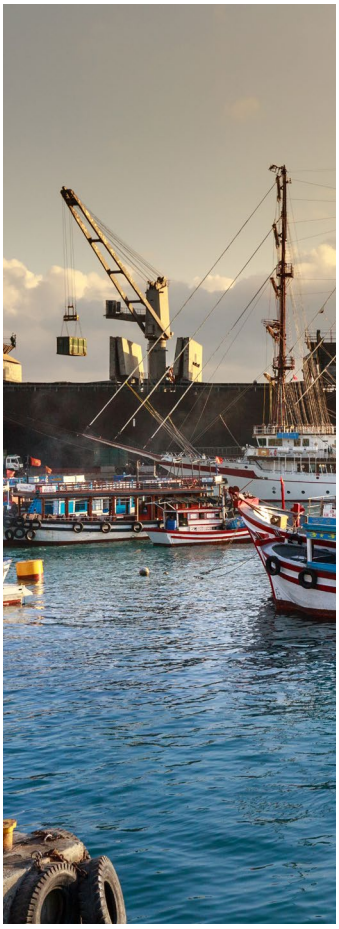
IIMS salutes the recent initiative driven by Capt Purnendu Shorey MIIMS, a Director of Offing, who has brought together 100 female maritime professionals to recognize their achievements in a special publication.

The Institute is also proud that two of its staff, Lorna Robinson and Pui Si Chung, were chosen to be featured.

In his introduction, Purnendu said, "We reached out to achieve a number of 100 women who are already a part of the maritime industry and the reason to choose only women for this edition was to showcase the strength of women in the industry that is already growing."

You can read this excellent publication and learn more about the 100 female maritime professionals and the difference they are making at **http://bit.ly/39ZCnl7**.

Fresh video content available to view for **free on YouTube**



In recent weeks the IIMS YouTube channel has been populated with many new videos recorded at various events and conferences in recent months, bringing the total to around 250 in total. If you currently have time to browse the content due to lockdown perhaps, be sure to take a look and use this period to learn some new marine surveying skills and brush up on some old ones. There really is something for all branches of the marine surveying profession.

Here's a review of some of the new content we have posted recently:

Atmospheric hazards and protecting the marine surveyor by John Malool
see **https://bit.ly/2MjBbRE**

Design and construction of a shallow tug by Jonathan Naude
see **https://bit.ly/3c5iZ97**

Lloyd Griffin gives an overview of Tier 3 and Tier 4 regulations
see **https://bit.ly/2NA5PXu**

Capt John McDevitt tackles the topic of the devastating Conception boat fire and its probable causes
see **https://bit.ly/2KKpNxA**

Capt Gerard Zingale gives a comprehensive overview of liquid cargo inspections
see **https://bit.ly/3qOAgaD**

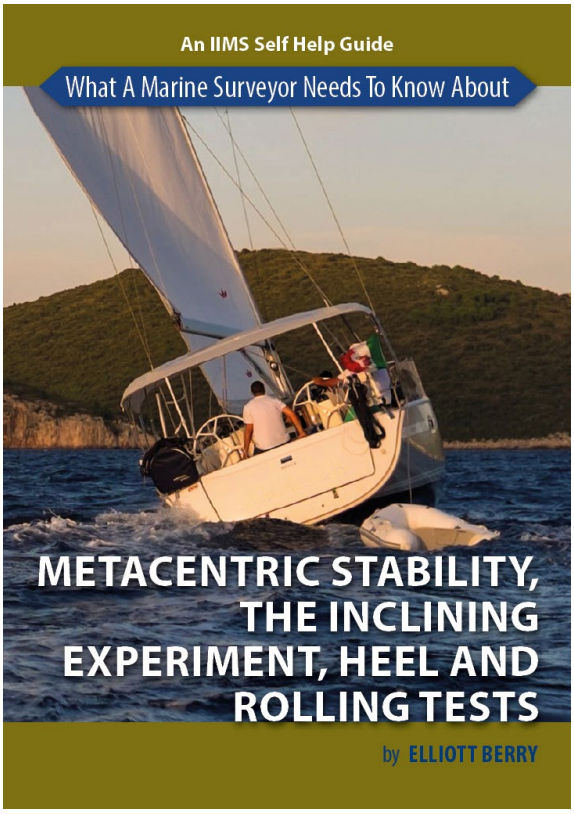
Deadline for 2020 CPD claims is **looming**

There is still time to claim your Continuing Professional Development (CPD) points for the year ended 31 December 2020. You have until 31 March 2021 to finalise your claims using the IIMS CPD App.

You can view the CPD points table at **https://bit.ly/2MIVKN8**.
To access the CPD App and register your points go to **http://bit.ly/2IWcXLi**.

Members who have acquired the 10 points that are needed to be CPD compliant will have the dated CPD badge applied to their listing on the Marine Surveyor Search App.

Handy Guide number 26 published by the Institute



The handy guide, ***What a marine surveyor needs to know about metacentric stability, the inclining experiment, heel and rolling tests***, authored by Elliott Berry FIIMS, covers an area that for many marine surveyors remains something of a dark art. Yet understanding stability and its theory as well as in practical terms as to why a vessel floats is something all surveyors must understand fully.

The handy guide is presented in four distinct parts:

- Part 1 - The inclining experiment
- Part 2 - A typical inclining experiment report for a steel yacht
- Part 3 - An approximate determination of a small vessel's stability by means of the rolling period tests
- Part 4 - The statical stability and stability criteria

An experienced practicing marine surveying practitioner, Elliott presents the theory using a number of formulae backed by helpful diagrams and illustrations to show what the marine surveyor should do and be aware of when conducting inclining experiments and heel tests.

What a marine surveyor needs to know about metacentric stability, the inclining experiment, heel and rolling tests is an essential companion for experienced and less experienced surveyors alike.

This handy guide is only available in downloadable pdf format and is priced at just £10. Click for more information **http://bit.ly/2M9zaYe**.

IIMS **US conference** report

In late January, over 50 delegates joined hosts James 'Randy' Renn and Mike Schwarz for the first online only US Conference broadcast by Zoom. As well as IIMS members, the event attracted delegates from SAMS and NAMS, as well as from Canada and even Poland!

The two day event featured speakers from all over America, who covered the widest possible topics from more technical surveying subjects to the softer skills, including the importance of keeping healthy. Some of the subjects were bang on trend and current. One of those that caught the eye was an analysis of the Conception dive boat fire with probable causes presented by Capt John McDevitt. Another was the presentation given by Bob Kochan who tackled the topic of last year's Beirut port blast be revealing some of the remarkable forensic work that has gone on behind the scenes since that tragic accident.

IIMS would like to thank James for putting together such an interesting programme.

Judging by the positive feedback from delegates, the event was enjoyed by all.

Video recordings of the two days have been made and are available to freely browse and view at **http://bit.ly/2M4FbFN**.

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The IIMS CPD App...

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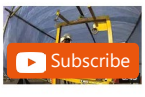
For **iOS** users go to the "**App Store**".
Android, go to the "**Google Play Store**".
Search '**IIMS CPD**' and install the app.
Login using your **IIMS credentials**.
Or the "**My CPD Program**" link on the IIMS membership details page, **re-directs** the user to the new **CPD Program Website**.

Web version, the login panel can be found at:

https://bit.ly/37sr311

IIMS is on YouTube



https://bit.ly/2iInWun

Tritex NDT Multiple Echo Ultrasonic Thickness Gauges

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Contact the IIMS Head Office team

As always, the IIMS head office team are here to help you on any matters relating to your membership or education needs. Please contact the appropriate person as follows:

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It is important that we keep our database and records up to date. Perhaps you have a web site address to add? If your contact details - address, email and telephone number - should change, please be sure to inform us immediately by email: **info@iims.org.uk** or call +44 23 9238 5223 (answer phone out of office hours).