RINA AFFAIRS

NOVEMBER 2009

The Newsletter of the Royal Institution of the Naval Architects

CHIEF EXECUTIVE'S COLUMN

Next month, most members will receive their 2009 Annual Subscription Renewal Notices. The average increase in fees over 2009 has been set at about 3.5%. Whilst this is above the rate of inflation in the UK, against which annual rates are generally benchmarked, members will recognise that the downturn in the global maritime industry has inevitably impacted on the Institution's other forms of income. However, I am sure that members would also wish to maintain the benefits and services which their membership provides.

For members with access to a UK bank, the preferred method of payment is the Direct Debit, and I would strongly urge members to consider this method of payment which requires the minimum of administrative effort to process, including the need for me to write to members in June 2010, reminding them that they have overlooked payment of their Annual Subscriptions and risk being removed from the Membership Roll for non-payment of fees (members are reminded that resignations cannot be accepted if fees are outstanding). Direct Debit Mandate Forms are available from Headquarters. For other members, it is recommended that the facility to pay by credit card be used. Payment for all RINA conferences, publications and merchandise, as well as membership subscriptions, can be made by all major credit cards. Members may also make their payment by credit card online if there is no change to the amount shown on the Renewal Notice, using the secure link. Payment can also be made by bank transfer or personal cheque drawn on a GBP, Euro, A$, NZ$, Can$, US$ or Chinese RMB account, but members should remember that the bank will make a charge for transfer and ensure that the full amount due is transferred.

I would be grateful if members would check the personal details on the Renewal Notice and inform Headquarters if there are any errors or changes. At any one time, up to 200 members' current addresses are not known, resulting in correspondence and journals being returned, and then back numbers being forwarded when new addresses are notified. The additional administrative, postage and printing costs are not insignificant. A charge is also made for returning journals from outside the UK. Change of address can be notified by letter, fax, email or through the RINA Website at www.rina.org.uk. May I also ask that members inform Headquarters of their email addresses, either by email to hq@rina.org.uk or with their Annual Subscription payment details. Email is now used as the preferred method of communication with members, including the RINA News e-newsletters.

Members are also asked to review their standing order for journals and the Transactions (the *International Journal of Maritime Engineering* and the *International Journal of Small Craft Technology*). Members should also decide if they wish to receive or continue receiving *Ship & Boat International* and *Ship Repair & Conversion Technology*, in addition to *The Naval Architect, Warship Technology* and *Offshore Marine Technology* which they receive free of charge. I would urge all members who do not already do so to consider taking these journals. These are available to members at a reduced cost of £32 for the *IJME* (four issues per year), £18 for the *IJSCT* (two issues per year), £24 for *S&BI* (six issues per year) and £16 for four issues of *SR&CT*, free of p&p. They are all first class journals and are widely acknowledged in the world maritime industry as leaders in their fields. More copies sent to members means larger circulations, which makes the journals more attractive to advertisers, which increases the Institution's income, which means lower Annual Fees!

Trevor Blakeley

IN THIS ISSUE

2009 Royal Institution of Naval Architecture Scholarships

Newcastle University

A RINA Scholarship has been awarded to Azli Hafeez Bin Roslan who achieved the best in the Stage 1 results at Newcastle University.

Southampton Solent University

RINA Scholarships have been awarded to Ronan Patrix and Gasper Vanhollebeke who achieved the best first year results in the Yacht & Powercraft Design and the Yacht Production and manufacturing courses at Southampton Solent University.

Plymouth University

RINA Scholarships have been awarded to David Evans and Jennifer Waters who achieved the best end of year results at Plymouth University.

Gasper Vanhollebeke and Ronan Patrix receive their awards from Chief Executive, Trevor Blakeley

David Evans receives his award from Chief Executive Trevor Blakeley

RINA Scholarship winner Jennifer Waters with Chief Executive, Trevor Blakeley

2009 RINA-Austal Student Naval Architect Award

University of New South Wales

The 2009 RINA–Austal Ships Award to the student giving the best presentation of a naval architecture project at the annual undergraduate thesis conference went to Gordon Danton for his presentation on *Review of State-of-the-art Ship Noise Management Techniques*. The award was announced at the Thesis Conference Dinner at the Bavarian Bier Café in the Entertainment Quarter at Fox Studios.

2009 RINA-BVT Student Naval Architect Award

The 2009 RINA-BVT Student Naval Architect Award for the best 3rd Year project at Newcastle University has been presented to Anthony F J McCarey.

2009 RINA Design Award

Southampton University

The start of many naval architecture careers is the first year at university. For Ship Science students at the University of Southampton, their first year begins with the induction week ship design competition. This provides an opportunity for the new students to bond in a teamwork exercise, engage in student and staff liaison, conduct a mini design and build and test project, and have fun!

Divided into teams, the students were provided with similar materials, tools and motor/propeller kits, and set the challenge of designing and building multi-hull cargo ship. These were ultimately tested in competitive races to determine which design could carry the most 1.9kg bags of gravel carried across the university swimming pool in 5 minutes.

Team "Presidential Marine Services" with Stephen Payne

The teams presented their designs in poster and oral form to their peers, staff and judges RINA President, Stephen Payne, and Dr. Mingyi Tan. The teams were judged on race scores, innovation, build quality and the presentations. The enthusiasm, ingenuity and quality of their work was impressive throughout, making the judges' job of picking the best team far from easy, but eventually, Team "Presidential Marine Services" (Alex Simpson; Hieu Le; James Dallimore; James Mozden and Jeremy Smith) was awarded the 2009 Royal Institution of Naval Architects Design Award.

2009 Science, Engineering & Technology Awards

The winners of the 2009 Science, Engineering & Technology Student of the Year Awards were announced at a ceremony in London's InterContinental Hotel. Record numbers of entries were received from every major university in the UK and Ireland and judges paid tribute to the exceptional quality of this year's work. Forty five students were shortlisted in 15 different categories.

Maritime Technology Category

The winner of the Best Maritime Technology Student Award, sponsored by Lloyd's Register Educational Trust, was Ben Sheppard of Cambridge University for his entry *Low-Cost Deep-Sea Photographic Vessel.*

Other shortlisted entries were Thomas Lloyd of Southampton University for his entry *Starting Torque for a Marine Turbine* and Khalid Abdulla of Edinburgh University for his entry *Oyster Wave Energy Converters.*

The members of the judging panel were John Carlton FRINA (LR), Giuseppe Gigantesco (RINA Professional Affairs Director, and John Wills (IMarEST). Final judging was held at RINA Headquarters.

Ben, Thomas and Khalid also receive one year's membership of the Institution.

Ben Sheppard receive the 2009 SET Award from John Carlton.

European Boat Design Innovation Group

EBDIG bid successful in EU funding

The European Boat Design Innovation Group, comprising Coventry University (Coventry School of Art & Design), the Turkish Maritime Education Foundation Institute of Maritime Studies, Delft University of Technology, and Genoa University (Department of Naval Engineering and Marine Technology) have been successful in their application for EU funding of an Leonardo project which will create innovative learning materials for employees working within the Marine industry and a networking framework.

By transferring embedded practices within the automotive industry through courses in: design visualisation; ergonomics and telematics; sustainable materials. Delivered by an interactive web based Digital Innovation Studio, the learning materials will include a handbook, a recorded video of a lecturer, notes, CAD images and other interactive resources. The courses will be available through the project website www.ebdig.eu. Learning material and video lectures will be available in 6 languages, namely Dutch, English, French, German, Italian and Turkish. A key requirement of the Leonardo scheme is not to produce profit, therefore the training material will be provided to any European boat design company who responds to marketing, by use of a password.

These courses are primarily aimed at Industrial Design graduates who work as boat designers in the marine industry. While there are a small number of Boat Design graduates from Industrial Design Departments every year, there are a large number of automotive and transport design graduates. Through their visualisation skills and aesthetic resolve of form, these students also populate the boat industry, generally through an interior design route. It is also important to bear in mind that, naval architects as the traditional designers of boats work in teams with industrial designers.

Boat design from an industrial design perspective is about understanding the needs of the user. It is in essence user centred design with a high degree of aesthetic resolve informed by engineering and ergonomics. It is important that a designer can select a suitable platform for a design proposal and identify the operations of the user on that platform. Boat designers understand the different types of vessels and can engage in hull design and powering calculations to produce a design proposal with a high degree of technical resolve in accordance with regulatory standards. They work in design teams with naval architects who design and resolve structural details.

The project group intend to apply for RINA accreditation of the courses.

EMSHIP – Integrated Advanced Ship Design

Six European universities cooperate in a unique degree programme

Universities in Belgium, France, Germany, Italy, Poland and Romania have teamed up for a university degree programme in Integrated Advanced Ship Design.

The programme will start September 2010. The duration is 1.5 years, organised in three semesters with a total of 90 credits. The application deadline for the first cycle is 15th December 2009. This completely new developed programme is supported by the European Commission under the Erasmus Mundus funding scheme. Excellent applicants from non European countries as well as European countries will be granted scholarships covering the tuition fees, travel to and from Europe and cost of monthly living allowance of €1000 for 18 months.

Students will have the opportunity to take lectures at three universities in three European countries. The first semester is held at the University of Liège in Belgium and the second at the Ecole Centrale de Nantes in France. To further specialize, students will decide to either complete their degree at the University of Galati in Romania with a focus on ship hydrodynamics, at the University of Genoa in Italy for advanced topics in yacht design, at the University of Rostock in Germany for ship design/CAD and production technologies or at the West Pomeranian University of Technology in Poland with a focus on ship structural mechanics and optimization. All lectures will be given in English. An internship forms an integral part for which many leading European maritime companies will offer positions.

Further details of the programme structure, the lectures and specially the application procedure can be found on the EMSHIP website: www.emship.eu. The application can be done online, the deadline of 15th December 2009 should be observed.

THOUGHTS FOR THE MONTH

He who loves practice without theory is like the sailor who boards ship without a rudder and compass and never knows where he may cast.

Leonardo da Vinci

If my ship sails from sight, it doesn't mean my journey ends, it simply means the river bends.

Enoch Powell

For a politician to complain about the press is like a ship's captain complaining about the sea.

Enoch Powell

CEMT Council meets in UK

The Council of the Confederation of European Maritime Technology Societies met in Portsmouth last month. The meeting was held in the Wardroom of HMS Nelson. CEMT is chaired by Mr Trevor Blakeley, Chief Executive of the Institution.

CEMT has recently produced career profiles of young naval architects and marine engineers, demonstrating the wide range of career opportunities offered by the European maritime industry.

The Confederation of European Maritime Technology Societies (CEMT) is an independent confederation of professional institutions (those involved in education and professional development) and learned societies (those facilitating the exchange of information) in the field of maritime technology.

Through its member Societies, CEMT is able to call upon the knowledge, skills and experience of over 35,000 professional naval architects, marine engineers and others in the field of maritime technology. It is therefore uniquely placed to contribute to the success of the European maritime industry.

CEMT council

Environmental Impacts of Recreational Boating

Report by ECNI

The European Confederation of Nautical Industries (ECNI) has recently published a report, looking at the impacts of recreational boating on the environment. The comprehensive report covers information on boat design, manufacturing and their related environmental impacts and can be downloaded from www.ecni.org

Key figures from the report are as follows:

- Recreational boating is responsible for less than 1% of the overall pollution affecting the marine environment.
- Sewage pollution from pleasure craft affecting the water quality is below 2%.
- "Small craft" under 24 metres in length, are responsible for 4% of sea-based oil pollution. However, within the small craft category, it is difficult to distinguish recreational craft from small fishing boats or commercial vessels.
- The marine sector only represents 7% of total composites consumption.
- Trials have shown that mixing up to 10% composite waste with municipal solid waste for incineration is a practical solution.

NEW BRANCHES IN CYPRUS AND SHANGHAI

When the Institution was formed in 1860, its aim was to encourage the presentation and discussion of technical developments in the design and construction of ships and marine structures. It achieves this today through its international publications and conferences, and its local Branches. For many members, the opportunity to meet with other maritime professionals at Branch technical meetings is one of the most valuable benefits of membership.

Following an increase in membership and support by members, Council has approved the formation of Branches of the Institution in Cyprus and Shanghai.

Event News

Institution invited to organise ICCAS 2011

Following its success in organising the 2007 International Conference on Computer Applications in Shipbuilding (ICCAS) in Portsmouth and ICCAS 2009 in Shanghai, the ICCAS International Committee have invited the Institution to organise ICCAS 2011. The International Committee have accepted the Institution's recommendation that the Conference be held in September 2011, in Trieste.

ICCAS 2009

Contract Management Course

The internationalism of the Institution's courses was aptly demonstrated at the recent Contract Management course, which was attended by delegates from Kuwait, the United Kingdom, Germany, Canada, Italy, Panama, Brazil, and the Netherlands.

Conducted by Dr Ken Fisher on behalf of the Institution, the Contract Management course is one of the Institution's most successful and popular training courses. Held twice per year at RINA Headquarters, the course can also be held at a company's offices. Details can be obtained from Amber Williams at awilliams@rina.org.uk.

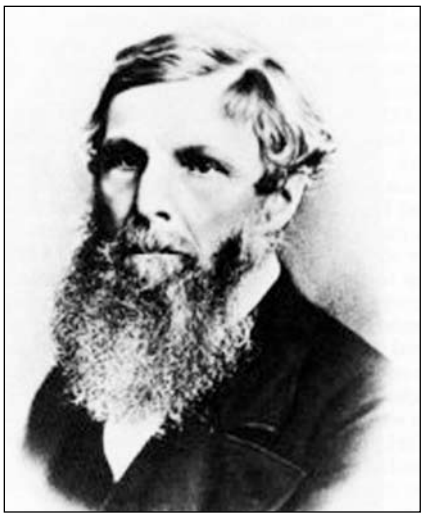
The William Froude Conference

The William Froude Conference "*Advances in Theoretical and Applied Hydrodynamics – Past and Future*" will be organised by The Royal Institution of Naval Architects and Lloyd's Register Strategic Research Group, in association with QinetiQ in November 2010, in Portsmouth.

2010 will mark the 200th anniversary of the birth of William Froude, and the 150th anniversary of the founding of the Royal Institution of Naval Architects, both of whom have made a significant contribution to advancing the understanding of hydrodynamics during their time.

The William Froude international conference will provide an appropriate opportunity for those who are involved in the research, development and application of hydrodynamic to meet and discuss current and future advances in theoretical and applied hydrodynamics.

The two-day conference will present 20 papers, with a session devoted to the work being undertaken by universities involved with the Lloyd's Register strategic hydrodynamic research programme. Selected papers from this conference will also be presented in a special issue of the International Journal of Maritime Engineering. The conference will include a visit to the QinetiQ towing tank and exhibition at Haslar.


William Froude 1810- 1879

In tribute to William Froude and other individuals who have made a significant contribution to the understanding of hydrodynamics, the conference will also look at past developments, taking as its start point, William Froude's paper "On the Rolling of Ships". Delegates to the conference will also receive a bound copy of the paper.

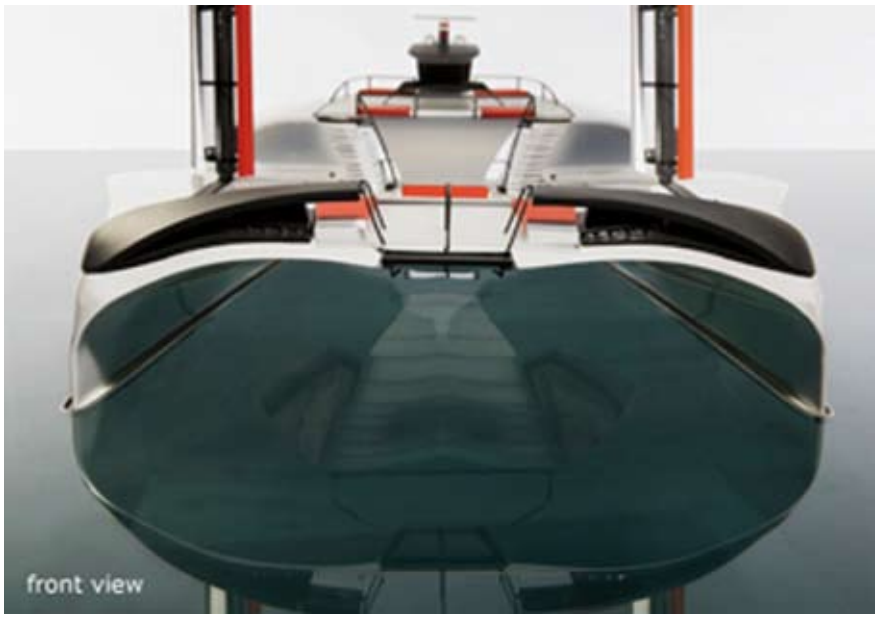
2010 COUNCIL ELECTIONS

Nominations for election to Council in 2010 are invited. Nominations should be forward to the Chief Executive, to arrive by 31 Dec 2009.

World Superyacht Young Designer Award

Entries invited for the 2009 Awards

Sponsored by Camper Nicholson International, and organised by the Royal Institution of Naval Architects and *Boat International* magazine, the World Superyacht Young Designer Award provides a showcase for young designers to demonstrate their ability and talents, and to encourage the development and showcase the talent of the next generation of superyacht designers.



Draconis – Winner of the 2008 Award

About the competition

The competition will be open to any one who is studying for a degree or other qualification in a subject related to yacht or small craft design, or who graduated from such a course within three years of the closing date for the competition. Work completed during the final year at university may be submitted after graduation.

The World Superyacht Young Designer Award 2009 will be presented to the young designer who produces the best concept design for a superyacht which meets the following owner's specification:

- It should be different from any other yacht!
- It should be capable of operating in both Caribbean and Mediterranean, and carrying 12 passengers and appropriate crew.
- It should comply with all appropriate international safety regulations.
- It should have the lowest possible carbon footprint.
- It should have all the recreational facilities which an owner and guests might expect on such a vessel.
- It will be made available for charter.

At this stage, the owner has not specified an upper cost.

Entrants to the competition will be required to submit the following:

- A profile and deck GA, showing major compartments and features.
- A list of principal components and systems.
- An estimate of weight and power requirements.
- A description of the vessel, with illustrations, describing the philosophy behind the design and its key or novel features.

Entries may be submitted by individuals or teams (maximum three members), and will be judged on innovation, technical feasibility, style and presentation by a panel of leading experts in the field. The deadline for entries, which should be submitted on CDROM or DVD, is 31 January 2009.

The Award

The winner of the Young Designer Award will receive a prize of €5000 and be invited to receive the Award at the 2009 World Superyacht Awards ceremony on in April 2009.

If you are interested in submitting an entry, or would like more information, contact:

Giuseppe Gigantesco
Royal Institution of Naval Architects
Email: ggigantesco@rina.org.uk

CHANGE OF ADDRESS

Each year, the Institution sends out over 170,000 copies of the journals and RINA Affairs, a total paper weight of over 35 tons. Unfortunately, a number of those are returned "not known at this address", usually because members have forgotten to inform the Institution of their change of address. In addition to the waste of postage, the Institution is charged for those returned from other than the UK. Additional cost is then incurred when members ask for the missing copies.

Members are requested to let the Institution know of a change of address as soon as possible, preferably before they actually change their address. Changes may be sent online from the Members Only section of the RINA website at www.rina.org.uk/members, by email to membership@rina.org.uk, by fax to +44 (0)20 7259 5912, or by letter to RINA Headquarters.

James Watt Dinner

In 1887 by mutual agreement; the Association of Foreman Engineers, the Philosophical Society of Glasgow and the Institution held their first joint James Watt Dinner in Glasgow. After 1887 the Association of Foreman Engineers are no longer mentioned in reports of the dinner, after 1892 the Philosophical Society of Glasgow are no longer mentioned in the accounts of the event.

Over the last hundred and twenty two years there have been several years where the James Watt Anniversary Dinner was unable to take place due to unfortunate circumstances, years during the wars, rationing, etc. This October, the Institution of Engineers and Shipbuilders in Scotland held its 100th James Watt Dinner in Glasgow.

A name familiar to engineers world-wide, but who was James Watt?

James Watt was brought up in Greenock, the Clyde port and shipbuilding centre. His mother was Agnes Muirhead, who died when he was in his teens. Watt's father was a successful shipwright and ship owner. Watt's grandfather, Thomas Watt, was a mathematics teacher. When he was 18, Watt travelled to London to learn the trade of instrument making. He was apprenticed to an Instrument maker in London for a year. In 1756 he returned to Scotland and tried to establish himself as an instrument maker but was prevented by local the Guild as lacking a sufficiently long apprenticeship. He eventually gained employment at Glasgow University.

A number of factors were at work to result in his perfection of the steam engine. He came into contact with Joseph Black and learned of his work on latent heat. He had a unique opportunity to study the workings of the Newcomen engine when the University gave him a model to mend after a London instrument maker had failed to do so, and he realised its inefficiency and limitations.

It was during a Sunday walk on Glasgow Green that the idea came to him as to how to improve the Newcomen engine. His solution was the introduction of a condenser, a chamber into which the steam could be led and which could be kept cool while the first chamber or cylinder was kept permanently hot. In this way the two processes were not forced to cancel each other out. In 1769, he patented his steam engine.

James Watt

Over the next few years Watt made many improvements to his design and in 1774 went into partnership with Matthew Boulton, a wealthy Birmingham businessman, to manufacture steam engines for sale.

By 1800 over 500 Watt engines were at work in Great Britain. The Watt engine was so effective that many give him sole credit for the invention of the steam engine arguing that the Newcomen engine was essentially only a pump.

In the 1780's Watt's fertile mind continued to power the steam revolution. In 1784, he used steam pipes to heat his office. He devised mechanical attachments to his engine that converted the up and down movement of a piston into the rotary motion of a wheel. This versatility allowed iron founders to operate bellows and textile manufacturers to drive looms.

The consequences of Watt's invention were incalculable. He provided the prime mover for the Industrial Revolution. Factories no longer needed to be tied to locations where there was a strong source of water power. Massive machines could be built and housed in factories ushering in the Victorian era of mass production.

Watt also produced the first germ of automation with his invention of the centrifugal governor which automatically controlled the engine's output of steam. Indeed it is the Greek word for governor, that provided the name for the later science of cybernetics, named and developed by another Scot, James Clerk Maxwell.

Watt also has a place in the history of measurement. By taking a strong horse he found that it could raise a 150lb weight nearly 4ft in one second, thus providing the definition of. "horsepower". The equivalent unit of power in the metric system is named the watt in honour of him.

RINA AFFAIRS

The Institution is not, as a body, responsible for opinions expressed in RINA Affairs unless expressly stated that these are Council's views.

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Discussion invited on IJME papers

The following papers to be published in the International Journal of Maritime Engineering are now available for discussion:

IJME 134: A Simplified Pump Tower Approach for Realistic CFD Simulation of Sloshing in LNG Tanks

B Godderidge, S R Turnock, and M Tan, University of Southampton, UK.
C Earl, BMT SeaTech Ltd, UK.

SUMMARY
The complexity of the sloshing analysis for liquefied natural gas carriers can be reduced by neglecting the pump tower.The validity of this assumption is examined by studying the effect of the pump tower, located near the aft bulkhead of a typical LNG tank on the sloshing flow evolution. Results are compared for surge-induced sloshing in a rectangular tank with pump tower to that without such an obstruction. A commercial flow solver is used to solve the unsteady Reynolds Averaged Navier Stokes equations for an inhomogeneous multiphase flow. Initial validation of the sloshing flow uses the experimental data of Hinatsu. It was found that a simplified pump tower consisting of a single vertical tube was suitable to capture the effect of the pump tower without the necessity of discretising the fine geometric detail of the pump tower structure. A suitable size for the simplified tower diameter was found using the total fluid force on a real pump tower in a steady flow for a similar range of Reynolds Number. This reduces the required mesh size by an order of magnitude. Although it is found that the effect of the pump tower on the overall force levels is small reductions of local impact pressures of up to 50% are observed and the sloshing flow develops a phase lag compared to the unobstructed tank.

IJME 147: Influence of Lifting Effects in Seakeeping Calculation

M-H Nguyen, M Guilbaud, S Huberson and M Ba, LEA, University of Poitiers-ENSMA-CNRS, France

SUMMARY
Lifting effects are actually present in a lot of ship hydrodynamic problems and are predominant when considering the action of appendages like fins, rudders or stabilizing foils. Beside this, they are seldom accounted for in calculations because they require specific modelling. In this paper, a global model, including both hull and appendages is presented. It was built within the framework of the "Poseidon" seakeeping solver. It is based on a boundary integral formulation: a Green doublet distribution over the mean surface of the body and semi infinite strips simulating a plane wake, extending from the sharp part of the body trailing edge, were added to the source distribution on the hull. The numerical results enable us to answer the question of whether a Kutta-Joukovsky condition can be dispensed with. This is achieved through predictions compared with available numerical or experimental results for aerodynamic as well as hydrodynamic problems.

IJME 148: Waterjet Performance Characteristics Prediction Based on CFD Simulation and Basic Principles of Waterjet Propulsion

Jiangming Ding and Yongsheng Wang, Naval University of Engineering, Wuhan, China

SUMMARY
The method of predicting the performance characteristics of waterjets based on CFD simulation and the basic principles of waterjet propulsion is introduced in this paper. The characteristics of waterjet pump are derived from the numerical calculation by means of CFD. The head and power of pump as a function of flow rate at design rotational speed are calculated firstly and converted into dimensionless form, from which the pump characteristics for varying rotational speed are deduced easily according to the similarity law of standard pump technology. Then the performance characteristics of waterjets are represented both in the form of constant power lines and in the form of constant rotational speed lines and compared with each other, of which procedures to be determined are stated in brief by the aid of schematic diagrams. The results of this paper can be used for the propulsive performance prediction of waterjet systems in preliminary stages and to assist the deck officers in manoeuvring vessels in an easier way.

IJME 151: A Theoretical Approach to Facilitating Transition Phase Motion in a Positively Buoyant Autonomous Underwater Vehicle

A R Palmer and G E Hearn, University of Southampton, UK
P Stevenson, National Oceanography Centre, Southampton, UK

SUMMARY
Positively buoyant autonomous underwater vehicles (AUVs) operate at survey speeds with a pitch angle that is maintained through application of the control surfaces, sufficient to generate hydrodynamic forces to counteract the excess buoyancy. To facilitate lower forward speeds and the ability to hover requires some additional method of control. This paper reviews possible options and then indicates how control can be achieved using a single or pair of through-body tunnel thrusters. New equations appropriate to AUVs are proposed and experimental results are used to estimate the equation parameters. These equations are used within a simulation of the Autosub AUV to determine the response of the AUV during the transition between survey and low speed operation. The results obtained from the simulations are analysed in terms of the performance of the AUV and the demanded energy levels to assess the feasibility of using tunnel thrusters as a low speed control device.

IJME 158: William Froude – A Sacred Duty of Doubt

D K Brown, RCNC (retired), UK
(Foreword by R Eatock Taylor, University of Oxford, UK)

FORWARD
Eur Ing David K Brown, M Eng, C Eng, FRINA, RCNC sadly died on 15th April 2008, before arrangements could Be made for publication of this paper. He was educated at Leeds Grammar School and Liverpool University graduating in 1949 with a First Class B Eng. Four years post graduate work led to a First in Warship Design at the Royal Naval College, and a career with the Royal

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Corps of Naval Constructors. His activities included early work on propeller noise, responsibility for trials of the first British nuclear submarine *Dreadnought*, and a spell on the academic staff at the RN College leading to a new postgraduate course in naval architecture at University College London. While working at the Admiralty Experiment Works, Haslar (the direct successor to William Froude's original experimental facility in Torquay), he was in charge of the Froude Centenary in 1972. Subsequently as Deputy Chief Naval Architect he was responsible for RN standards for Safety, Stability, Strength, Materials, Hydrodynamics and Seakeeping. He was a Vice President of the Royal Institution of Naval Architects for many years. Following retirement in 1988 he wrote 11 historical books, including "*The Way of the Ship in the Midst of the Sea – The Life and Work of William Froude*" [1]. This paper is an edited version of a lecture given by David Brown at the Department of Engineering Science, University of Oxford, on Tuesday, 30th October 2007. The lecture was sponsored by Froude Hofmann Ltd. It was one of a series celebrating the Centenary of the Department and of the first Professor of Engineering Science at Oxford, Charles Frewin Jenkin. David's lecture was his last public presentation before his death. It is fittingly being published posthumously, as was Froude's last paper.

IJME papers for discussion can be downloaded from www.rina.org.uk/ijme_discussion.html These PDF files can be saved and viewed on screen but cannot be edited or printed out.

Written comments on these papers may be forwarded using the Online Comment form or by email to ijme@rina.org.uk, with the title of the paper as the Subject, and quoting the name and affiliation which will be printed with the comment. Illustrations may be forwarded as an attachment. Accepted discussion will be published in subsequent issues of the IJME.

'MARITIME ADVANCEMENT AUSTRALIA AWARD'

The Australian Naval Institute, in conjunction with The Australian National Centre for Ocean Resources and Security at the University of Wollongong, is proud to announce the opening of the selection process for the second 'Maritime Advancement Australia Award', sponsored by Booz & Co Australia with the support of SAAB Systems and Defence Maritime Systems.

The Award is in the form of a two-year grant for research or development in a maritime activity. A grant of $20,000 each year will be made available to the winning project subject to conditions. The grant will be awarded to the most promising research or development proposal which will be judged by a committee of experts from the various fields of maritime endeavour, including science, maritime law and policy, defence, commerce, shipbuilding and maritime industry. The intent of the award is that it be available to the widest range of potential researchers and innovators, rather than just one sphere of maritime endeavour.

Applications open immediately and will close on 4 December 2009. Further details are available on navalinstitute.com.au

HEADQUARTERS FACILITIES

The Headquarters of The Royal Institution of Naval Architects at 10 Upper Belgrave Street, London, offer a high quality, low cost venue for conferences, meetings, examinations and exhibitions for any number up to 80, within 5 minutes walking distance of Victoria tube, rail and bus station. AV facilities are available and catering can be provided. Members enjoy a 10% discount on booking rates.

The Weir Lecture Hall will seat up to 80, and can be set out in conference, classroom or seminar style.

Weir Lecture Hall

The Denny Library will accommodate up to 50 in lecture room style, or seat 30 at the conference table.

Denny Library

The Members' Room will sit up to 30 in lecture room style, or seat 14 at the table.

Members' Room

For further information or to book the Headquarters' facilities, contact Sally Charity, Tel: +44 (0)20 7235 4622; Email: scharity@rina.org.uk

Short & Fat v Long & Thin

Sir: Regarding Mr Helmore's inquiry (Oct RINA Affairs) about the Short Fat Warship debate in the 1980s, I do not think there were any published RINA papers. My recollection is that the protagonist David Giles was reluctant to publish a detailed paper on the grounds of commercial confidentiality. Lloyd's Register were commissioned to make a review of the claims and HM Stationery Office published their Report of the Inquiry into Hull Forms for Warships in 1988. Admiral Bryson's 1985 RINA paper 'The Procurement of a Warship' was intended to show the context into which such design proposals fitted. For a personal view on the debate, see Marshall Meek's autobiography *There Go the Ships*.

Ian Buxton FRINA

Asbestos in Ships

Sir: I am the Chief Staff Officer of the Maritime Volunteer Service, with overall responsibility for the service's fleet of craft and also for Health and Safety.

The MVS have a fleet of some 30 plus craft of various designs ranging from an elderly fleet tender to RIBs and Dorys. The fleet tender, Appleby, and various launches such as Nelsons, Chevertons and a Kiwi-class launch are all a bit long in the tooth and I am concerned about the possible presence of asbestos in lagging and insulation.

I would be grateful if any member could tell me, or point me to information as to when the use of asbestos was stopped in craft of this nature, if indeed it was ever used.

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THE HISTORIC CLIPPER SHIP *CITY OF ADELAIDE*

Support is growing in Australia for a campaign to save the historic clipper ship *City of Adelaide*, which many consider represents an extraordinarily important part of the Australian and United Kingdom common heritage. As the only surviving sailing ship built to give regular passenger and cargo service between Europe and Australia, she represents a whole foundation era of Australian economic and social history. As such, *City of Adelaide* is an icon of the making of modern Australia, and of the relationship between Britain and the Australian colonies.

In the 1800s, thousands of European migrants made the long and arduous voyage to Australia. They all came by sea, many to establish a new life. It was a trade involving hundreds of ships from convict transports to gold rush clippers. Despite its pivotal role in the development of the country, the only significant remaining heritage of this ship trade is *City of Adelaide*.

The *City of Adelaide* was purpose built in 1867 to serve the passenger trade. For a quarter of a century, the clipper played an important role in the development of the colony of South Australia. She carried all classes of passengers from the rich to the poor, from people 'of substance', to government assisted emigrants. Her first class cabins were considered to be the finest of the sailing ship era. Today their descendents living in South Australia number in the hundreds of thousands.

On annual outward voyages to Adelaide she carried goods needed for the colony's development and survival. On return voyages to London, she would carry South Australian produce including copper and wool. *City of Adelaide* made more visits to the fledgling colony than any other vessel before or since.

Presently *City of Adelaide* sits on a slipway in Scotland and is in the way of a housing development. There are plans to demolish the historic ship in order to clear the site.