



# RINA AFFAIRS

MARCH/APRIL 2016

The Newsletter of the Royal Institution of the Naval Architects

## CHIEF EXECUTIVE'S COLUMN



In his Report to members at the 2016 Annual General Meeting, the President will speak of how he has had the opportunity to meet with both members of the Institution and others in the global maritime industry, and how he has continued to be impressed by the standing and respect which the Institution enjoys throughout the international maritime industry. He will describe the activities and achievements in what has been an eventful year for the Institution, including a record number of conferences.

This will be his final Report, both as the President, and as Chairman of the Board of Trustees, formed following the

Resolution adopted at the 2013 Annual General Meeting. The Board of Trustees is now in its third year as the Institution's governing body, and during that time has completed its review of the Institution's policy with regard to such key matters as its operational management, investments and risk management. As a smaller body of 12 members of Council, it is better able to focus on governance matters, and ensuring the proper management of the Institution in accordance with the requirements of the UK Charity Commission. The Institution's status as a registered charity provides significant benefits, particularly financial.

The formation of the Board of Trustees has allowed the larger Council to concentrate on the professional, technical and learned society affairs which are at the heart of the Institution. In that respect, the Council of today is fulfilling the role of the Council in 1860. The Institution makes its collective expertise available through the Institution's standing committees – the Membership, Professional Affairs and Publications Committee – and the Technical Committees, which include the IMO, Safety, Small Craft and High Speed Vessels Committees. The Working Group formed to carry out a review of how the Institution can make that expertise more effective today will present its report to Council later this year.

This will be the third Annual General Meeting held in the Institution's new Headquarters at Northumberland Street. Owned by the Institution, the building provides a valuable asset for the Institution, which in turn provides a sound financial basis for its future – a future which would have been somewhat uncertain on the expiry of the lease on the previous Headquarters building. Members and others who have visited the New Headquarters, either for conferences or committee meetings, have been impressed by the location and the facilities at Northumberland Street. Any member who has the opportunity while in London is invited to visit the Headquarters and see the facilities which it offers. Members are reminded that members may book the rooms for meeting, at a discount.

As with previous Annual General Meetings, the Institution's Medals and Prizes for papers of distinction published in the Transactions and the best papers also published in the Transactions by authors under the age of 30 will be announced.

The winner of the RINA – Lloyd's Register Maritime Safety Award and the RINA – QinetiQ Maritime Innovation Award will be announced by the President at the Institution's Annual Dinner. These Awards recognise achievements by companies and individuals, who are nominated by members of the global maritime industry, and there can, of course, be no finer recognition than that of one's peers.

Chief Executive

## IN THIS ISSUE

### 2016 Annual General Meeting

The Annual General Meeting of the Institution will be held at 8-9 Northumberland Street, London, WC 5DA, on 20 April 2016 at 1100.

The AGM will be followed by a presentation by Dr Martin Stopford, President of Clarkson Research, entitled *Smart Shipping & the Intranet of Ships – a New Challenge*.

### Election of the President

The Council has nominated Tom Boardley FRINA for election as the 32nd President of the Royal Institution of Naval Architects.

### News from the Divisions, Branches and Sections

The Chief Executive reports on his visit to the Australian Division and the Pakistan Joint Branch.

### Shiprepair eNews

Shiprepair eNews is the Institution's new and highly valuable communication tool for the repair, maintenance and conversion sector. It will provide regular, up-to-date news, views and information on what's happening in this the most crucial area of fleet management

### Communication Skills for Engineers

The Royal Institution of Naval Architects, in conjunction with Emmett and Smith, offers two one-day workshops aimed at developing the communication skills of engineers.

### Letters to the Editor

Letters to the Editor include an unusual request for advice on designing and building a ship to provide clean water in Africa, identifying an unusual boat and advice on reducing the burden on regulation. Can you help?

### Southampton Hydro Team

The Southampton Hydro Team is a University of Southampton student-led project aimed at designing, building and racing an electrically-powered boat in Switzerland. Can your company provide much needed sponsorship?

## 2016 AGM

1. President opens the AGM
2. Annual Report of Council
3. Financial Statement for 2014/15
4. AGM Resolutions
  - Resolution 1:** To elect Mr T Boardley FRINA as President
  - Resolution 2:** To re-appoint haysmacintyre as the Institution's auditors
5. 2016 Elections to Council
6. 2015 Medals and Prizes
10. President's Report
11. General Discussion
12. President closes the AGM

On completion of the AGM, there will be a presentation by Dr Martin Stopford, President of Clarkson Research, entitled *Smart Shipping & the Intranet of Ships – a New Challenge*

Following the presentation, a buffet lunch will be available for those attending the AGM. To assist in catering, members intending to attend the AGM and stay for lunch are requested to inform Sara Phillips at [sphillips@rina.org.uk](mailto:sphillips@rina.org.uk)

## Agreements of Co-operation

The Council has approved the signing of Agreements of Co-operation with the Pakistan Institution of Engineers and the Finnish Association of Naval Architects.

## Election of the President

The Council has nominated *Tom Boardley* for election as the 32nd President of the Royal Institution of Naval Architects.

### Tom Boardley FRINA

Tom Boardley is an engineering graduate of Oxford University. After 30 years' experience in the container shipping, ports and logistics business with P&O, NYK and CMA-CGM, he joined Lloyd's Register (LR) in 2009 as the Marine Director, with responsibility for LR's worldwide operations, strategy and business development. In March this year, he will take up the position of Executive Vice President and Global Head of Corporate and External Affairs.

He is a past Chairman of the International Association of Classification Societies (IACS), and is currently the President of the UK Chamber of Shipping, a position he will hold until March 2016.



Tom Boardley FRINA

## 2015 Annual Report and Financial Statement

The 2015 Annual Report and Financial Statements will be published in April at [rina.org.uk/2015AnnualReport](http://rina.org.uk/2015AnnualReport)

## 2016 Annual General Meeting

NOTICE IS HEREBY GIVEN THAT IN ACCORDANCE WITH BY-LAWS 39 AND 42, THE ANNUAL GENERAL MEETING OF THE INSTITUTION WILL BE HELD AT 8-9 NORTHUMBERLAND STREET, LONDON WC2N 5DA, AT 1100 ON 20 APRIL 2016 FOR THE FOLLOWING PURPOSES;

1. To receive the Annual Report and the Financial Statement for the year ended 30 September 2015.
2. To consider and if felt fit, approve the following Resolutions:

Resolution 1: To elect Mr T Boardley FRINA as President.

Resolution 2: To re-appoint haysmacintyre as the Institution's auditors

Note.

1. All members have the privilege to attend the above meeting, but only Voting Members (all except Student and Junior Members) are entitled to vote on the Resolutions.
2. Members entitled to vote on the Resolutions may appoint the Chairman of the meeting as their proxy to vote on their behalf. Members may register their proxy vote by online ([rina.org.uk/agm2016proxyform](http://rina.org.uk/agm2016proxyform)) or by post/email ([rina.org.uk/agm2016proxyformprinted](mailto:rina.org.uk/agm2016proxyformprinted))
3. All proxy votes must be received not later than 1045 hours on 20 April 2016

### SOUTHAMPTON HYDRO TEAM

The Southampton Hydro Team is a University of Southampton student-led project aimed at designing, building and racing an electrically-powered boat in Switzerland. The Team will be competing with the best universities in the world during the Hydrocontest 2016. However, its goals go beyond winning the race prizes. The Team intends to develop new ideas of commercial significance, to raise public awareness of maritime challenges and inspire the younger generation through various outreach activities. Details of the Southampton Hydro Team can be found at [www.southamptonhydroteam.co.uk/](http://www.southamptonhydroteam.co.uk/)

The Team is seeking sponsorship – large and small – from companies – large and small – for this very worthwhile project. If your company can help or you would like more information, contact Marion James, Partner Relations Manager, at [M.James@soton.ac.uk](mailto:M.James@soton.ac.uk) or Ariadna Pons Forn, Project Manager, at [apf1a14@soton.ac.uk](mailto:apf1a14@soton.ac.uk).

Members of the Team will be giving a presentation on their project and be available to answer questions at the Small Craft Technology Conference at RINA Headquarters on 13 April.

## People in the News

### Dr. Kirsi Tikka Elected Member of NAE

Dr Kirsi Tikka FRINA, member of Council and ABS Europe and Africa Division President Kirsi Tikka has been elected a Foreign Member of the United States National Academy of Engineering (NAE).

### Jack Brown FRINA

At a meeting the Isle of Man Joint Branch, Chairman David Furnival presented Jack Brown, a long standing and active Branch member, with his 60 Years' Continuous Membership Certificate.

### Student Awards

#### Ngee Ann Polytechnic

The following students at Ngee Ann Polytechnic, Singapore, were awarded the 2015 RINA – Keppel Student Awards for the best Final Year thesis presentations:

*Amirul Hayat Bin Rahman*

*Rayyan Bin Ramli*

*Pi Shuheng*

*Dong Mengqiu*

### Emily Lennox

Emily Lennox, an Associate Member at Babcock Rosyth, was interviewed by the *Telegraph* about STEM careers and opportunities. This resulted in the following online article.

#### “What does it take to be a naval architect?”:

She may have opted to study drama and media, as well as maths and physics as a teenager, but when it came to making serious career choices, Rosyth-based



Emily Lennox

naval architect Emily, had little doubt that ships were her passion.

Working as a Babcock intern in the summer of 2014, she joined the firm's two-year Graduate Development Programme last August after successfully completing a naval architecture and marine engineering degree at Strathclyde University.

“As a child growing up on the west coast of Scotland, ships were an everyday part of the local scenery – I wouldn't say I took it for granted, I just never realised it was an industry I would end up working in,” she says. “I wasn't aware that I had an interest in marine engineering until I was older. I think it's the sheer size of ships and their level of complexity which attract me.”

Although she agrees that the specialist skills of naval architects may appear niche, Emily explains that they can be applied in many different projects.

“As an intern, I worked on the undocking of the Queen Elizabeth Class aircraft carrier,” she says. “On a different occasion, I also got the exciting opportunity to take part in a ship's 'sea trial', which included testing the ship's engines – up to top speed – its manoeuvrability and all the navigation equipment, including the gyroscope. It was fairly unforgettable.”

As part of the firm's two-year graduate scheme, Emily swaps to a new role every three months and is encouraged to take part both in school-based STEM activities and in graduate projects.

Although there are only a small number of female naval architects at the firm, Emily says that the support she and other graduates have been given by Babcock is “outstanding.”

The full article may be read at [www.telegraph.co.uk/sponsored/education/stem-awards/12125348/how-to-become-a-naval-architect](http://www.telegraph.co.uk/sponsored/education/stem-awards/12125348/how-to-become-a-naval-architect).

# News from the Divisions, Branches and Sections

## New South Wales Section

Geoff Goodwin, Specialist Marine Propulsion and Failure Investigation of AADI Defence, gave a presentation on Submarine Diesel Engine Development to a joint meeting with the IMarEST attended by 39 on 2 February in the Harricks Auditorium at Engineers Australia, Chatswood.

*Phil Helmore*

## Western Australia Section

The WA Section organised the Institution's first offshore conference Fixed and Floating Structures in Perth, in conjunction with the Australian Oil & Gas Show in Perth. The Chief Executive, Trevor Blakeley, who was attending the conference, later held a Graduate Workshop on The Routes to Chartered Membership. The RINA stand at AOG was manned by members of the Section.

Some of the presentations at the conference (where permission was granted) may be viewed at [www.aog-speaker-presentationsaog-speaker-presentations](http://www.aog-speaker-presentationsaog-speaker-presentations)

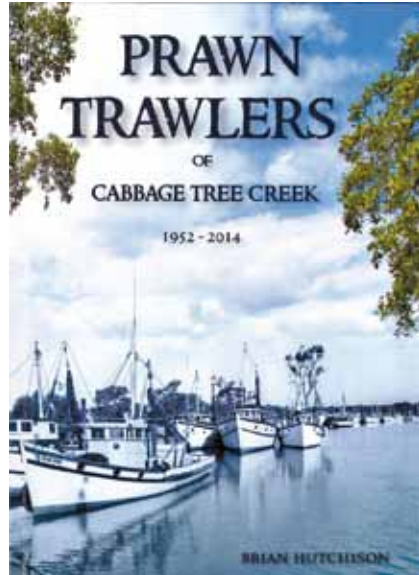
## Victoria Section

During his visit to Melbourne, the Chief Executive met with members of the Victoria Section, and also visited a number of companies and organisations, including ThyssenKrupp, BMT (DT), DESG, Jacobs, AMOG Consulting and Engineers Australia.

## Queensland Section

The Chief Executive met with members of the Queensland Section and visited a number of boat building yards, including Riviera, Everingham Boats, Assegai Marine, MEC and Aus Ships.

At an evening meeting with members of the Section, the Chief Executive presented Brian Huchison, first Chairman of the QLD Section, with his 50 Years' Service Certificate. In return, Mr Huchison presented the Institution's Library with a copy of his book *Prawn Trawlers of Cabbage Tree Creek*.



*I would like to thank all members of the Australian Division whom I met for their warm welcome.*

*Chief Executive*

## Isle of Man Joint Branch

The Isle of Man Joint Branch held a technical meeting, at which 26 persons attended, to hear Professor Tony Wickham give a very good and well illustrated presentation on *Fukushima and Other Stories: What Future for Nuclear Power?*

The Fukushima nuclear incident took place nearly five years ago, but the repercussions continue to echo around the nuclear power industry worldwide. With four large power reactors practically within sight of the Isle of Man, two of which have clocked up 30 years of

## Prawn Trawlers

operation, and more commercial reactors planned for Sellafield, it was perhaps timely to review what Fukushima and the other three major reactor incidents have taught us in terms of the safety of 'nuclear' against other potential sources of electrical power.

Starting from the detailed sequence of events at Fukushima, this talk offered an objective risk analysis of electrical power for the future.

## Southern Joint Branch

Due to the diversity of its membership, the Southern Joint Branch of RINA & IMarEST are now also publishing their events and news in the LinkedIn Group at [www.linkedin.com/groups/3827434](http://www.linkedin.com/groups/3827434)

Members are invited to join the LinkedIn Group and let Andrew Bennett at [andrew.bennett@solent.ac.uk](mailto:andrew.bennett@solent.ac.uk) know what they think of this means of communicating with the Joint Branch.

## Canadian Atlantic Branch

A meeting was held at the Memorial University of Newfoundland when a paper "How to apply the risk index approach defined by the new Polar Code" was presented by Pentti Kujala of Aalto University.

## Pakistan Joint Branch

During a recent visit to the Pakistan Joint Branch, the Chief Executive, Mr Trevor Blakeley, met with the Managing

The Chief Executive meets senior members of KSEW





The Chief Executive receives the KSEW crest from the Managing Director



Members and guests of the Pakistan Joint Branch

Director and senior members of Karachi Shipbuilding & Engineering Works, at which time he gave a presentation on the role and responsibilities of the Royal Institution of Naval Architects.

Following the visit, the Chief Executive joined members of the Pakistan Joint Branch and their guests at a reception and dinner, held in the Officers' Mess of PNS Karasaz, where he updated members on the Institution's activities.

*I would like to thank all members of the Pakistan whom I met for their warm welcome on my visit.*

*Chief Executive*



The Chief Executive joins members of the Pakistan Joint Branch Committee

## Shiprepair eNews

### A new eNewsletter for the ship repair and maintenance sector

Shiprepair eNews is the new and highly valuable communication tool for the repair, maintenance and conversion sector. It will provide regular, up-to-date news, views and information on what's happening in this the most crucial area of fleet management. From hull cleaning through to fume scrubbing, welding through to new electronic technology,

Shiprepair eNews will deliver the most relevant content that keeps its readers abreast of the latest technology and innovations in marine repair and maintenance. Shiprepair eNews will complement the more depth reporting of the Institution's magazine *Shiprepair & Conversion Technology*.

The new responsive design format of Shiprepair eNews allows for easy viewing on any device, automatically adapting to the size of the screen on which it's being displayed.

Shiprepair eNews, which will be free to subscribers, will be published in eight issues per year – four times in conjunction with the printed issue of *Shiprepair & Conversion Technology* (February, May, August and November) and a further four intermediate issues on the 20th of the month in December, March, June and September.

To subscribe to Shiprepair eNews, logon to [www.rina.org.uk/Shiprepair\\_eNews.html](http://www.rina.org.uk/Shiprepair_eNews.html)

# Communication Skills for Engineers

The business case for improved communication is robust. Engineers who communicate well are better equipped, more effective and more motivated to engage with customers. Better communication will reduce misunderstanding and costly mistakes which in turn facilitate stronger relationships and repeat business. This can create competitive advantage that will help to secure new prospects and will undoubtedly accelerate the speed of sale. Similarly, engineers who are effective networkers reap benefits for themselves and their organisations by utilising time spent amongst their peers productively to develop connections, relationships and opportunities.

The Royal Institution of Naval Architects, in conjunction with Emmett and Smith, offers two one-day workshops aimed at developing the communication skills of engineers. The workshops demonstrate how to effectively communicate in business with a specific focus on customer and colleague engagement through enhanced presentation and networking skills. The workshops provide those attending with the opportunity to utilise their newly acquired knowledge, practice their new

skills and receive constructive feedback. Delegates are encouraged to be proactive and contribute towards the process as they grow in confidence.

## Effective Communications

This workshop covers the fundamental communications skills required by all engineers. It includes:

- Understanding what effective communication is
- Active listening
  - Tips
  - Bad habits
  - The listening hierarchy
- Verbal & non-verbal communication
- Laws of Remembering & Forgetting
- The communication pyramid
- Attention spans

The Effective Communications workshop provides a useful, but not essential, lead-in to the more focussed workshop on Effective Presentation and Networking workshop.

## Effective Presentation and Networking

This new workshop covers the skills needed by engineers who are required to give

presentations, both oral and written, and network at all levels. It includes:

- Understanding the purpose and value of powerful communication
- Developing communication skills to ensure there is consistency and maximum effect.
- Being open in communication situations and have confidence to put forward own/new ideas
- Using techniques to ensure that you are concise in communications
- Creating an action plan to fine tune your communication skills through presentations and networking activities.

Each workshop will have a maximum of 12 delegates, and may be booked singly or together. Details of workshops in 2016 may be found at [www.rina.org.uk/Events](http://www.rina.org.uk/Events). Discounts on the delegate fee for two or more bookings, or for attending both workshops are available.

Programmed workshops are held at RINA Headquarters in London. However, workshops at the company's location may also be organised. For further details, contact Catherine Staunton-Lambert at [clambert@rina.org.uk](mailto:clambert@rina.org.uk)

# Letters to the Editor

## Help the people of Africa

Sir: My name is David Lee and I am a 6th grader at Haneol Elementary school located in South Korea. For the past 2 years I have been very interested in marine design and have studied a lot about it. I also am very sympathetic to the struggles of the people of Africa. It is my dream to use my knowledge of ship design to help the people of Africa in a unique way.

After reading several articles about Africa ([http://www.huffingtonpost.com/marcus-samuelsson/helping-east-africa\\_b\\_915570.html](http://www.huffingtonpost.com/marcus-samuelsson/helping-east-africa_b_915570.html)) I was convinced that I could build a ship that could help them with their clean water shortage. There are experts who claim 12 Africans die per minute, a total of over 6 million people per year, 20% of which can be prevented by a clean supply of water. That is equivalent to the number of people living in the state of Rhode Island. This is why I want to

incorporate my knowledge of ship design with a highly sophisticated desalination process in order to help the struggles of the people of Africa.

The ship will have several major technological advancements such as aqua tunnels and hydroelectric propellers. First of all, aqua tunnels are series of tunnels located near the bottom of the hull. The aqua tunnels will have powerful hydroelectric propellers and several water obstacles called aqua tardius, or slow water in Latin. The main point of having the aqua tardius is to slow the flow of water in the upper tunnels. The reason to slow the flow of water in the upper tunnels is to make sure water doesn't rush into the hull too quickly. From the upper tunnels there will be a second series of smaller tunnels from which water will be pulled and desalinated from. You might be concerned that the upper tunnels will create too much drag, but this

will not be a problem as the combination of the hydroelectric propeller and the Azipod thrusters will provide more than enough thrust for the ship. Another problem that you might see is how the ship will fare against rough seas. This is solved by having an equal weight on both sides which will be maintained by a ballast control system consisting of a series of dams similar to an irrigation system.

One of the countries that struggles the most with clean water supply issues is Ethiopia. Assuming that we are using the North America-Middle East- South Asia trade route, the ship could stop at the port of Djibouti to unload the desalinated water and use the Addis Ababa-Djibouti railway to ship the water to the capital of Ethiopia, where it could be distributed to communities that need it the most. This would provide the much needed water for drinking and sanitation for the people of Ethiopia.

I am very excited about this idea and I hope that you will be able to help to make it a reality. I truly believe that this idea could raise the living standards of the people of Africa. Please contact me if you have any questions via [slee.trust@gmail.com](mailto:slee.trust@gmail.com). Thank you for your time.

David Lee  
[slee.trust@gmail.com](mailto:slee.trust@gmail.com)

### Reducing Regulation on Business

Sir: The UK Maritime and Coastguard Agency is seeking the assistance of members with their initiatives to ease the burdens of regulation on business or business areas by putting forward ideas as to where it can take action within the maritime industry. Ideally they are seeking to identify where there will be significant financial benefit to you, the users, in so doing. The initiative will look not only at legislation, but also at MCA guidance and instructions, policy, its regulatory practices and those areas where it might use its imagination to innovate new processes and ways of doing business.

The MCA invites members to identify areas which would benefit from wholesale, significant change to bring the greatest improvements for business. Examples or requests for further information should be made by 24 March 2016.

Alison Leighton  
 Acting Head of Legal Services  
 Maritime and Coastguard Agency  
[alison.leighton@mca.gov.uk](mailto:alison.leighton@mca.gov.uk)

### Unusual Boat

Sir: I would be grateful for your members' assistance in trying to help me identify a very unusual boat. I purchased it from a chap who thought it may have been built for a Bond film and believed there to be only three built. This boat is number "03". He didn't have any evidence of this so I took everything he said with a pinch of salt, but loved the boat anyway. I'm unsure of the age of the boat but I would take a guess at early to mid '80s. More recently I spoke to Westend Marine in the midlands who I was told were involved with the boats and they mentioned they were built by VT.

Looking at the construction, at noting the lack of a builders ID plate, film production use seems the most likely option. I was also thinking that perhaps they could have been commissioned by a wealthy superyacht owner as toys to be carried on a yacht.

The construction standard is very good, and the design very clever (although somewhat

complex). Air is drawn into the engine bay by a suction fan, which draws air from the cabin, through a vent in the bulkhead next to the seat. Air is drawn into the cabin via the rearward facing vents on the bow. The fuel tank is located between the drivers legs! Propulsion is a single-stage waterjet (unknown manufacturer) and the engine is missing but I am told this was a water-cooled 2 stroke Kawasaki jet ski engine. There is a clever syphon system that clears the bilge via a swan neck tubing system using suction from the low pressure area just aft of the longitudinal strake on the starboard side of the boat. The canopy is raised on two hydraulic struts.

My plan is to offer the boat to the National Maritime Museum in Cornwall or the Design Museum, hence I am trying to ID the boat as they will need to know its provenance.

Dominic Burger  
[dom100@hotmail.com](mailto:dom100@hotmail.com)



Driven by James Bond?

## A Forecast - The Crewless Wireless Craft

Following the publication of the Smart Ships supplement to *The Naval Architect* magazine, Michael Grey sent in this offering, proving once and for all that no idea is new.

In days long past the paddle played its part in forward motion,

Soon challenged by the spreading sail unfurled on every ocean,

Large fleets propelled by coal-made steam for distant parts were loaded;

While others gained their impetus from mineral oil exploded.

Electric power invisible, compact, its force expended,

A few short years its generous help

to floating homes extended,

But now, (we speak in time not yet, prophetic is our vision)

The crewless, wireless ship we view (waste not your swift derision).

To-day with myriad cathode rays, atomic forces splitting

Electron speed to unseen craft are from the land transmitting,

A tube in shape, no deck, no keel, no funnel, ventilator,

No rudder, engine, mast or screw, nor even navigator.

Controlled by gyroscope its course, through aerial wave connected,

From port to port across the seas unshackled yet directed.

If solid matter in its path should threaten to destroy it

Its telepathic sentient powers on courses new deploy it.

Till, as the distant port is neared, the waiting tuned receiver

In action fixes guiding "wave" by tapping key and lever.

If weakly bolt or rivet false should cause the tube to founder,

The magnet will attract and with galvanic powers surround her.

So here we have the future ship, unlosable we deem her,

No longer need we navigate with paddle, sail or steamer.

*From Sea Breezes, August 1924*

# RINA Member benefit plans with HMCA

**H**ospital and Medical Care Association is a specialist in offering benefits exclusively to members of the Royal Institution of Naval Architects and their families. Its plans are available exclusively to members of RINA and not available to the general public ensuring and maintaining competitive rates for members and their family.

## Medical Care Plans

HMCA Medical Plans are designed to provide various benefits for the treatment of acute conditions following a visit to your GP, where the NHS are unable to provide you with the treatment you need at a time, or location, which is convenient for you. With a HMCA medical plan:

- No medical examination is required
- No age restrictions are imposed
- No excess or deductible is required
- Overseas and sports cover are included
- A personal, UK based, claims service is provided
- 30 day money-back guarantee

HMCA can offer up to a 40% discount off the underwriter's standard rates for members of RINA.

## Cash Plans

If you have ever been faced with unexpected medical expenses the HMCA Care Starter Cash Plan is one way you can reduce these unexpected expenses. These expenses can range from treatment required after seeing a dentist or opticians fees, through to seeing a chiropractor or osteopath, prescription charges or hospital accommodation and more. As a member of RINA the monthly subscription for you is £17.50.

## Dental Plan

Whether you have a Private or NHS Dentist, our Dental Plan allows you to choose the dentist of your choice. World-wide cover is also included along with hospital and day case treatment. Eligibility covers ages 0-78 for members, their spouses and family.

## Income Protection Plan

The Income Protection Plan ensures that in the event of loss of earnings, because

of serious illness or accident, you will still have income.

## Single and Multi-Trip Travel Plan

HMCA provides a flexible package to cover overseas holidays and non-manual business trips for either the individual traveller or the family. Comprehensive cover at competitive prices with first class claims handling service to offer further peace of mind.

## Life Extra Plan

The Life Extra Plan provides your family with a lump sum in the event of your death.

## Vehicle Breakdown Club

The Breakdown Recovery Club gives full cover, at a low cost, for home-starts, roadside-assistance and recovery following an accident or breakdown and has no joining or membership fee as with some breakdown organisations.

For further information call HMCA on 01423 799949, [www.hmca.co.uk/rina](http://www.hmca.co.uk/rina)

# Review of the Intact Stability Code Requirements

**A** great deal is published about how an inclining test should be conducted, detailing the precautions that need to be taken to assure a reliable result. However very little is published about the manner in which the experimental results should be analysed in order to derive the KG.

The traditional methods of analysis assume that the Metacentre does not change position within the range of heel and trim angles used in the inclining test. As this assumption can be far from valid for many modern hull forms, the deduced KG is in error, usually resulting in an under estimate and hence an over-estimate of the vessel's stability. Problematic hull forms include those where the 'as inclined' waterline is intersected by significant flare, knuckles, bulbous bows or raked keel line aft. This is an issue which is

known to affect some substantial merchant ships as well as smaller craft.

The Institution has concern over how much naval architects are aware of the potential errors that may be generated by using the traditional analysis method on unsuitable vessels, and the extent to which such errors and their consequences occur in practice.

In its capacity of an NGO to the International Maritime Organisation, the Institution intends to submit a paper to the IMO proposing that an amendment to the Intact Stability Code be considered addressing the determination of the KG from the inclining data.

The Institution would welcome comment on this issue, including practical experience of where current methods of analysis have resulted in an over-estimate of a vessel's stability. Comments should be forwarded to [hq@rina.org.uk](mailto:hq@rina.org.uk)

## 2016 ANNUAL DINNER

20 April 2016, London

The 2016 Annual Dinner of the Institution will once again be held at the London Lancaster Hotel. This year's principal speakers will be Kitach Lim, Secretary General of the International Maritime Organisation, and the Revd Andrew Wright, Secretary General of the Mission to Seafarers.

Members and their guests will be most welcome at the dinner. Corporate tables are available, along with private function suites for pre-dinner and after-dinner receptions.

Tickets for the Dinner cost £145.20 inc VAT. For further details, contact Sara Phillips at [sphillips@rina.org.uk](mailto:sphillips@rina.org.uk) or 020 7235 4622.