

SIGTTO NEWSLETTER

Issue 48

Winter 2022-2023



Ian Revell
SIGTTO CEO

Message from the CEO

It has been an extremely busy period since I had the privilege of becoming the CEO of SIGTTO.

SIGTTO has a critical role to play in sustaining the gas industry's excellent safety record. Of equal importance is the need to support our members in the maritime decarbonisation challenge that the industry faces in the coming years.

I will be supported in meeting these significant challenges by a new Board leadership. Lloyd Bland is our new President and Rahul Kulkarni has been elected as our new Vice President West. Tetsuya Watabe, the Senior Vice President East, completes the senior Board team.

We also have a new Chair of the GPC in Giovanni Giorgi and a new Vice-Chair in Eleni Lazaratou. We are fortunate to have so many talented people committed to driving SIGTTO forward.

SIGTTO will modernise in 2023 to support existing members with increased services to meet those challenges in a more effective and modern style.

It is of great importance that we understand what you need us to do on your behalf to represent the gas industry as necessary to governments and global partners across the world.

I would like to thank the members and the Secretariat for their warm welcome. SIGTTO is nothing without its members and the Secretariat working together.

I look forward to meeting as many members and partners as possible in the coming months.

We would like to wish all our members a safe, healthy and prosperous 2023.



SIGTTO's CEO and new President

Autumn Board & AGM

SIGTTO held its Autumn Board meeting and Annual General Meeting (AGM) on 16th November 2022 in Singapore. The event was kindly hosted by Chevron Shipping.

Continued on page 2 >

Upcoming Meetings

28th March 2023, Singapore

GPC 86 & EC 02

29th March 2023, Singapore

Regional Panel

24th May 2023, Houston

Spring Board

25th May 2023, Houston

Regional Panel

3rd October 2023, London

GPC 87 & EC 03

4th October 2023, London

Regional Panel

22nd November 2023, London

Autumn Board & AGM

Autumn Board & AGM

➤ At the AGM Lloyd Bland of Chevron was confirmed as the new SIGTTO President, taking over the role from Steffen Jacobsen of Evergas. Ian Revell thanked Steffen for the commitment and contribution he made to the work of the Society during both terms as President and welcomed Lloyd to the role.

With Lloyd stepping into the role of President, this created a vacancy for the Vice President West role. Rahul Kulkarni of BP Shipping was elected and joined Tetsuya Watabe of Jera Co., Incorporated as Vice President West and East respectively.

The Autumn Board also made four director changes and welcomed two new directors:

- James D Sagar of ExxonMobil
- Roberto Vara of Freeport LNG Development LP
- Andreas Spertos of Maran Gas Maritime Inc
- Hironobu Watanabe of NYK Line
- Nobushige Goto of Osaka Gas Co Ltd
- Pierre Decarpigny of TotalEnergies SE



Steffen Jacobsen welcomes Lloyd Bland into his new role

The Board had an in-depth strategy discussion. Together it was agreed that the Secretariat should develop their capabilities to respond to rapid decarbonisation developments in the industry. This includes providing guidance on safety and the environment, taking into account the diversity of the gas carrier fleet.



SIGTTO's Board of Directors

SIGTTO Presidents



Steffen Jacobsen

Steffen Jacobsen has now completed his second term as SIGTTO President.

Steffen previously served as SIGTTO President from 2011 to 2013 while a member of Maersk's gas shipping department. After joining Evergas in 2015, Steffen once again became a SIGTTO Board member. Within Evergas, Steffen oversaw a growing fleet of LPG, ethylene and LNG carriers and spent 8 years as CEO. Evergas was the first in the industry to convert propulsion to run on ethane and to have ethane accepted as a fuel. In 2018, Steffen was elected as SIGTTO's Vice President West and became President the following year.

Steffen said, "It has been a pleasure to be president of SIGTTO twice. The second tenure was very different with the impact of Covid on the organisation and conduct of Board meetings, the new focus on environmental matters and the resignation of the General Manager and subsequent selection and employment of the new CEO.

The new environmental focus will require additional resources in the Secretariat and the members will have to accept increases in membership costs, although the cost of SIGTTO membership will remain much lower than other industry NGOs. I would like to thank Lloyd for the close cooperation in these three challenging years and wish him and Rahul the very best for the next three years."



Lloyd Bland

Lloyd Bland, Chevron Shipping Co. LLC, Senior Manager, Fleet Technical, is now SIGTTO's new President.

He is a graduate of the US Merchant Marine Academy at Kings Point, New York, and has held several senior manager roles at Chevron Shipping across their Oil & Gas Fleet. Lloyd started his journey in LNG as a Deck and Engine Cadet on the LNG LEO back in 1993.

Lloyd has served as a SIGTTO Board member since 2016. In November 2019, he was elected as SIGTTO's Vice President West. With 28 years of oil and gas shipping experience, Lloyd readily follows his predecessor, Steffen Jacobsen.

Lloyd said, "It has been a pleasure working with the Board these last few years. Over this short period of time there has been a surprising number of dynamic changes for our industry, both from an environmental perspective as well as growing demand for bulk transport of emerging liquified gases.

We have exciting challenges ahead to continue to deliver on safety and reliability, and with SIGTTO's commitments in our updated environmental policy."

Regional Panels

SIGTTO held its first two Regional Panel meetings in Autumn 2022. This new style of panel meeting covers *Safety and Innovation* topics in the morning, followed by an afternoon *Environment* session.

London Regional Panel

SIGTTO held its first Regional Panel meeting in London on 5th October 2022. The event was chaired by Giovanni Giorgi of OLT Offshore LNG Toscana, the new GPC Chair.

In the *Safety and Innovation* session, Magnus Gillberg and Fredrik Jonasson of Consilium Marine & Safety AB presented on gas detection for alternative fuels, including methanol, ammonia and hydrogen.

This was followed by Dhruv Boruah of Ocean Ways, on the world's first zero-emission underwater transport system. Raphael Poichot of Technip then presented on the design of liquid CO₂ marine loading arms.

Environmental topics covered in the afternoon session focused on addressing greenhouse

gas (GHG) emissions. Paul Balcombe of Queen Mary University of London presented on measuring and reducing methane emissions from LNG carriers. Another presentation that focused on measurement was given by Krisian Hovet of Tunable AS on online fuel gas and emission gas measurements.

Roel Hoenders of the International Maritime Organization (IMO) provided an overview of IMO regulatory work on reducing GHG emissions from international shipping. Tristan Smith of UCL finished the day with a presentation on scenarios for shipping's decarbonisation, progress towards these, and the implications for LNG and other fuel options.

Both sessions were followed by panel discussions with the speakers. There was lively audience participation and in-depth discussion of these topics.

Continued on page 5 >



London Regional Panel



Singapore Regional Panel

Singapore Regional Panel

The Singapore Regional Panel meeting was held on 17th November 2022 and was chaired by Hans Weverbergh of Exceleerate Energy.

The morning session focused on innovative technologies. This included a presentation on a liquefied hydrogen loading arm by Frederic Pelletier of TB Global Technologies Ltd. This was followed by a presentation by Yoshiyuki Moriyama of Fukui Seisakusho Co., Ltd on safety valve development for liquefied hydrogen and liquefied carbon dioxide carriers.

Mikael Gustavsson of Consilium Marine & Safety AB then presented on gas detection for alternative fuels. The final presentation of the morning was by Tien Loong Wong of NUS Education, who provided an introduction to the Technology Centre for Offshore & Marine Singapore (TCOMS) and its research and development capabilities and facilities.

In the afternoon *Environment* session, presentations focused on the implications of decarbonisation. Jayendu Krishna of Drewry presented on latest developments in the gas market and Ashish Anilan of Bureau Veritas presented on maritime decarbonisation and considerations for gas carriers.

This was followed by a presentation by Douglas Raitt of Lloyds Register on the longevity of LNG carriers operating in the age of GHG emission reduction, with an assessment of the challenges and solutions. A presentation was then given by Gustad Hormazdi of DNV on the energy transition outlook and maritime forecast.

Both the morning and afternoon sessions were followed by interactive panel discussions with the speakers.



SIGTTO's exhibition stand, image by Witherbys

GASTECH 2022

SIGTTO was delighted to attend Gastech 2022 in Milan in September. Ian Revell chaired the first sessions of the technical conference on shipping and marine technologies.

Ian Revell, Cherian Oommen and Adrian Ruiz were pleased to host industry members at SIGTTO's exhibition stand with Witherbys.

GPC Update

General Purposes Committee (GPC 85)

GPC 85 was held on 4th October 2022 in London. The GPC appointed Giovanni Giorgi of OLT Offshore LNG Toscana as GPC Chair for the next three years. Alongside Giovanni, the GPC appointed Eleni Lazaratou from Maran Gas Maritime Inc. as Vice-Chair.

Commenting on the new appointments, Ian Revell said, "I would like to welcome Giovanni and Eleni to their new roles leading the General Purposes Committee. We look forward to a strong co-operation in the coming years which will drive SIGTTO's policies in the Society's core activities."

During the meeting, the GPC provided feedback on two projects that had reached concept draft stage, *Guidance for Gas Trials on LNG Carriers* and *Recommendations for Valves on Liquefied Gas Carriers*.

The GPC also approved the terms of reference for a new project to revise *LNG Emergency Release Systems*, a SIGTTO publication, to bring it up to date with current best practice.

GPC Working Groups

CO₂ Shipping Operations

This working group has held three meetings, in September, December and February. All three



Giovanni Giorgi of OLT Offshore LNG Toscana was appointed as GPC Chair

meetings were well attended, and the working group has made good progress in developing the first draft.

The working group is developing guidance on the transportation of liquefied carbon dioxide (LCO₂). The document identifies the hazards associated with LCO₂ transportation and provides recommendations to support safe and environmentally responsible transportation.

Continued on page 7 >



The CO₂ Shipping Operations working group met on 27th to 28th September



The Valves working group met on 22nd November

Gas Trials for LNG Carriers

This working group, chaired by Rose Brooks of BP, was set up to revise *Guide for Planning Gas Trials for LNG Vessels* (2008).

Gas trials are carried out on new gas carriers to check that the cargo system is working properly. The working group is providing updated guidance to assist with planning a gas trial. This includes considerations for minimising the impact of greenhouse gas (GHG) emissions.

This document has now reached concept draft stage. At GPC 85 in October 2022, the working group received technical feedback on the concept draft of the publication. They are now working to incorporate feedback and plan to submit a final draft to the GPC in March 2023.

Valves on Liquefied Gas Carriers

This working group also received GPC feedback on their concept draft in October 2022. This document combines and revises *The Selection and Testing of Valves for LNG Applications* (2008) and *The Selection and Testing of Valves for LPG Applications* (2012).

Chaired by John Taylor of Shell, the working group is providing guidance on the selection, design and maintenance of valves on liquefied gas carriers. The document is expected to be useful for valve manufacturers, shipyards and ship owners.

The working group held its most recent meeting in November, where they discussed GPC feedback. They are preparing the final draft for submission to the GPC in March 2023.

Design and Operation of Liquefied Gas Terminals

This working group held its most recent meeting in October. Chaired by Guy Nicholls of Cheniere, they are working to combine and revise *Site Selection and Design for LNG Ports and Jetties (Information Paper No.14)* (1997) and *LNG Operations in Port Areas – Essential Best Practices for the Industry* (2003).

The document provides guidance on the site selection and design of liquefied gas terminals and operations during ship transit and at berth. The document highlights ways that the environmental impact of terminal design and operations can be reduced, including ways to reduce GHG emissions.

The working group aims to submit a concept draft to the GPC in March 2023.

Jetty Maintenance and Inspection Guide

This joint working group with Oil Companies International Marine Forum (OCIMF) was set up to revise *Jetty Maintenance and Inspection Guide* (2008).

The project is nearing completion and the final draft was reviewed at GPC 85. Publication of the guide is expected in 2023.

EC Update

Environmental Committee (EC 01)

The new Environmental Committee held its first meeting on 6th October 2022 in the SIGTTO office. John Boreman of BP was appointed as EC Chair for the next three years.

Updates were given on the progress of the EC working groups on the Reduction of Gas Carrier CO₂ Emissions and the Reduction of LNGC Methane Emissions, which are both making good progress.

The Committee spent time discussing the strategy and opportunities of the EC, including SIGTTO's work in supporting the International Maritime Organization's (IMO's) GHG Strategy.

The next EC meeting will be held on 28th March 2023 in Singapore, with the GPC held on the same day.

EC Working Groups

Reduction of Methane Emissions from LNG Carriers

This project builds on the guidance in the new SIGTTO publication, *Detection and Reporting of Fugitive Methane Emissions from LNG Carriers*.

Methane is a GHG, and these documents are part of a series that supports the IMO's goals on the reduction of GHG emissions.

The working group, chaired by Ajay Edakkara of Shell, recently met in November 2022. They are developing a document that outlines the main sources of methane emissions and provides guidance for reducing these emissions from LNG carriers during design and operations.

Reduction of CO₂ Emissions from Gas Carriers

Chaired by Leonidas Koulouridis of Shell, this working group also met in November 2022 and is part of SIGTTO's work to support the IMO's goals on the reduction of GHG emissions.

Building on the guidance in the new SIGTTO publication, *Measurement and Reporting of CO₂ Emissions from Gas Carriers*, this project will provide high-level guidance to assist the gas shipping industry in its efforts to reduce carbon dioxide (CO₂) emissions. This covers the reduction of gas carrier CO₂ emissions during design and operations.



The Reduction of Methane Emissions working group met on 8th to 9th November

IMO Activities

The International Maritime Organization's (IMO's) meetings are now being held in person with hybrid options, following more than two years of disruption due to the global pandemic.

CCC 8

The first of these meetings was the Sub-committee on Carriage of Cargoes and Containers (CCC 8) in September 2022. SIGTTO submitted six papers in the months leading up to the meeting and had a significant presence, participating in two working groups in addition to the plenary sessions.

IGC Code

CCC 8 was the first meeting to consider the *Review of the IGC Code*, an important and substantial area of work for SIGTTO. The aim of this work is to develop a consolidated edition of the IGC Code, with the target of completing the text by CCC 9 (September 2023). This would mean an entry into force of the revised Code on 1 January 2028.

Topics discussed for the review of the IGC Code included:

- CO₂ triple point and CO₂ classification (Chapter 19)
- emergency shutdown (ESD) systems
- amendments to incorporate unified interpretations
- a new cargo called 'VOC Condensate'
- use of LPG cargo as fuel
- reference temperature and cargo tank becoming liquid full (Chapter 15).

While some amendments were agreed at the meeting, many were referred to a correspondence group for further consideration.

Carriage of Hydrogen

CCC 8 also considered a proposal to revise the *Interim recommendations for carriage of liquefied hydrogen in bulk (resolution MSC.420(97))*. These proposals were high-level and suggested the structure of new guidelines. This topic will be further developed at the next session.



CCC 8 was the first in-person IMO meeting, image by the IMO

Alternative Fuels

Another significant area of work at CCC is the development of regulation for the use of alternative fuels. Several interim guidelines are being developed under the IGF Code.

CCC 8 agreed *Interim Guidelines for the Safety of Ships Using LPG Fuels*. A correspondence group will continue to develop guidelines for ships using hydrogen or ammonia as a fuel.

Continued on page 10 >



MEPC 79 met from 12th to 16th December, image by the IMO

MSC 106

SIGTTO attended the Maritime Safety Committee (MSC 106) meeting in November 2022.

Amendments to the IGC Code Chapter 6, and IGF Code Chapter 7, concerning the use of high manganese austenitic stainless steel, were adopted.

MSC 106 also approved an MSC circular titled *Revised guidelines for the approval of fixed dry chemical powder fire-extinguishing systems for the protection of ships carrying liquefied gases in bulk*, which will be published as MSC.1/Circ.1315/Rev.1.

MEPC 79

The IMO Marine Environment Protection Committee (MEPC) met for its 79th session from 12th to 16th December 2022.

GHG

The most anticipated agenda item concerned the reduction of greenhouse gases (GHGs) and in particular the revision of the IMO's GHG Strategy.

The final agreement on the revised strategy, scheduled for July 2023, is already being called a "historic" decision. December's meetings, the first face-to-face GHG negotiations since the pandemic, aimed to build consensus on a way forward.

Proposals include more stringent targets for 2030, an additional milestone in 2040, a goal of zero (or net zero) by 2050, and the suggestion of five-yearly check points.

The Committee also welcomed the convergence on the development of a basket of mid-term measures, noting increasing support for a possible combination of technical and economic elements.

Work on the strategy and mid-term measures will continue in two intersessional meetings before the next session, MEPC 80, in July 2023.

*For further information please contact
ian.harrison@sigtto.org.*

Secretariat Update

This section outlines recent changes in SIGTTO.

Environmental Policy

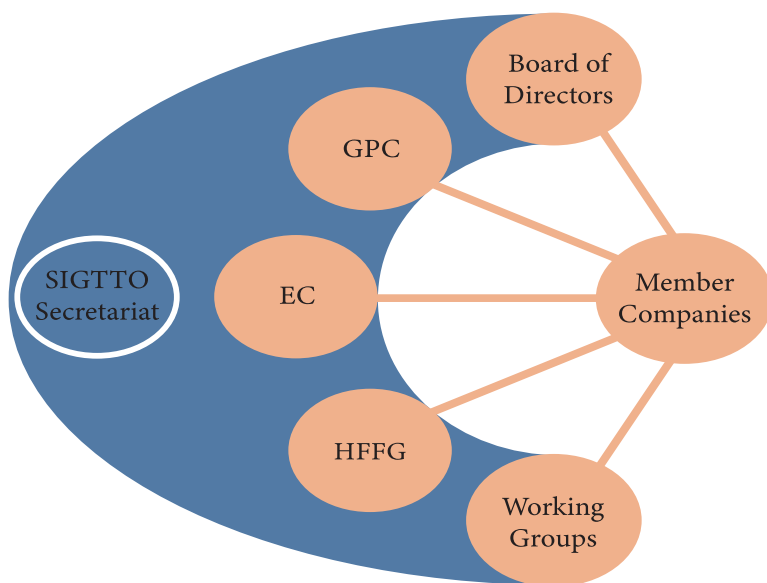
In recognition of the environmental issues affecting our planet, SIGTTO has published an Environmental Policy. This outlines SIGTTO's commitment to supporting the aims of the International Maritime Organization's (IMO's) Greenhouse Gas (GHG) Strategy.

The full policy can be viewed on the SIGTTO website.

New Committee Structure

To reflect SIGTTO's commitment to the environment, the Environmental Sub-committee has been restructured to an independent Environmental Committee (EC). It will work alongside the General Purposes Committee (GPC).

The Human Element Committee has become a Human Factors Focus Group (HFFG) and will assist the GPC and EC on this topic.



SIGTTO Structure

Meeting Schedule Rotation

In addition to the new committee structure, SIGTTO is working to improve the accessibility of meetings. A new meeting schedule has been created, with the location of the Board, GPC, EC and regional panel meetings rotating between key hubs.

The autumn GPC and EC meetings are held in London, while the spring GPC and EC meetings rotate between Houston and Singapore.

	2023	2024	2025
April GPC & EC	Singapore	Houston	Singapore
May Board	Houston	London	London
October GPC & EC	London	London	London
November Board & AGM	London	Singapore	Houston

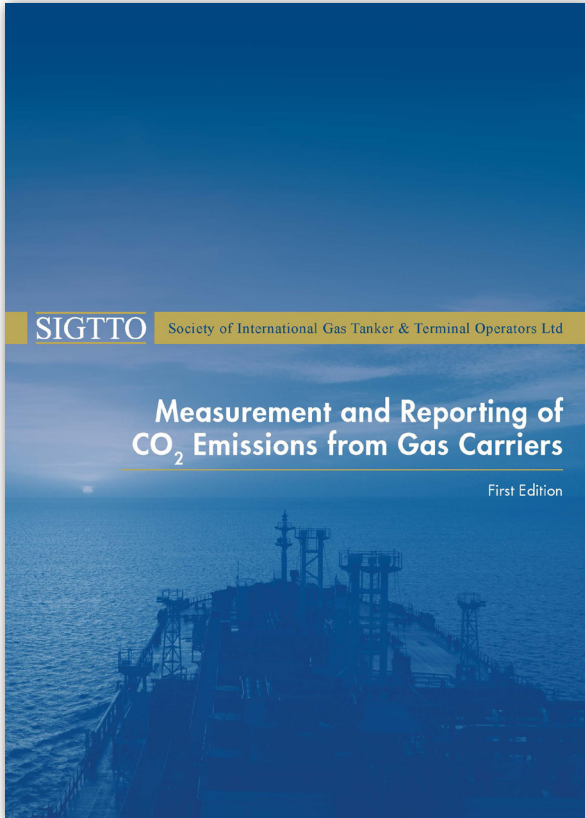
SIGTTO Meeting Schedule

Continuous Improvement

SIGTTO aims to continuously work to improve processes and communication. The Secretariat has prepared *How We Work* to provide clarity on what SIGTTO does and how SIGTTO works.

This guide is available on the SIGTTO website and will be updated regularly. SIGTTO members are encouraged to read this guide.

New Publications



Measurement and Reporting of CO₂ Emissions from Gas Carriers

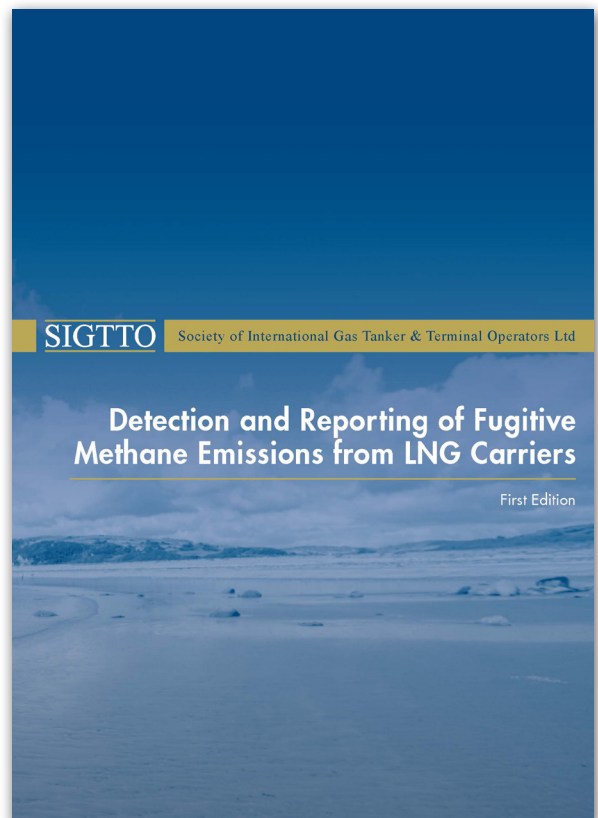
This document provides guidance to assist the gas shipping industry in its efforts to reduce carbon dioxide (CO₂) emissions. It is the first document in a series that plans to address CO₂ emissions. As a first step, this document provides guidance on the standardised measurement and reporting of CO₂ emissions.

This document identifies typical sources of CO₂ emissions from gas carriers and describes the methodologies for measuring CO₂ emissions. The reporting standards set by the International Maritime Organization (IMO) and European Union (EU) for CO₂ emissions are then explained, covering both technical and operational efficiency.

Detection and Reporting of Fugitive Methane Emissions from LNG Carriers

This is the first document in a series to assist the gas shipping industry in its efforts to reduce methane emissions from LNG carriers. As a first step, this document provides guidance on the detection and reporting of fugitive methane emissions.

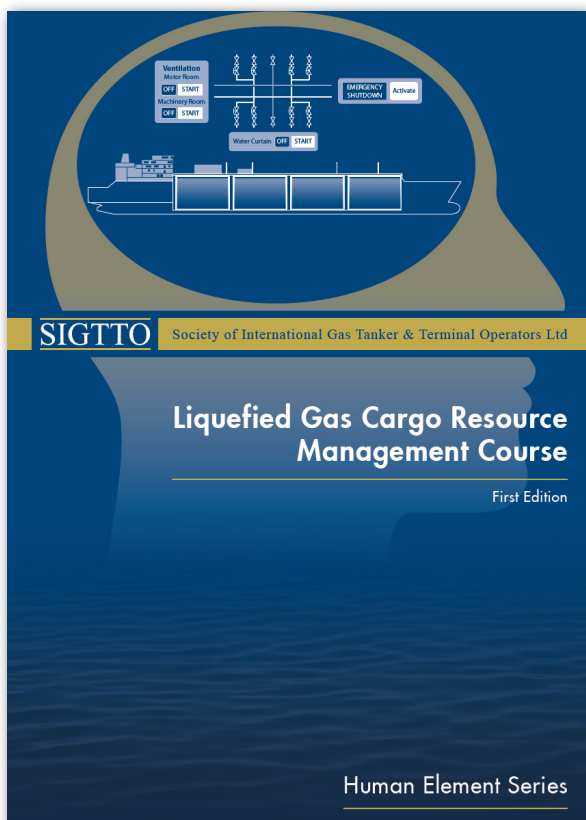
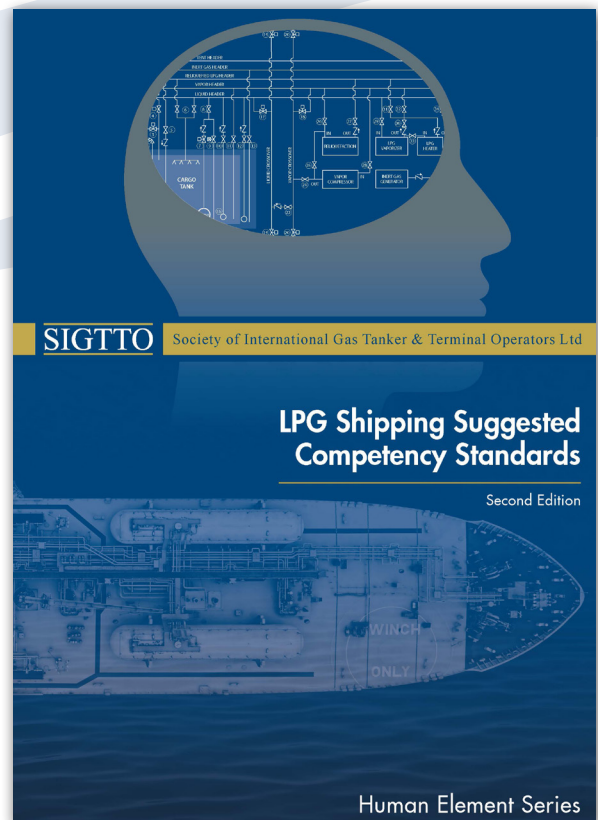
This document recommends a structured system to identify, detect, measure and quantify fugitive emissions of methane from LNG carriers. This is an important primary step that may also support a leak detection and repair (LDAR) system to reduce emissions through maintenance and design improvements.



LPG Shipping Suggested Competency Standards

This document is written for organisations involved in training officers, including cargo engineers, for LPG cargo operations. It is written at a high level and is suitable for individuals that are technically qualified and experienced in the subject of training and LPG operations.

This document updates and replaces the previous edition, *LPG Shipping Suggested Competency Standards* (2008). This update reflects changes in technology and lessons learnt from incidents since the previous edition was published. The growing use of LPG as a fuel by LPG carriers (LPGCs) is a significant addition now covered by this edition.



Liquefied Gas Cargo Resource Management Course

Cargo resource management (CRM) enables safe cargo operations by using all available resources, including the crew, equipment and relevant information. This document provides recommendations for CRM training courses to improve the safety of liquefied gas cargo operations.

The training courses covered in this document are designed for officers and other shipboard personnel engaged in cargo operations. This document is expected to provide useful guidance for organisations involved in CRM training in the liquefied gas industry. This includes training institutions, as well as ship owners and operators that provide resource management training.

For information on how to download or purchase publications, visit our website:

www.sigtto.org

SIGTTO

The Society of International Gas Tanker and Terminal Operators
5th Floor, 42 New Broad Street
London, EC2M 1JD
Tel: +44 20 7628 1124
E-mail: reception@sigtto.org