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a new era of sustainability

Small ships, large challenges

Future plans and activities for the sector were discussed at the IMarEST's recent Small Ships Group annual meeting

A small ship is generally considered to be one that is less than 100m in length

BY ALAN CARTWRIGHT

The success and appeal for the IMarEST, for all members, has been greatly expanded by the activities of the Special Interest Groups (SIGs). One of the founding SIGs is the Small Ships Group (SSG), which arose from the 'Surveyors' List' of the Certifying Authority MECAL, created by the Institute in 1994. When the Institute sold MECAL as a commercial concern, the SSG broadened its scope, to serve and support all those members involved in design, construction, operation, survey, regulation or any other activities involving small ships.

A 'small ship' is considered to be of less than 100m in length. However, the SSG was instrumental in supporting the UK Maritime and Coastguard Agency for the development of the Standards

of Training, certification and Watchkeeping for Engineer – Small Ship, for vessels of up to 3,000 gross tons and 12,000 horsepower. The SSG works closely with other SIGs through which we have connection and looks forward to working with the new Superyacht SIG, as there is much in common across our areas of interest.

Throughout the COVID years, the SSG remained active, with members contributing to maritime safety and standards through membership of the CHIRP Maritime Advisory Board, the UK MASS Regulatory Working Group, the ISO and BSI committees for Small Craft Standards, the Canal and River Trust/EA Boat Safety Scheme Surveyors' committee, and the MCA groups for development

of the Sport and Pleasure and the Workboat Codes, as well as through representation of the IMarEST at a number of other organisations. An update on our activities and plans for the future was given by each member at the recent SSG annual meeting, held at the Seawork Conference and Exhibition in Southampton. The following summarises those updates.

Small craft committee

As part of the SSG, Jean-Baptiste RG Soupepe, senior teaching fellow for mechanical, biomedical and design engineering at the College of Engineering and Physical Sciences Birmingham, acts as the IMarEST liaison on the UK small craft committee. He oversees the

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development of all small craft rules and regulations falling within the scope of the ISO TC 188, namely equipment and construction details for small crafts up to 24m hull length. These close to 100 standards include hull construction and scantlings (ISO 12215s), and stability and buoyancy (ISO 17717s), as well as new developments in the areas of automatic watertight ventilation shutdown systems (ISO 6017) and lithium-ion batteries (ISO 23625).

This allows relevant IMarEST members to provide feedback and comments on the review and new development of rules and regulations, and vote on their acceptance. This is an essential part of the regulatory process that allows stakeholders to keep abreast of, and influence, future changes, while raising concerns and suggestions in term areas of expertise. As such, members of the IMarEST are highly encouraged to get involved.

Fellow SSG member Tom Keeling CMarEng MIMarEST is a marine surveyor based on the inland waterways. He represented the IMarEST on the Boat Safety Scheme Technical Committee for many years, collating and presenting input from a host of marine professionals as surveyors' group representative, before handing over to colleague Peter Stott in 2019.

Keeling has recently completed an MSc in Engineering for Marine Professionals via the MLA College/ Plymouth University, which focused on domestic liquefied petroleum gas safety on small craft. His unique research revealed that significant amendments are required throughout the training framework that registered gas engineers undertake. Keeling has now presented findings to industry stakeholders and hopes to bring about necessary change to standards, training requirements, supporting materials and training centre output. The aim is simple – to improve

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knowledge in this under-researched area and to improve boater safety. The research also identified significant knowledge gaps among both registered gas engineers and consumers alike, and identified key areas for further work, notably research into long-term (chronic) carbon-monoxide poisoning.

Keeling contributes to the development of standards through the IMarEST, most recently to the current review of ISO 10239 (gas on boats), which generated a significant input.

Boat Safety Scheme

Meanwhile, SSG member Peter Stott has been overseeing progress on the Boat Safety Scheme. Over the past four years, all Boat Safety examiners have undergone a 150-hour retraining programme on the various sections of the scheme, including the

subsections of Fuel, Electrical, Fire, Environmental and Gas. Thirty new examiners have joined and have completed, or are currently completing, this training. New checks have been implemented and older ones have been brought up to current standards – especially with the ever-developing new technologies.

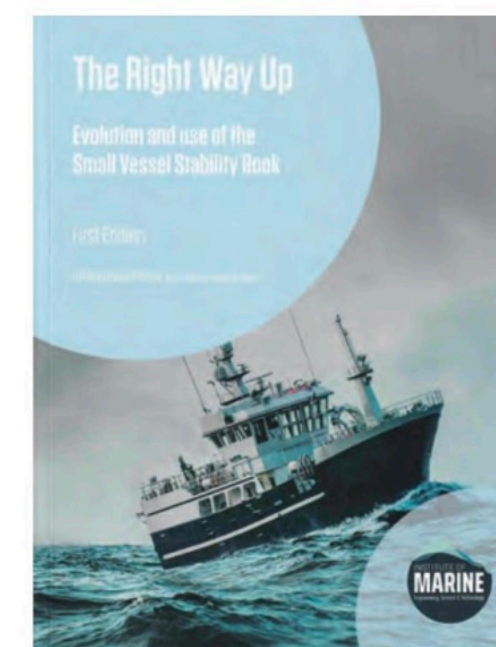
The future brings new challenges with new technologies affecting the Boat Safety Scheme. These include passive and active anti-fouling, remote access to bridges/locks, and waste/black water processing. These and other changes will introduce new systems to boats that will have implications to the safety and usability of boats in the future.

However, the subject at the forefront of most boat owners' minds is alternative power and fuel systems, including electrical challenges and retrofitting for new fuels such

as hydrogen. Many of these new technologies do not have relevant standards that can be referred to for small ships. This will be a big challenge to the Boat Safety Scheme over the next four years, or sooner.

Away from the SSG's routine activities, one of the major achievements has been the IMarEST's publication, through Witherbys, of the small ship stability reference book *The Right Way Up* by Hylton Edward (Ted) Penny, a founder member of the SSG. This accessible and useful book covers the principles of ship stability but applies them to the very different circumstances that can arise in small ships. It is thoroughly recommended to all Masters, engineers and naval architects working in the small ships sector.

SSG work continues in support of the MCA for the development of Workboat Code, Edition 3 (including



annexes for electrically propelled and hybrid vessels and remotely operated uncrewed vessels), and the revised Sport and Pleasure Vessel Code, both of which the MCA hopes to publish in 2024.

I would encourage all members who work in the small ships sector to ensure that they are signed up to the SSG, to enjoy the support that the SIG can provide, and perhaps join us in the contributions that we are making towards good design and construction, and overall maritime safety in the small ships sector.

Finally, after nearly 20 years as chair of the SSG, I regret that I am retiring in April 2024 and need to step down. Therefore, we are on the lookout for someone to take over the helm and keep the SSG on a good track for the future. ■

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