

Shipshape

Newsletter June 2022

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From the Bridge

Chairman's Message

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2022 has thus far presented many other challenges, none more so than the extraordinary weather events affecting the lives and livelihoods of many Australians." I would like to extend a warm welcome to all AIMS members, students, and other readers, who have been eagerly anticipating our latest "Shipshape" newsletter.

Although our world is steadily moving towards post-COVID "norms", 2022 has thus far presented many other challenges, none more so than the extraordinary weather events affecting the lives and livelihoods of many Australians.

My thoughts are with those many Australians affected by these tragic and devastating events; however, we should prepare for predicted increasing occurrences and the consequential increase in premiums for renewals of insurances. Some members may derive insurance work as a result of these events.

After much deliberation and waiting for travel restrictions to ease, the AIMS board finally got together for an in-person board meeting in Sydney held 05th April. Given that some of the board had never met face to face previously, this presented a great opportunity to spend some time getting to know fellow board members and our General Manager, Stacey Taylor, whose time in the leadership role is approaching six months. With only one of seven board members unable to attend due to work commitments, and our marketing manager, Tim Hull in COVID isolation, I believe the meeting was considered by all to be productive and beneficial.

The agenda was set for this meeting to consider the higher level, strategic planning that will steer the AIMS ship towards future success, both for the institute, and its members. To this end, discussions were broken into three sessions:

WHERE WE ARE AND WHERE WE ARE HEADING

- Where is the AIMS positioned within the maritime, shipping and industry sectors and where do we want to be in future?
- Key focus areas review current, identify new areas of focus and quantify success to inform the AIMS business plan

SUPPORTING AND PROVIDING VALUE TO MEMBERS

Structuring AIMS conferences and awards going forward



- How to best connect and engage with members – online vs in person, state or category based?
- Resources for members extend and enhance membership benefits, what do members want and what can the AIMS provide for members?

EFFECTIVE USE OF RESOURCES TO PROMOTE BUSINESS DEVELOPMENT

- Identify performance indicators for strategic planning
- Structuring board meetings to effectively focus on business development and strategy
- Invite board guests to provide specialist skills: i.e., business development, networking, lobbying

Two areas identified during the meeting for immediate action were:

- 1. Training, training delivery, review, improvement, and opportunities.
- 2. Membership benefits and membership capacity building

This is a broad overview of the strategic planning and future directions that the board is working through; however, the day-to-day operational matters must still be addressed in an ongoing manner as the board works closely with the management team of Stacey, Brett, and Tim.

Over the last two months, I have been working on a new fatigue management plan for my marine surveying business. This has been a challenging task, to say the least, and may offer other members some insight into this most important, but oft poorly considered part of our businesses.

Whilst researching fatigue management (FM), several issues have been revealed and considered:

- Very few marine surveyors (big or small) have FM plans that deliver intended outcomes
- Big ship surveyor availability to work 24/7/365 remains a big problem for fatigue management!
- If you work for corporates, you must have a FM plan that complies with client requirements
- You may need to negotiate special exemptions for surveyors on corporate industrial sites where split and staggered shifts are required to conduct contracted services
- Most FM plans reflect operations based around set shifts with set breaks, and a roster
- A roster greatly assists with implementing a compliant FM plan – this is a challenge!
- To enable a FM plan, you may need to

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Regulations under the Maritime Labour Convention struggle to address seafarer fatigue management.
There in no magic wand for marine surveyors in addressing these challenges."

employ more people – this may not be viable!

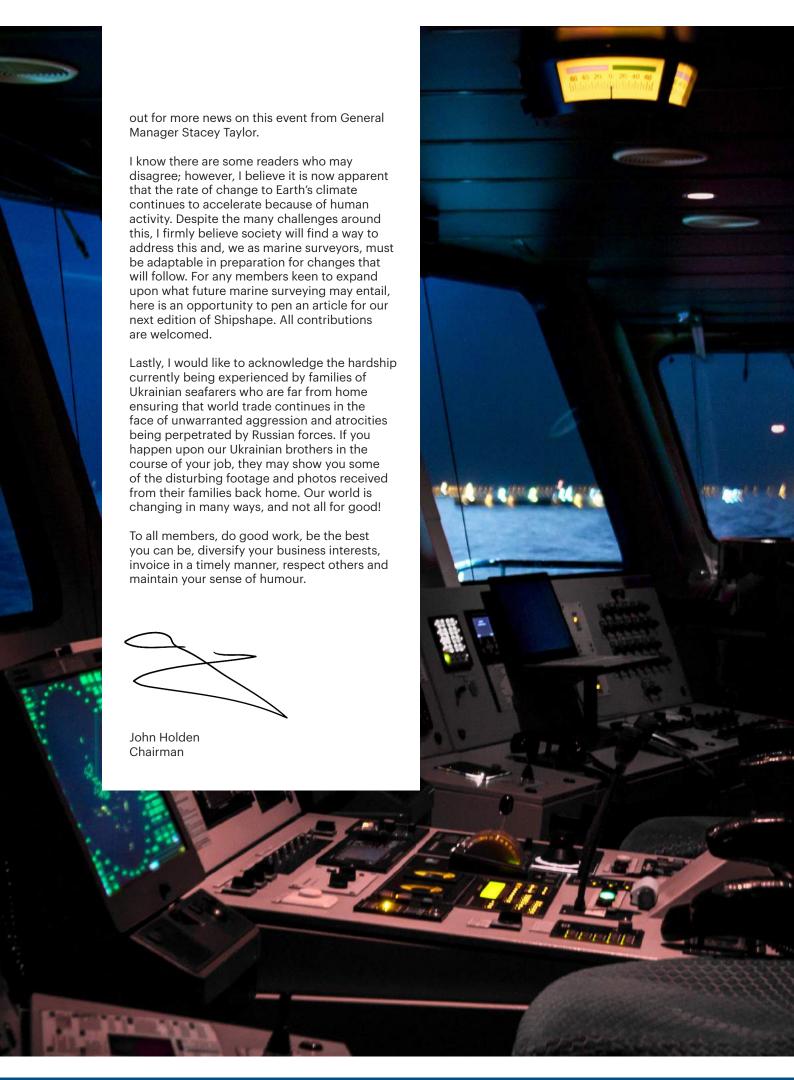
- Tracking workers hours provides evidence that your FM plan designed for split, staggered and chaotic working attendances is meeting its objectives
- The shipping industry challenges the management of the risks presented by fatigued workers
- Corporate clients expect compliance at a low cost, challenging staff levels to enable FM plans

As you can see, fatigue management within the shipping industry and, more specifically marine surveyors and inspectors, challenges current corporate and regulatory standards applicable in developed countries. Regulations under the Maritime Labour Convention struggle to address seafarer fatigue management. There in no magic wand for marine surveyors in addressing these challenges. We may have FM systems in place to meet quality and safety system compliance, but how many times do surveyors fail to comply, work too long, rest too little, drive when tired?

For those members working across the DCV and small-craft sectors, you may find it much easier to manage fatigue due to the more sensible working hours that would primarily reflect a five-day week and daytime operations for the most part. Nonetheless, with reports to be written after hours, FM should remain at the forefront of a robust health and safety system.

By embedding evidence-based flexibility into the new FM plan for our business, we attempt to address these issues in a manner that demonstrates a commitment to providing a safe and healthy working environment that delivers on both safety and service. "Sounds too good to be true" I hear you say, nonetheless, we must try for the sake of our people and our profession.

The AIMS Conference will be back this year! I don't want to steal her thunder, so please look



Your ship, is our ship.

You keep our world moving, we keep you in business.

Shipping is the lifeblood of our country and it's our job to keep you working safely and hassle free. Trusted. Experienced. Certified Commercial Marine Surveyors™.



Find a surveyor at www.aimsurveyors.com.au Email us at info@aimsurveyors.com.au or call us on 02 6232 6555





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THE AIMS TEAM

We are very pleased to have had an expansion of our team since our last newsletter to make us once again a team of 3! Brett McCulloch has joined us as an Office Administrator working 9:30-2:30 Monday to Thursday. Brett has been very busy learning the diversity involved in the day-to-day operations of the Institute. Feel free to get in touch with Brett anytime if you have questions about your membership, CPD or other general enquiries.

MEMBERS OPEN ONLINE FORUM

On Thursday the 16th of June at 3:00pm (AEST) I will be hosting our first members open online forum. This is an hour of coffee and conversation all members are invited to attend to discuss what's happening in AIMS, ask questions and discuss ideas and suggestions.

For our first forum I will also have Imesha Perera from Austbrokers Countrywide Insurance join me for the first half an hour to answer any questions about Professional Indemnity and Public Liability Insurance.

If you have a specific question or topic for discussion with myself or Imesha, send me an email prior to the forum so we can come well prepared.

DCV COMMITTEE

We have recently reformed AIMS's DCV Committee. Thank you to the members who have volunteered to be a part this committee for the coming year:

Zac Howells (committee chair), Mark Smith, Mike Ebsworth, Mick McAuliffe, Sue Brown, Rod Armstrong, Martin Williams and Peter Kerkenezov.

The committee will represent AMSA accredited members in identifying issues or concerns and, using a solution-based approach, develop strategies for change within AIMS or to be communicated to AMSA. The committee will also assist AIMS with representation in legislative reviews. The committee has compiled the results from the recent Accredited Surveyor survey with several common themes emerging from the feedback:

- Required increase in training/support and communication from AMSA for AMS
- Current inconsistency and slow response times from AMSA to AMS enquiries



- AMS would like to see more delineation between DCV and Shipping within AMSA
- Improvement needed in communication from AIMS to members about our communications and work with AMSA
- Incorrect and unsafe electrical systems are being passed and not surveyed to the appropriate marine standards

If you have any items you would like to present to the committee or would like to be involved further, please complete the DCV Committee Submission Form: https://form.jotform.com/221458946622058 or email gm@aimsurveyors.com.au.

Completed submission forms will be shared with committee members. This form will also be available to be completed from the members area of the website.

RECREATIONAL SURVEY STANDARDS COMMITTEE

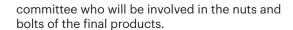
Project – Industry Standard Marine Survey Templates

Thank you to everyone who expressed interest in being involved with AIMS in the project to develop an industry standard template/templates for the recreational survey sector.

When I first put out the call for expressions of interest, I honestly wasn't sure if I would get enough interest, but I was very pleasantly surprised to receive positive responses from over 40 members! An absolute example of the passion of our members for continuous improvement within the profession.

Unfortunately though, forming a working committee of this many members would not necessarily be the best way forward to achieving our outcomes so I have had to look at how we can harness the immense experience on the table to make this project a success.

The way I have decided to proceed is to form a small committee of six members who each bring to the table specific skillsets within the recreational surveying sector such as boat building and hull specialisation, marine engineering, maritime law, insurance claims and investigations and IT/reporting software experience and these six will form the core



This committee though, will be drawing on the skills and experience of the expanded group of members who wish to be involved via consultation, polls, surveys, reviews and feedback throughout the stages of the project.

I would like to introduce the members of this core committee: Eric McIlwain, Aaron O'Donoghue, Kerryn Woonings, Mark McIlwain, Rhett Sullivan, and Andrew Laughlin. I am very thankful to this group for volunteering their time to be involved.

I ask that all feedback and comment relating to this project be channelled through AIMS via gm@aimsurveyors.com.au and I will forward this on to the committee for review and response.

Thank you to those who have already provided written feedback, this will be presented to the committee at our next meeting in June.

All members who have expressed interest in being involved should have now received an email from me confirming our plan moving forward. If you have not received this email or had not previously expressed interest but would like to be involved, please get in contact asap as the project has now commenced.

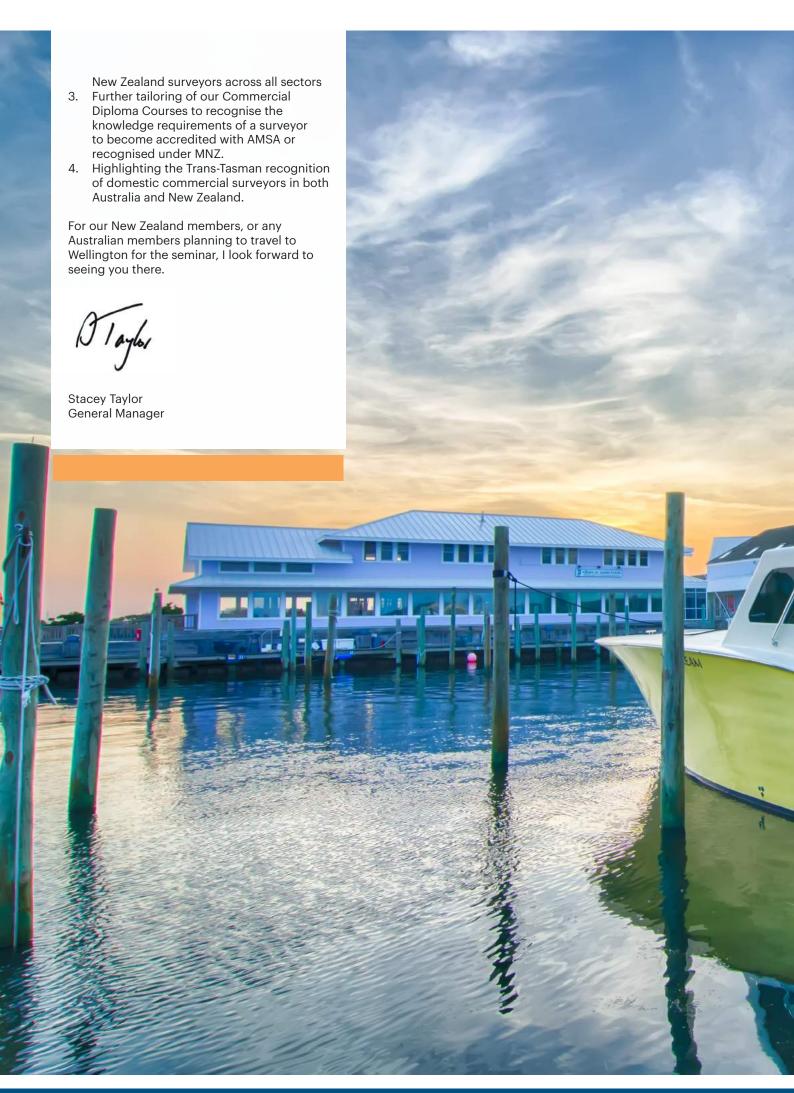
I am looking forward to working with all interested members on this project and would love to hear from anyone who would like to discuss further.

MARITIME NEW ZEALAND SURVEYOR SEMINAR – 2022

Maritime New Zealand are hosting a Marine Surveyor Seminar in Wellington on the 28th and 29th of June and AIMS have been provided the opportunity to present at this seminar.

Greg Marsden, our NZ board representative, and Stacey Taylor will be attending and presenting on 4 main themes:

- An introduction to AIMS who we are and our vision within the marine survey industry
- The strategic intent of AIMS to expand our Australasian focus by providing support to



AMSA News

Australian Government

Australian Maritime Safety Authority

MO504 (CERTIFICATES OF OPERATION – NATIONAL LAW)

AMSA is undertaking a review of the crewing requirements and SMS requirements in Marine Order 504. AIMS is represented in this review panel specifically with the SMS requirements under the MO, with a workshop scheduled for the 15th of June 2022. If you have feedback to be incorporated into this review or would like to be involved further, please contact Stacey @ AIMS.

MO503 - (CERTIFICATES OF SURVEY-NATIONAL LAW)

AMSA is undertaking a limited scope review of Marine Order 503 to address technical/workability issues within the survey changes made in 2018, as well as the transitional vessel triggers and required surveys. Changes will also include amendments to Part 2 of the Marine Surveyor Manual. Consultation is expected in Quarter 3, 2022 and AIMS will be represented in this review. If you have feedback to be incorporated into this review or would like to be involved further, please contact Stacey @ AIMS.

SURVEY REQUIREMENTS FOR VESSELS > 35M

AMSA committed to implementing changes to the survey requirements for larger domestic commercial vessels, permitting vessels greater than 35m to be surveyed by an AMS. This initiative was planned to be implemented in the current review of Marine Order 503, however AMSA has paused this pending the outcomes of the Independent Review into DCV safety legislation. The permitting of vessels greater than 35m to be surveyed by an AMS will continue to be delivered on a case-by-case basis via specific exemption.

NSCV PART C6B - BUOYANCY AND STABILITY

Consultation is expected Quarter 3, 2022 on amendment to address a high number of outstanding issues related to, amongst other things, level flotation, hydrostatic testing, incorrect calculations, and formulas. Industry has also identified stability calculation issues within the standard.

EXEMPTION 06 MARINE SAFETY – LIFE RAFT SERVICING

In January 2022, EX06 was amended to enable continued operations where life rafts are being serviced, provided there is sufficient life raft capacity for all on board. The exemption does not need to be applied for, though logbook and life raft service evidence need to be provided on request.

NSCV C7A- SAFETY EQUIPMENT

A full review of this part is currently being conducted, including safety equipment for vessels <12m and life raft carriage requirements.

Osmosis

by Michael Hunn

This article was written by Michael Hunn, Naval Architect and published on Marine and Safety Tasmania's website - https://mast.tas.gov.au/safe-boating/vessel-maintenance/

The term "osmosis" was coined in the early 70s to describe the blistering found on many GRP boat hulls and is now in common usage. The osmotic process probably does occur within the blisters but is not the only process involved and is not the full story.

A GRP (glass reinforced plastic) boat hull is a matrix of (usually) polyester resin reinforced with glass fibres, built up in layers. The final laminate will have an approximate ratio of 30% glass to 70% resin. This laminate is not homogeneous; that is even within a well-built GRP hull there will be small voids, air pockets and micro-cracks within the resin matrix and at the interface between the resin and the glass fibres.

Water can diffuse into, and through the gel coat and the laminate (the polyester not the glass fibres) as water molecules, not a liquid. A boat hull can absorb a maximum of approximately 2% water in this way. Water may pass slowly through a GRP hull in this way and disperse in the bilges as water vapour. The moisture content of a new hull will slowly increase during the first few seasons that she is afloat. The moisture content will similarly reduce slowly when she is out of the water.

As mentioned previously there are various small voids within the laminate. The water molecules can collect and condense within these. Within the GRP laminate and the microvoids are various water soluble components. These are solvents, by-products and unreacted constituents from the manufacturing process.

The water within the micro-voids is able to dissolve and chemically react with these components. This process is known as "hydrolysis". "Hydrolysis" will continue with the voids enlarging. A dissolved solution is formed, the main ingredients being, acetic and hydrochloric acid and glycol. These products give "osmotic fluid" its characteristic vinegary smell and greasy texture.

The glycol in particular is "hydroscopic" (water absorbing). Once this is released in the voids it will accelerate the rate of water absorption into the laminate. This process will now continue and will not be reversed by simply taking the boat out of the water. Moisture content will drop slowly if left ashore but will rise again fairly rapidly when the boat is immersed again. The various hydrolysed products cannot pass through the polyester gel coat / laminate but the water molecules can.

As this process continues, at some point the concentration within the voids will become greater than the concentration of the water the vessel is floating in (sea water). At this point the "osmotic" process occurs and more water is drawn in.

The interface between the glass fibres and the resin matrix can also be broken down. The binder used on the glass fibres (particularly emulsion bound mats with polyvinylacetate binder) are water soluble. This can allow liquid water to pass along the fibre bundles, producing some swelling at the fibre ends and the characteristic "wicking" or "fibre-aligned blisters".

As this continues the voids are increased in size by "Hydrolysis" and the pressure within is increased by "Osmosis". At some point the pressure may become too high for the surrounding material to support and a blister is formed

This all sounds fairly alarming, however it is important not to over-react. Many boats are used for years in this condition and at this stage the processes are chemical with very little loss of mechanical strength of the laminate / hull. Many boat hulls may take 10 - 20 years or longer to reach this stage.

As this process continues, moisture continues to be absorbed, the laminate break down accelerates and more blisters are formed. In time some larger blisters may develop within the laminate as well as those more commonly occurring between the gel coat and laminate. At this stage, treatment will be required (See later).

Diagnosis of the "osmotic" condition and the decision as to what level of treatment, if any, is required and when, is made by considering a number of factors.

- The hull gel coat surface is visually examined for signs of blisters or wicking.
- The liquid content of any blisters is examined and tested.
- The moisture content of the hull is gauged using a moisture meter.

With regard to moisture meters, these are only one tool and have their limitations. A diagnosis based on meter reading alone is flawed. Relatively high readings on older hulls in particular is not necessarily an indication of "osmosis" or poor laminate condition.

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At the other extreme, a visual examination revealing extensive gel coat and deeper seated blisters may be all that is necessary to produce a diagnosis of "osmosis".

To determine the full extent of the defects and therefore the detail of the complete treatment required, it will be necessary to examine the hull laminate after the gel coat has been removed. In some cases additional laminate repair may be required prior to epoxy coating the laminate (see treatment).

As noted earlier there are a number of factors associated with "osmosis". The treatment process has to deal with all these factors. Simply "drying" the hull and covering with an epoxy paint system will not work.

The laminate does have to be dry, however the removal of just water from the laminate will not result in a long lasting treatment. The contaminants and components dissolved in the water also have to be removed. As noted earlier some of these are hydroscopic (water attracting) and in general are large molecules. These have to be removed from the laminate when still in solution within the water.

Simply drying or forced drying using dehumidifiers and/or heat lamps will tend to remove the water but leave many of the contaminants behind. For this reason steam cleaning and washing the hull surface is important.

The gel coat, although not 100% water proof, is still a very effective water barrier and will not allow the passage of larger molecules such as glycols. For this reason the gel coat has to be removed. This is most effectively achieved by the use of a "Gel Peeler". This removes a controlled thickness of gel coat and / or laminate leaving an even, smooth surface.

The surface left by the "Gel Peeler" however has several problems. Firstly the very smooth surface does not promote drying well and doesn't provide a good abraded surface for a good mechanical bond for the epoxy coating. In addition the "Gel Peeler" will not remove softer material within the blisters deeper than this smooth surface. For these reasons the peeled surface should be "grit blasted" after peeling.

As the aim of the treatment is to remove the contaminant from the laminate along with the water, it is best to initiate treatment, peeling and drying shortly after the vessel has been lifted ashore after a sailing season. If left ashore for some time (a winter say) before initiating treatment, some of the water may have been removed and it will be more difficult to wash out the contaminants.

Once peeled and blasted it's important to wash out the contaminant from within the laminate. This is best achieved by repeated steam cleaning or hot pressure washing. Initially this will probably be on a daily basis and then less frequently for a period of several weeks. It is necessary to monitor this process with both moisture meter readings and using litmus paper to assess the PH of the surface water. When the surface is found to be neutral, a few days after washing, the drying process can commence. At first this can simply be air dried but the hull will eventually need to be heated to reduce the surface moisture content to a very low level, 50 or below (Tramex scale 2) 5 or below (Sovereign scale A) At this stage coating can commence. The exact specification, over-coating, application procedures etc will be determined by the product used and the manufacturer's specifications. However in general a solvent free epoxy system, applied by roller, with four to five coats giving a total application thickness of approximately 1mm, is a summary of what is required. Most solvent free epoxy systems require to be applied and cured in controlled temperature and humidity conditions. For this reason generally applications should be carried out inside a workshop. 16th June - Members' Open Online Forum 28th-29th June - Maritime New Zealand Marine Surveyor Seminar 28th July - 1st August - Sydney International Boat Show 21st October - 2022 AIMS Conference

LPG Installation Case Study

EXTRACT FROM AMSA'S SURVEY MATTERS MARCH 2022

In June 2021, an explosion occurred on board a houseboat when the owner attempted to light a gas-powered stove via a piezo ignition switch. The explosion caused catastrophic damage to the vessel structure & fittings and both people on board were hospitalised with burn related injuries.

AMSA inspected the 9.9m vessel following the incident and found that major structural damage had occurred to the superstructure, windows, doors, hatches, compartments, fittings, and fixtures. The join of fibreglass between the hull and superstructure was cracked and delaminated away from the hull in the area surrounding the lower cabin. The carpet and curtains were singed, whilst the galley and dining area floor had delaminated. The dining table had also been flipped upside down.

The vessel had a fixed gas system installed which was certified to supply a cooktop, refrigerator, and instantaneous hot water system. Two 8.5kg LPG cylinders were located on the upper deck during inspection, one was connected to the fixed gas system.

Two gas connections were located in the galley during inspection. One supplied the gas cooktop while the other was not connected to an appliance. There was no gas fuelled refrigerator on the vessel. The hot water system was connected to one of the LPG cylinders on the upper deck and was not supplied by the fixed gas system. A valve and connection linked to the fixed gas system was also located externally aft of the vessel, but it was not connected to a hot water system.

Following the incident AMSA engaged a gasfitter to inspect the fixed gas system. At the time of inspection, the gasfitter found the system was not

complaint with the requirements of the Gas Supply (Consumer Safety) Regulation 2012 because:

- Gas appliances as indicated on the compliance plate were not installed
- Where appliances weren't fitted, the connection points were not sufficiently capped to prevent a gas leak
- A gas detector was not on board

Following a pressure test of the system, the unused gas connection in the galley was found to be leaking when tested in the off position. The connection and valve located externally was also found to be leaking. The components of the external connection were made from a half-inch kinko nut and olive compression fitting. These fittings are manufactured for use in water copper pipe systems and are not complaint with gas system requirements.

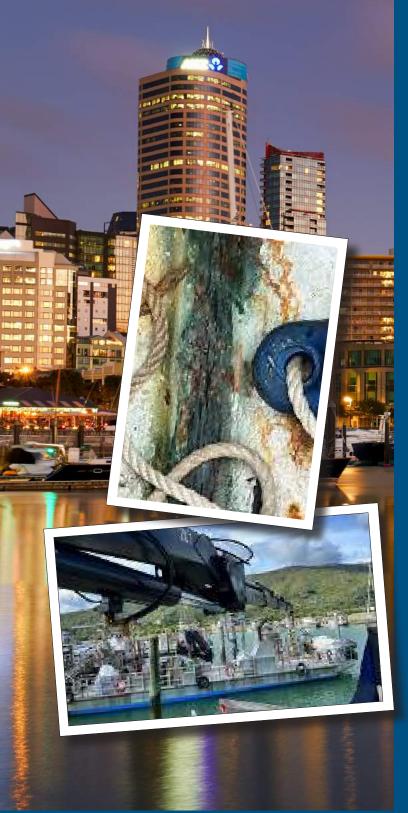
The gasfitters report stated that it is likely the LPG leak from the disconnected gas fridge isolation valve in the galley would have contributed to the presence and accumulation of explosive vapour within the vessel.

AMSA concluded that:

- Propane gas was most likely the cause of a flammable gas air mixture within the vessel
- A faulty gas isolation valve leaking through an open outlet within the kitchen cabinetry was likely the source of uncontrolled gas escape
- The source of ignition was almost certain to be the piezo ignition switch on the gas cooktop which was operated by the owner in the moment before the explosion

AMSA reminds surveyors of the periodic survey requirements listed in Table 9 of SAGM Part 2. Surveyors should look for signs of alterations, modifications, deteriorations, and disconnections when inspecting the condition of LPG systems. Verification of compliance certificates/plates for installed gas equipment is also required under Table 9. In accordance with section 6 of the National Law, gas systems must also comply with the applicable state or territory gas safety regulator requirements. A licensed gasfitter should inspect the system if there are any concerns.

Musings from New Zealand



Kia ora koutou katoa

It is fair to say that April and May have been two pretty hectic months in the life of a Marine Surveyor. Of course, it had a fantastic start with our first Board meeting in Sydney which was a great success largely due to the energy and drive, Stacey brought to the Boardroom!

A very settled Autumn in Wellington included our routine commercial and recreational activity such as supporting fishing vessels from the Chatham Islands undertaking their MNZ periodic surveys and annual servicing, as well as working through vessel change of use for one of our local Diving and Salvage companies.

On the pleasure craft side, we have done a number of Pre-Purchase Inspections on various launches and yachts, including one Ferro vessel that was immediately condemned and didn't actually make it to the travel lift. Anecdotally we are seeing more of this type of vessel appear either abandoned and left to Harbour Masters and marinas to deal with or alternatively popping up on online auction sites. I suspect these types of vessel will become an increasing problem as cost of ownership and insurance requirements increase.

ROTTEN BEAM IN FERRO BOAT

What May has really exemplified though is the diverse range of activities a Marine Surveyor can undertake. May has thrown up some other interesting engagements, such as an audit of recent work undertaken on a vessel that had been previously surveyed for sale and purchase (I'll expand on this in a future piece), the project management of a 90's Maxi 88 charter yacht which having been abandoned in NZ and was purchased from the Crown, with the new owner working towards putting it into MNZ Survey. As a legacy vessel issues include, (but not limited to) getting Design Approval for the construction and electrical installation, especially when there is limited history, plans and the company no longer exists!

This month has also provided the opportunity to undertake some training and professional development. Able Ships Ltd in Nelson are a recognised MNZ Inspectorate for the Test, Examination and Inspection and marine lifting devices (the rules for these being under Maritime Rule Part 49). Robert Browne, a Part 49 expert recently ran an excellent two-day course which included visiting Havelock Marina AKA 'Crane Land' for the practical elements of the training.



Marine Hold Inspections by Capt. Prabhgeet Singh

To start with, below are Charter Party excerpts from AusGrain 2015:

"15. Survey at Loading Port

15.1 Before loading is commenced, and at each loading port, the Vessel must pass the customary survey of:

- (a) Any relevant Australian government quarantine and inspection agency authorised officer/surveyor; and
- (b) an independent Marine Surveyor appointed by the Charterers and acceptable to the Owners (acting reasonably) provided that such survey(s) shall not be required at any second or subsequent loading port unless government agency so directs. "
- "Vessel will present for loading free from loose rust, scale, infestation and/or contamination by previous cargoes and suitable in every respect for the loading, carriage, and discharge of the permissible cargoes under this Charterparty."

We have been finding discrepancy and variations in opinion of surveyors w.r.t. hold conditions and so often more in recent few years.

Surveyors used to make a call basis their experience on type of cargo, shipper requirements, port of loading, port of discharging, method of discharging, previous claims for that cargo/voyage and judgements were based on an expert opinion. Senior surveyors will pass on their experience to the new ones over time with a number of full hold inspections as a trainee surveyor.

Few latest examples of our recent learning are:

- We learnt that there was a low-level lead-based contamination in a sugar shipment. Surveyors now are more stringent for sugar shipments in fact all consumables if vessel carried lead in recent history (last 5 cargoes).
- For loading grain Tank tops hard rust was acceptable which is as per international grain standards but in recent past, it was noted that surveyors are too strict (especially after loose rust issues on cabotage grain shipments). It was noticed that rust which seems to be hard during initial survey becomes loose over a period, with combined action of moisture in rust, dryness of cargo and movement of grabs and heavy payloaders.
- Cement hard residues were acceptable, now surveyors need same to be removed, sometime the fact being grain cargo is loaded from cement silos or cemented open areas and will be discharged in cement silos.

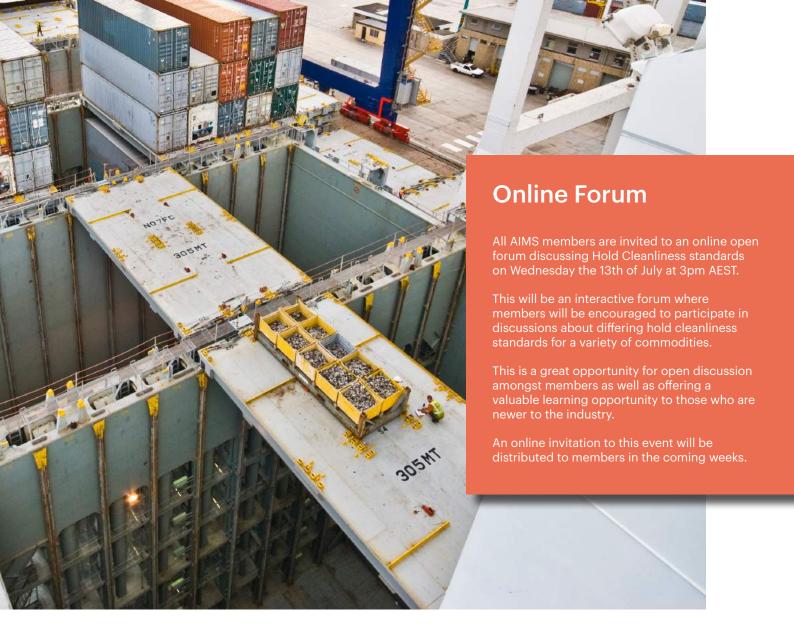
- Light transferable stains used to be acceptable for grain.
- Except cabotage or fertilizer inspections, EWP were never used by surveyors for inspection but are being used at times.
- Underdeck or higher area rust was checked by sledge hammering but now any doubts on rust/ paint being asked to be removed.

Sometimes, we see surveyors don't know where to draw a line for passing or failing a ship and that reasonable act seems to be lost.

There continues to be much conjecture about standards for cargo hold cleanliness amongst onboard crew, owners and charterers, Australian bulk industry, shippers and marine surveyors that can lead to indecision, disagreement and conflict. All vessels cannot be bought from new building shipyards and ships fail even fresh from drydock.

AIMS surveyors should have a minimum understanding of requirements for at least following cargoes, (1 being highest standards):

- 1. Talc, Zircon thorough washing of holds, holds without rust, loose paint, or cargo residues or contaminant, tank tops bare metal (even rusty colour of tank top is not acceptable... is it required as per shipping contracts?)
- 2. Alumina, spodumene (higher quality), Ilmenite sand (higher quality) thorough washing of holds, holds without rust, loose paint, or cargo residues or contaminant, tank tops bare metal (sometimes there is very hard rust on tank tops (I call it machine breaking rust) that should be acceptable).
- 3. Grain, Sugar thorough washing of holds, holds without loose rust, loose paint, or cargo residues or contaminant, tank tops hard rust is acceptable (to be checked using ships long handle scraper not surveyors pinpoint sharp scrapers or chipping hammers), Rust on bulkheads is checked using long handle scraper.
- **4. Fertilizer** Similar to grain cargo inspection, plus EWP inspections for import, domestic and New Zealand shipments.
- 5. Concentrate cargoes, block cargoes, Silica sand, other sands Standard washing of holds without any loose scales, or obvious contaminants (tank tops to be checked using ships long handle scraper)
- **6.** Coal, Iron Ore SW washing of holds, usually there are no hold inspections, at times have seen vessel getting inspected and failed for large amount of loose scales.



Faint line between Authorised Officer -DAWE and Marine Surveyor inspections:

- 1. AO-DAWE inspections are conducted under strict guidelines from the department while they are predominantly looking for infestible residues such as previous grain, insects, pests but not limited to.
- 2. Marine Surveyors carry out underwriters inspections to check non-infestible as well as infestible residues while making sure overall condition of holds is acceptable and won't contaminate, wet, or infest cargo to be loaded.

People most affected are ship staff with the pressure to pass holds at any cost. It must be considered by shipping companies' prior vessel next employment whether it is possible to prepare holds during sea passage safely or not. If in doubt, expert surveyors' advice should be sought prior to vessel sailing from last port or well ahead of time rather than at sea, proceeding to the load port. As usual ship's crew safety remains ship master responsibility.

Australia predominantly being an export-based country and AIMS being a governing body for grain surveyors at least, will be providing an opportunity to discuss requirements among our surveyors and produce some resolution to understand minimum acceptable standards which are to be followed as a guideline, with results circulated among all concerned parties for their good perusal.

This will be an opportunity for attending surveyors to have their say on the subject matter and to use their best judgement of holds as suitable to load intended cargo.

Aim is **not to reduce** hold inspection standards but to act reasonably while carrying out hold inspections.

Capt. Prabhgeet Singh AFNI, A.I.M.S, AO – DAWE Marine Surveyor-Grain Accredited The MCC Group

The Surveyor's Notebook and Discovery

by Mike Wall

The majority of marine surveyors carry a notebook during their surveys, inspections and investigations to record relevant information. Some surveyors may use a Dictaphone or Smartphone to verbally record information. Whichever is used, it is important to remember that the notebook is a legal document and that the recorded information may be revealed in court during litigation under the rules of 'discovery' or 'disclosure'.

Notebooks are usually A6 paper size and around 20 mm thick so that they fit neatly into a boiler suit top pocket. They should be easily accessible and used frequently, no matter how good you are at remembering what you have seen. Checklists may also be pasted into the notebook for easy reference for new surveyors or when senility is setting in.

A new page is started for every new job with the vessel's name, job number, date, place and type of survey recorded. Then follows relevant and pertinent information relating to the surveyor's findings. This may also include a schedule of events with dates, times, locations with times in 24 hour format for easy sorting.

TIP: Rip off the top corner of the last page so that you can find the next page easily when ready to make an entry.

The surveyor may also find it useful to record aspects of photographs which have been taken, particularly when related to similar pieces of equipment, eg, pistons, hatch covers, etc, as most cameras and smartphones do not accommodate such notes.

There is an old saying that 'A picture says a thousand words'. For a surveyor this means that a picture or graphic can replace a thousand words in a report. As an example, try to describe a ship that you have recently surveyed in less than one thousand words. Your description should include the number of holds, watertight bulkheads, hatch covers, cranes, water ballast, fuel and fresh water tanks. Not easy!

This is why most surveyors draw a plan view of the vessel they are visiting before they start the survey, particularly when surveying hull damage. This should show the main deck outline showing bulkheads and their frame numbers, holds, hatches and deck cranes. It may also show the forepeak tank, double bottom, after peak and wing ballast tanks. A useful trick is to have an A6 sized Perspex sheet with the main deck outline cut out. This can then be used repeatedly as a template for the ship's plan. It can be stored in a cardboard pouch on the inside of the notebook back cover.

Before digital photography came into being, diagrams and sketches were particularly useful in faxed or emailed preliminary reports. The ability to send digital photos has greatly enhanced communicating and reporting of findings to clients, reducing the need for diagrams.

However, as previously stated, there will be times when the surveyor needs to explain the operation of a piece of equipment or the sequence of events leading up to a casualty. This is when diagrams or sketches come into their own. The surveyor is advised to learn basic technical drawing techniques as these help make drawings more understandable for the client.

The notebook, being used frequently, will become tattered and worn so that it may need the occasional reinforcement with packing tape. This is particularly important as all such information in most jurisdictions is required to be retained for several years. The cover should thus show the range of job numbers and dates of survey for easy access.

DISCOVERY OR DISCLOSURE

The law in most countries stipulates that there should be no surprises in court. This means that both sides must disclose to each other information relating to their case, ie, all information is discoverable.



The term 'discovery' identifies the process by which a party to civil proceedings is obliged to disclose to the other parties all documents relevant to the issues in the litigation. The definition of documents is extremely wide-ranging and includes information stored electronically. The rules of discovery in court proceedings are intended to ensure that each party is in a position to evaluate the strengths and weaknesses of its case in advance of trial. The process of discovery involves the disclosure of one party's documents to the other. Either party can seek documents from the other which they believe may strengthen their case.

If the other party in a dispute is aware of a report having been issued by a surveyor to his client which might strengthen their case, they are entitled to request discovery of the report and the court will support such a request. Hence, a report issued as a consequence of a survey carried out during normal duties to a client will come under the rules of discovery. This includes any information recorded in a notebook.

However, under the law of evidence, a client's privilege to refuse to disclose, and to prevent any other person from disclosing, confidential communications between the client and his or her attorney is termed 'Attorney-client privilege'. This protects the client from having to disclose confidential communications and/or evidence. Whatever is communicated professedly by a client to his counsel, solicitor, or attorney, is considered as a confidential communication.

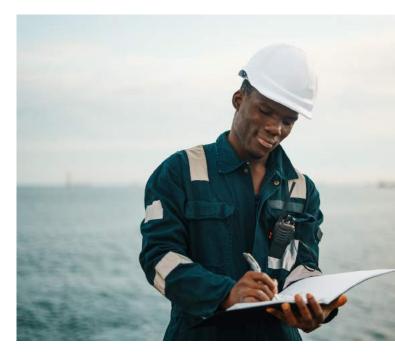
A means of circumventing the rules of discovery is for the client's lawyers to instruct the surveyor to carry out the investigation and report to them, not the client. The client will then get to see the report in the lawyers' offices.

The reader may thus see that it is imperative that the surveyor's report and any other recorded information must be accurate in all details. The surveyor should also be aware of the rules of discovery when issuing his report. If in doubt, check with the client.

The above is an introduction to discovery for the marine surveyor. It is a wide and deep subject about which much has been written. There are more authoritative and comprehensive writings on the subject which the surveyor may wish to reference.

Surveyors should be very careful what they write in their notebook especially if the information is to be used in a final report. Unprompted comments and opinions should be avoided, eg, 'this ship is a disaster waiting to happen!', whether joking or not as these could be used against you and your client at a later date. Stick to the facts and only your findings. If such records would be detrimental to your client's case, avoid writing anything in your notebook. An 'in confidence' phone call or email to the lawyer will be more appropriate.

It is therefore imperative that your notes should be correct in every detail otherwise the opposition counsel will take you apart in the witness box with the result that you may lose the case for your client and your credibility as a marine surveyor/expert.



Avoid that sinking feeling. Pick the right marine surveyor.

The wrong surveyor could cost you more than a new boat.

Getting out on the water is a favourite Aussie past-time and we want to help you make sure that the boat you purchase is suitable for you and what you want it to do.

Purchasing a boat is a big investment and things can and do go wrong so you want the best advice possible.

Engaging a Certified Commercial Marine Surveyor™ to help you buy a boat makes a lot of sense. A quality condition survey is the best investment that you will make as part of the buying process.

Getting it right the first time may just save your life.

So how do you choose a surveyor that is right for you?

There are no Government controls that regulate the minimum qualifications or experience required by a marine surveyor in the recreational boating industry.

The Australasian Institute of Marine Surveyors encourages boat owners to only engage a Certified Commercial Marine Surveyor™.

We care passionately about getting you out on the water because we love it too – but more than that we care about your safety and that means we care about your boat.

Check your marine surveyor's qualifications yourself or talk to us before you purchase a boat or engage a marine surveyor.

It's our profession, not our part time job.

To become a Certified member of the AIMS, surveyors must provide evidence of their qualifications and experience that support the areas of specialisation they advertise.

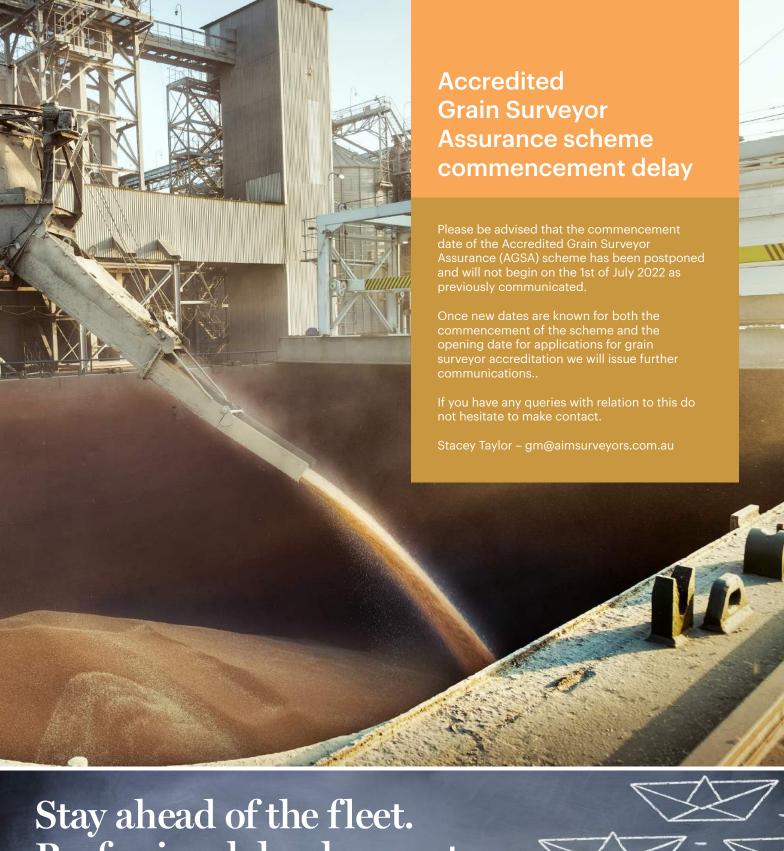
AIMS Surveyors also commit and adhere to the AIMS Code of Professional Practice giving you, the boat owner, greater peace of mind.

Avoid that sinking feeling, pick the right marine surveyor.



Find a surveyor at www.aimsurveyors.com.au Email us on info@aimsurveyors.com.au or call us on 02 6232 6555





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The importance of professional indemnity insurance for Marine Surveyors

by Greg Hansen

Director Professional Risks, Austbrokers Countrywide

Ensuring you are covered by appropriate insurance as a consultant is a key aspect to best professional practice.

This article explores why professional indemnity insurance is so important and how to ensure you are getting the best cover possible.

What is professional indemnity insurance and why is it important?

It is important for professionals to have the correct insurance and to engage in good risk-management strategies, especially when involved in marine surveying work.

Professional indemnity (PI) insurance is a vital risk transfer mechanism for marine surveyors who can be exposed to a high degree of risk due to the services provided and nature and size of projects that can be undertaken. In today's highly litigious society, claims can be relatively common.

Without a PI policy in place, surveyors risk their business assets – and possibly their personal assets – in the event of a claim. Even if it is ultimately determined that the surveyor was not responsible, payment of the legal costs associated with defending an allegation of negligence or similar is often the part of the insurance cover most appreciated by an insured business.

Why is PI insurance hard to buy and premiums have often been rising?

The insurance market is cyclical and in the last few years has been very difficult. In particular, for PI insurance with Insurers generally making losses. The marine surveying industry has an additional issue which can make the insurance purchase more of a challenge and that is due to the relatively small number of professional operating in this field. Insurance operates best when Insurers can leverage off a large number of risks and hence a large premium pool to cover claims.

For example, there are thousands of architects and engineers which generate very large pools of premium for Insurers writing these professions as opposed to a relatively small pool of risk and premium in the marine surveying profession. Both issues (the poor profitability of PI insurance across the board) and the small numbers in the profession has made it difficult to attract Insurer offering reasonably priced insurance.

How to get the best results from your PI renewal

The first point of call for Austbrokers Countrywide is to tackle one of the issues raised above of an occupation with low numbers by using AIMS as a body to encourage members to combine together and bulk buy. Insurance works well with a large premiums pool to attract Insurers. By encouraging more Insurers interested in a larger premium pool we create the best ability to reduce insurance premiums. The second point is to use AIMS to promote risk management and improvement in standards across the profession.

The harder insurance market does look to be here for at least another 12 months so in addition to above it is important for surveyors to ensure they are preparing properly for their renewal and adhering to industry best practice.

Practical suggestions that can help include:

- Give the renewal process the attention it deserves.
- Engage a broker with expertise and resources in your field to provide you with the best advice.
- Complete the proposal form early and diligently. If the questions do not adequately portray your business activities, provide an explanatory addendum. A substandard submission may prejudice your practice, resulting in premium loadings, restrictive terms or even a declinature.
- Pay particular attention to the risk management questions. If you are able to differentiate your practice from your peers and provide comfort to underwriters regarding your processes and procedures, you are more likely to achieve a favourable result. Include accreditations, CVs and procedure manuals if appropriate.
- If any PI claims have been made against your practice, provide details regarding the steps taken to ensure there will not be a repetition of the circumstances which led to the claims.
- In the hard market, underwriters are more particular about the risks they are prepared to write and negotiations are often lengthy and time consuming. Ensure you provide your broker with renewal documents well before your renewal date, as they may need to approach a number of insurers to achieve the required coverage and premium.

CASE STUDIES

Austbrokers Countrywide asked its panel of Insurers to provide some claims examples where professional negligence was alleged against the marine surveyor and a Professional Indemnity insurance policy responded to cover the claim:

I. A vessel valuation by a marine surveyor of \$900,000 was used by the owner to secure a loan. When the owner defaulted on the loan the bank seized the vessel and was only able to sell it for \$290,000 so the bank sued the marine surveyor for performing a negligent valuation which they relied upon to secure the loan.

II. The marine surveyor was appointed by a bank. The instructions provided to the surveyor were clear. They were to confirm the value of the vessel being built at a local yard and to certify to the bank when additional funds could be drawn down during the construction period. The bank confirmed that the surveyor was not required to monitor the standard or quality control of the ship's construction nor its conformity with design.

Defects were found in the ship after construction and the owners sued the ship builder, the surveyor attending to the quality control of the build and also the surveyor acting for the bank. Legal proceedings against all parties took two and a half years to conclude. A settlement of US\$235,000 was reached at mediation with all parties contributing.

Its important marine surveyors obtain clear instructions and/or to confirm in writing the exact services they are to provide. Unfortunately this does not always protect surveyors from legal action.

This is an unfortunate example of where the cheapest option is for a surveyor to contribute to a settlement even though his instructions and responsibilities were clear from the very beginning.

III. A surveyor in Canada was contracted to provide a load and stow survey for a barge of steel.

A week after the survey had been undertaken the barge sank and the cargo was lost. The surveyor was one of eight parties sued for CA\$2.5 million. In the lawsuit it was alleged that the surveyor knew, or should have known, that the barge loading capacity was 6.8 metric tons but allowed 7 metric tons to be loaded. This was alleged to have caused or contributed to the sinking.

Although it was not clear that the surveyor had been negligent there was some risk that they



could be found liable. The owner's insurers agreed to settle the majority of the claim and the surveyor was asked to contribute CA\$75,000 to the settlement pot.

IV. An insured acted as a marine consultant, stowage and lashing planning advisor for the stowage of steel coils. The marine consultant was appointed by a principal for whom they had worked with for many years and enjoyed a very good working relationship.

Due to their good relationship, upon only the verbal instruction of the principal, the marine consultant arranged and signed off on the stowage of the coils on an "athwartship" basis (at right angles to the centre line of the ship) as this form of stowage increased the cargo intake. It could be justified with additional lashing due to the way the hold was constructed.

The ship encountered very heavy seas and ultimately the stow collapsed resulting in a claim in excess of US\$1.5m. The consultant was subsequently held responsible by the insurer of their principal, as part of a recovery action.

Unfortunately, there was no written confirmation of the instructions from the principal indicating they had agreed to an athwartship stow. There were however various other facts which were in the marine consultant's favour to defend the case,

including a limitation of liability clause in their terms and conditions.

The Insurer obtained independent third party advice to support the position for stowing the cargo athwartship. After five years of investigations and claims negotiations the Insurer managed to successfully defend the marine consultant, making a modest claim contribution of EUR 50,000 with legal fees well in excess of this amount.

This is a good example that shows even if your most trusted clients do not intend to make a claim against you, their insurers or another third party may do so. You should always get instructions in writing. If you do not, your "favour" can become very costly.

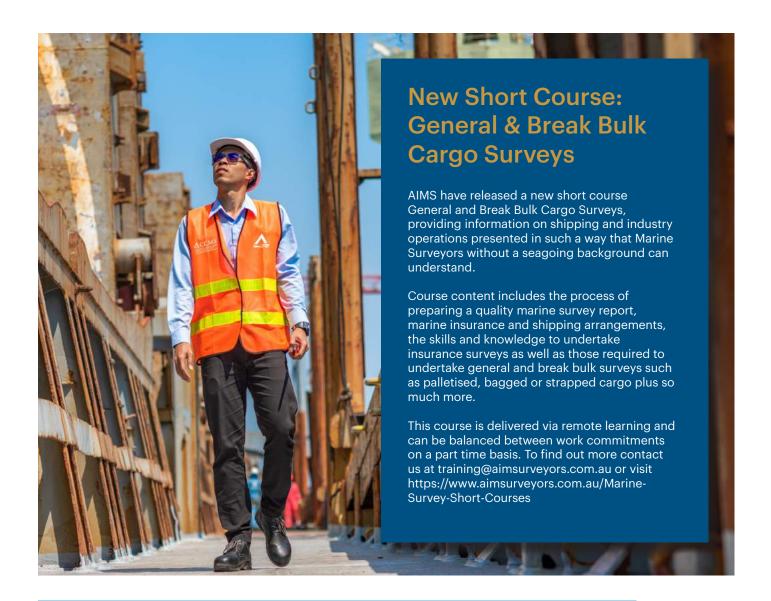
Get in touch with Austbrokers Countrywide If you would like further information or have any queries, please contact Austbrokers Countrywide on 1800 245 123 or email us at info@abcountrywide.com.au

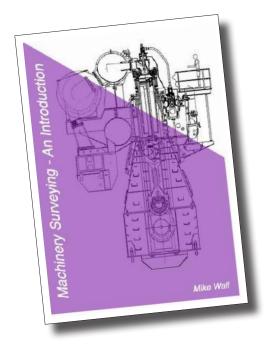
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Machinery Surveying - An Introduction - by Mike Wall Self-published December 2021. Cost US\$120 ISBN: 978-616-588-305-4

The book was originally a single book relating to both hull and machinery surveying but became so large that it had to be split into two parts. This is the second of the two. It has been written with three possible types of surveyor in mind.

The first group will have had very little or no marine experience and who are seeking to enter, what is to them, an entirely new profession. As such, much of the material presented will be new to them being designed to give them a grounding in the profession of marine surveying. The second group will be people who have some related marine experience such as ship's deck or engineering officers who are seeking to leave seafaring but wish to remain involved with the marine industry in a wider field. The final group will be experienced marine surveyors who want to extend their knowledge into the wider fields of the profession and continue their personal professional development by being exposed to areas of expertise with which they may not be familiar.

Each of the above groups should have a grounding in marine engineering. For this reason, the book does not cover the basics, eg, engine cycles, etc.

The book contains thirteen case histories based on actual incidents which show what machinery damage investigations might look. It also covers various reporting techniques relating to such incidents.

Available from www.petrospot.com/books

Members Update

by Brett McCulloch

New Team Member

Firstly, I would like to thank all the Board, Team, and Institute members for welcoming me to the Australasian Institute of Marine Surveyors (AIMS). It gives me great pleasure to have taken on the Administration Officer role.

As a member of AIMS myself as a Marine Surveyor, I know only too well what support AIMS has given me over the years. My pledge to all the members in my new role as Administration Officer is to continue to share the values, support, and professionalism of AIMS.

Brett McCulloch Administration Officer AIMS

Membership

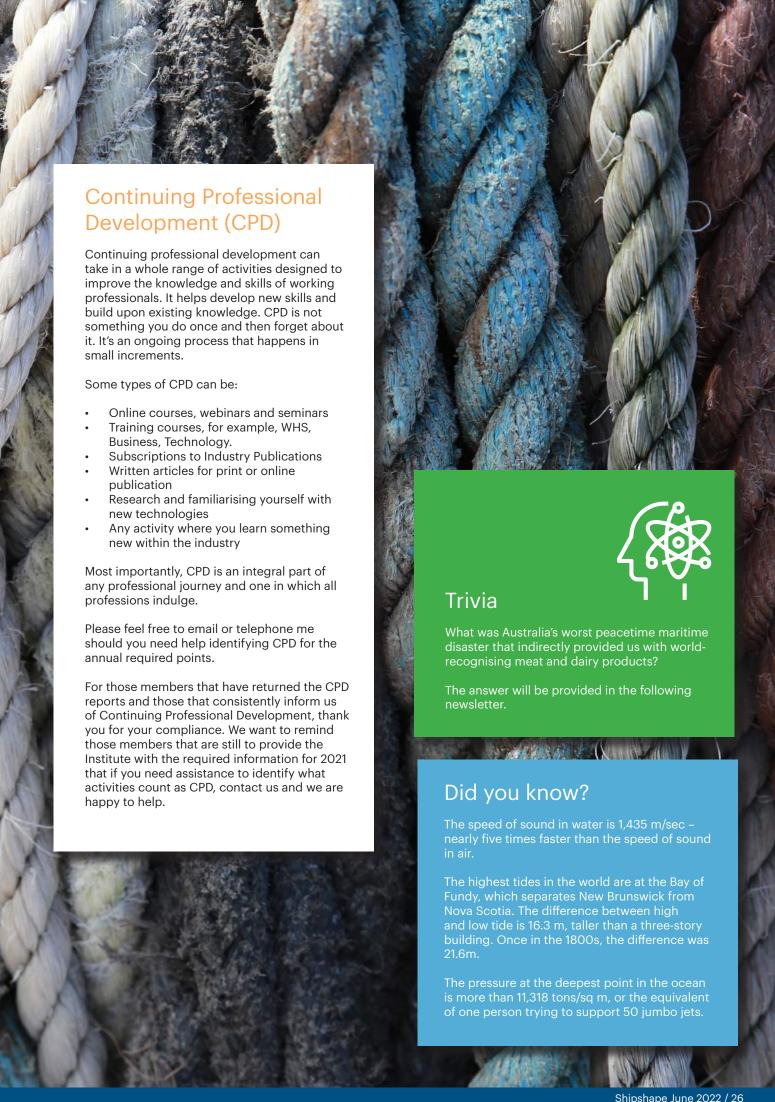
As you all may know, it is fast approaching the end of another financial year, which means our memberships fall due. Presently, I am going through everybody's membership with the invoices to be emailed out from the 1st of July. If you are currently an Associate Member and ready to upgrade to Full Membership, please contact me and I can organise this for you prior to July 1st. Associate members must work towards Full Membership within 4 years of joining AIMS.

As per the amendments to the membership requirements from the 1st of July 2021, to upgrade to Full Membership you must have 2 years' experience as a marine surveyor as well as hold a Diploma of Marine Surveying.

If you don't currently have a Diploma of Marine Surveying, did you know you may be eligible for Recognition of Prior Learning (RPL) towards some, or all, of the qualification from your previous qualifications and current work experience. While we recognise many surveyors hold seafaring or other maritime qualifications which contribute greatly to the marine surveying profession, a Diploma of Marine Surveying specialises in the unique perspective of a surveyor. Surveying is seen as a specialisation within the industry with its own unique skillset, and therefore the requirement for a specialist qualification to reflect this.

There are extra benefits to full membership, it is about being recognised as an experienced and qualified professional member of the institute.

I will touch on Certified Commercial Marine Surveyors (CCMS) membership in the following newsletter.



2022 Sanctuary Cove International Boat Show

AIMS once again returned to a very wet and wild Sanctuary Cove International Boat Show. The weather could not keep the crowds away with nearly 60,000 visitors passing through the gates over the course of the 4 days.

We had a great opportunity to speak to many consumers about the lack of regulation in the recreational vessel sector and promote the services of our marine surveyors and the Institute.

A big thank you to all the members and students that came down to the stand to help or just to pop in and say hello, it was a huge advantage in answering technical survey specific questions from the general public, and we could not have put on such a successful show without you all.

The feedback we have received has been all positive, and we are already preparing for a new and improved stand experience for next year's boat shows.



2022 AIMS Conference Date Confirmed

This year finally sees the long awaited return of the AIMS Conference. The all day event will be hosted at the Ovolo Hotel, Woolloomooloo in Sydney on Friday 21st October and will see a wide range of guest speakers from across industry and Government deliver talks on the future of marine surveying.

The event will include morning tea, lunch and afternoon tea for our delegates, followed by an exclusive networking drinks and canapés session on the historic Woolloomooloo Finger Wharf.

Early Bird tickets will be on sale soon and further information will be available on our website as well as emailed out to members in the coming weeks, so stay tuned to your inbox and we look forward to seeing you all there!





Safe vessels, safe seas.

The largest industry body in the Australasian region for professional marine surveyors.