

Working Group 44 – New Build Guidance

Scope and Deliverables

To develop comprehensive and practical guidelines for the design, construction, commissioning, and operation of New Build IGF Vessels.

To identify critical areas that require guidance, particularly with respect to alternative fuels LNG, Ammonia, hydrogen, and methanol.

To create a framework for stakeholders involved in the design and construction of IGF vessels to follow, ensuring the incorporation of operationally focused best practices.

To ensure the guidelines support the decarbonisation of the maritime industry by incorporating best practices for sustainable fuel usage and management.

Scope of Work:

The guidelines will focus on the following suggested areas related to the design and construction of New Build IGF vessels ensuring the incorporation of operationally focused best practices.:

1. **Introduction**
2. **Goal-Based Requirements for Design**
 - **No Venting Policy:** Establishing design requirements and technologies to eliminate or minimise venting of alternative fuels during vessel operations.
 - **Tank Pressure and Temperature Management:** Guidelines for maintaining safe and stable tank conditions from port to port including all operational modes such as manoeuvring, waiting at anchor and alongside whilst on shore power
 - **Bunkering:** Design of fuel system and ships arrangements using best practices for bunkering alternative fuels, including safety protocols, equipment, bunker manifold workspace, including hose support, hose lifting/handling facility/installations and personnel requirements. Additional focus will be given to initial bunkering at the shipyards prior to delivery to the owner.
 - **Operational Focus Areas:** Key operational considerations such as fuel consumption monitoring, emissions management, and safe fuel handling procedures which should be incorporated in the design
3. **Framework Elements to Consider in Specification**
 - **Fuel System Requirements:** Guidance on specifications for designing and implementing fuel systems for alternative fuels.
 - **Tank System Requirements:** Considerations for tank design and specifications, covering safety features, fuel type compatibility, and operational considerations, including handling pressures and venting of alternative fuels.
 - **BOG Management:** Considerations for managing Boil-off Gas (BOG) during all operation modes including but not limited to transit and bunkering, anchoring and alongside, including the use of shore power. Including specification on capabilities to handle BOG during 'Cold Ironing' periods when applicable.
 - **Bunker Station Requirements:** Guidelines for bunker station design, including manifolds, connections, and infrastructure requirements for alternative fuel

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bunkering. Particular attention will be given to the need for proper training and adherence to procedures at shipyards.

- **Design Standard for Connections and Instrumentation:** Identification of specification of standards for the design, installation, and maintenance of fuel system connections and instrumentation.
- **Fire, Gas, and O2 Detection:** Design and operational guidelines for fire, gas, and oxygen detection systems, including specific systems for detecting hazards related to ammonia, hydrogen, and other alternative fuels.
- **Compatibility considerations:** Compatibility assessment based on example operations. Drawing/Form etc.
- **Training:** Recommendations for training requirements for crew, operators, and shipyard personnel on IGF systems, safety protocols and procedures when it comes to shipyard supervision and commissioning.
- **Ex Equipment:** Guidelines for the design and installation of Ex-rated equipment in line with international safety standards for the safe handling of alternative fuels.

4. Commissioning

- **Inspections:** Guidance for inspecting systems and equipment before, during, and after installation to ensure compliance with safety and design specifications. Cold spot inspections
- **Equipment Trials:** Guidance on conducting equipment trials, including suggestions for assessing fuel systems, tank management systems, and safety equipment. This will focus on trials for systems handling ammonia, hydrogen, and other alternative fuels. What should be tested on LNG vs not?
- **Sea Trials:** Best practices for conducting sea trials, including operational checks, safety assessments, and performance testing for fuel systems and tanks. Special consideration will be given to testing IGF systems under real-world conditions, with a focus on handling and safety challenges. Specifically based on lessons learned and experience.

Proposed Structure of the Publication

The publication will be divided into the following sections (tbc):

1. **Introduction:** Overview of IGF vessels and their operational context.
2. **Design and Engineering Framework:** Guidelines for designing IGF vessels, including specific considerations for fuel systems and tank management.
3. **Operational Procedures:** Detailed procedures for managing IGF vessel operations during shipyard, from first bunkering to safety protocols.
4. **Commissioning Process:** Guidance and suggestions on commissioning, including inspections, equipment trials, and sea trials.

Proposed potential deliverables of Work Group New Build Guidance:

The expected outcomes from the development of this publication are:

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- A comprehensive, practical, and accessible set of guidelines for the safe and efficient design, construction, and operation of IGF vessels.
- Improved safety and compliance across the industry, especially for emerging fuels such as ammonia, hydrogen, and methanol.
- Enhanced industry understanding of best practices for IGF vessel operations, reducing risks and operational challenges.

Target Audience

The guidelines will be aimed at a broad range of stakeholders in the maritime industry, including:

- Shipbuilders and shipyards involved in the construction of IGF vessels.
- Equipment suppliers and manufacturers providing components for IGF systems.
- Classification societies responsible for certifying vessels and systems.
- Shipowners and operators responsible for the safe operation of IGF vessels.
- Regulatory bodies involved in overseeing the compliance and safety of IGF vessels.

Development Process

The development of the publication will follow a structured process, including:

- Establish a working group
- Research and Consultation
- Drafting
- Review and Feedback
- Finalisation and Publication

Proposed timeline and commitment:

- Anticipated duration 18 months
- 3 face to face meeting
- 6 virtual meeting calls
- 2 proposal review rounds
- WG start date May 2025
- Submission to TC25 Autumn 2026

Open Vacancies

SGMF members with a technical background and relevant understanding of the new build processes work group scope of work, are invited to apply for the vacancies.

Please Note:

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Before applying, please consider the following requirements:

1. Applicants must have a strong technical background on the topic under discussion and ideally hold a technical role in their organisation.
2. Applicants **must have actual proven technical experience:**
 - a. In operating of IGF compliant vessels and/or vessels utilising low or zero carbon fuels.
 - b. In operating Bunker Vessels supply IGF compliant vessels and/or vessels utilising low or zero carbon fuels.
3. Each WG's member will be required to actively work on drafting or reviewing proposals, or other outputs in their own time outside the WG meetings.
4. Each WG's member will be required to regularly participate to FG meetings for the duration of this **working group 18 months.**
5. SGMF invites all members to apply.
 - a. Members will be selected based on the criteria above,
 - b. Based on experience, first-come and first-serve basis, and a mix of business interests.
 - c. Applications should be submitted using SGMF provided link.
 - d. SGMF Secretariat may appoint members or experts from or outside of the membership directly to ensure that sufficient skills are provided.
 - e. Applications from ship owners, ship yards, operators, designers, equipment manufactures, and classification societies are invited.
 - f. **A total of 23 vacancies** are available at this stage.



THE FUTURE IS CLEAR.

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Joining Instructions

Vacancies for this work group are now open please follow the instruction below::

1. Please fully read work Group scope of work (this document)
2. Register your interest to by completing the online form <https://sgmf.wufoo.com/forms/wg44-new-build-guidance/> with the information of the person that will be participating in the working group.
3. Please explain what skills and experiences you as member and your organisation will bring to the WG.
4. Your application will be processed by the SGMF secretariat.
5. Applications will be processed on the principle of merit and experience on the subject and first-come first-serve basis.
6. **Closing date for applications is 10th April 2025 1400.**

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Annex 1: Responsibilities of Working Group Members

Meetings

Virtual WG meetings will be conducted with all members by Teams. The use of email and phone consultations will be maximised and WG members can propose to host a face-to-face focus group meeting at one of their premises. These might be held in different locations, requiring worldwide travel.

Confidentiality

All documents and records pertaining to the work of a WG should be maintained by the Secretary. All WG documents are, in general principle, to be regarded as confidential to the WG members.

It is, however, recognised that a member may wish to consult with colleagues within his company to form a better judgement or understanding. Where this process takes place, care should be taken to ensure such documents are not circulated widely or freely within the members' companies or to third parties.

Occasionally, it may be appropriate to release a specific document or draft to a third party. This shall only take place after consultation with the SGMF General Manager. All such releases shall strictly be from the Secretariat to the designated party or parties, and not via a member of the WG.

SGMF will provide summaries of WG meetings to the wider membership.

Anti-trust

Please find here guidance notes for the conduct of all SGMF meetings that are intended to avoid infringement of laws covering 'anti-competitive practices' as have been well established within the country jurisdictions' of the SGMF membership organisations.

SGMF Bye-laws include clauses on prohibitive activities, the relevant parts are as follows;

Not engage in fixing or regulating freight, charter, or other transportation rates or in fixing vessel management or operating fees or the terms and conditions of any of these;

Not engage in any activity which is in contravention of the laws of England and Isle of Man or the laws applicable to any member.

Refrain from any activity that involves the collection or the dissemination of commercial data, or activities that may be construed as representing the commercial interests of any or all of its members.

Notwithstanding these bye-laws the following lists summarise the principal do's and don'ts for participants in any SGMF meeting.

Do

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Ensure that the minutes/agendas and notes are produced and circulated to all attendees and accurately reflect the discussions and the decisions therein.

Ensure that the meeting discussion is kept as far as in possible to the agenda topics. It is recommended that any AOB items is discussed with the Chairman and/or the secretary of the meeting before proceedings commence. Do object if an improper or questionable subject is raised and of not satisfied with the response ensure your objection is recorded in the minutes and leave the meeting.

Do Not

Discuss or make agreements or decisions on any of the following: Prices, rates, production capacity, inventories, sales, purchases, prospects, costs, business plans not publicly available, employee packages or benefits, restrictions of capacity or outputs, restriction of supply for a product or service, limitations on the quality of a product, blacklisting or boycotting of suppliers or customers.

Documentation

The Secretary should ensure that proper documentation is created and safely archived at each stage of the WG. WG meetings' minutes will be captured in action points format to record relevant points and decision-making processes.