Training and Competency for Alternative Fuels and Systems

Stream Marine Technical

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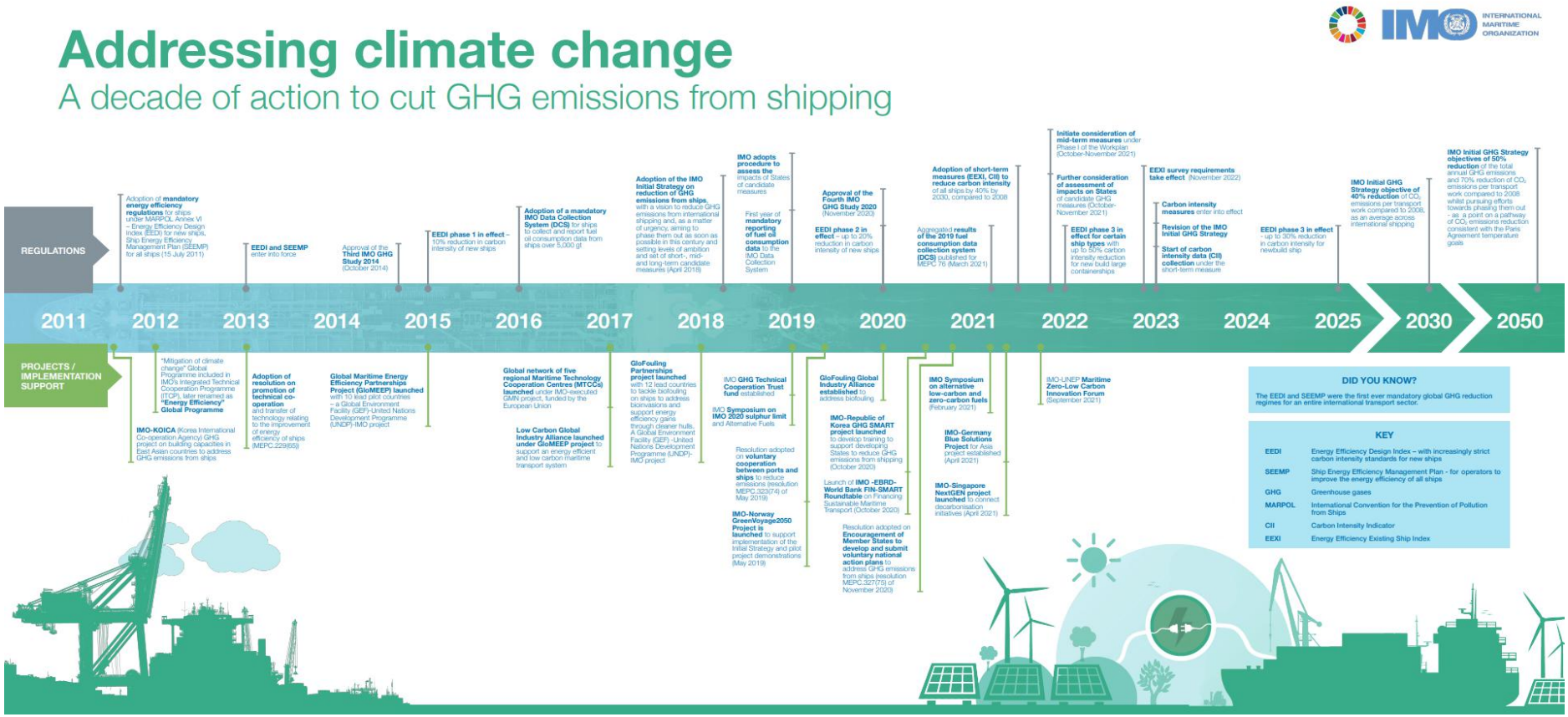
Who are Stream Marine Technical?

Stream Marine Group is proud to be expanding our portfolio of courses to now offer bespoke training and consultancy in the use and handling of new and alternative fuels under the name Stream Marine Technical.

With innovation at the heart of everything we do, and the aim of global net zero by the year 2050 a priority, Stream Marine Technical has been established to lead the way in training fuels of the future. Our expert advisors have a wealth of experience in the industry and have already provided training and advice to some of the world's largest ship builders, ferry companies and cruise lines.

The concept of Stream Marine Technical is combing our main strengths: Innovation and Knowledge, to help guide the industry towards a net zero future. By offering multiple customised training and consultancy options, we can help crews and vessels move into a greener horizon.

What is the Environmental Impact?



What is the Environmental Impact?

The United Kingdom is one of the world's leading maritime sectors. The department is the principal facilitator of global trade, and the country is already beginning preparations which look far into the future. Maritime 2050 has been set up with high ambitions to improve "technological and environmental innovation" in the maritime industry (Maritime 2050, 2019). The promise is that the maritime future in the UK will not resemble it's maritime past. Two of the ten objectives are important to highlight for the subject of New and Alternative Fuels. Firstly, a promise has been made to:

- "Lead the way in taking action on clean maritime growth enjoying economic benefits from being an early adopter or fast mover." (Maritime 2050, 2019)

Illustrating the importance of learning the new fuels technologies which will improve our maritime sector. Furthermore, the quicker we move to adapt our knowledge, the better off the environment will be. In addition to this we must:

- "Strengthen our reputation for maritime innovation, maximising benefits to the UK from new maritime technology through our world leading universities, maritime small and medium enterprises (SMEs) and global companies." (Maritime 2050, 2019)

Stream Marine Training are a world class provider of maritime training and have led the way in alternative fuels coaching. We are passionate about making a difference in the maritime industry and this can been shown by the fact we were the first training centre to offer this innovative technology, thus illustrating our eagerness to lead the change.

Alongside the International Maritime Organisation (IMO), the UK has been at the forefront of change in deciding to make the target of a 50% reduction in greenhouse gas emissions by the year 2050. The Maritime 2050 plan mainly focusses on the direct effect on marine and coastal areas. The intention is for the maritime sector to have minimal to no disturbance to the overall environment within the next thirty years. This will mean a complete change in the building and operations of ships to accommodate this plan (Maritime 2050, 2019). Stream Marine Training, alongside all our clients are, therefore, responsible for this contribution to reduce environmental damage.

GOV.UK. 2019. Maritime 2050: navigating the future. [online] Available at: <https://www.gov.uk/government/publications/maritime-2050-navigating-the-future> [Accessed 27 October 2021].

What is the IGF Code?

The IGF Code established an international standard for ships using gases or other low-flashpoint fuels for propulsion, and entered into force on 1 January 2017. The IGF Code applies to ships using low-flashpoint fuels:

- For which the building contract is placed on or after 1 January 2017
- The keels of which are laid or which are at a similar stage of construction on or after 1 July 2017 (in the absence of a building contract)
- The delivery of the vessel is on or after 1 January 2021.
- Ships which commence a conversion on or after 1 January 2017 to use low-flashpoint fuels (or use additional or different lowflashpoint fuels other than those for which the ship was originally certified). New mandatory minimum requirements in the STCW Convention and Code for the training and qualifications of relevant personnel on ships subject to the IGF Code entered into force on 1 January 2017.

What New Fuels Technology Courses do SMT Offer?

- STCW Basic Training for Service on Ships using Fuels Covered within the IGF Code (BIGF)
- STCW Advanced Training for Service on Ships Using Fuels Covered Within the IGF Code (AIGF)
- STCW Basic and Advanced Combined Training for Service on Ships Using Fuels Covered Within the IGF Code (AIGF)
- STCW Basic Training for Service on Ships using Fuels Covered within the IGF Code - Online via Webinar
- SMT Liquefied Natural Gas (LNG) Awareness Training
- Hydrogen Awareness
- Methanol Awareness
- Ammonia Awareness
- Battery and Fuel Cells Awareness
- Battery Construction & Battery Fire
- Bunkering Operations
- Shoreside Legislation Awareness Training
- Government/Flag State Training
- Decarbonisation Requirement and Solutions
- Cryogenic Low Flash Point Fuel Fire Fighting
- STCW Tanker Fire Fighting
- Simulation Training


What New Fuels Technology Courses do SMT Offer?

STCW Basic Training for Service on Ships using Fuels Covered within the IGF Code (BIGF)

Course Description:

The MCA approved Basic Training for Service on Ships using Fuels Covered within the IGF (LNG) Code intends to provide a basic training for seafarers responsible for designated safety duties associated with the care, use or in emergency response to the fuels on board ships subject to the IGF code. This course will cover how to:

- Contribute to the safe operation of a ship subject to IGF code
- Take precautions to prevent hazards on a ship subject to the IGF code
- Apply occupational health and safety precautions and measures
- Respond to emergencies
- Take precautions to prevent pollution of the environment from the release of fuels found on ships subject to the IGF code

Prerequisites:

- STCW Tanker Fire Fighting
- Photographic ID (A Government issued, photographic proof of identity on the day of the course and this should take the form of either a valid Passport or a driving license or a valid discharge book).

Who is this course for?

Officers and ratings who are responsible for designated safety duties associated with the care, use or in emergency response to the fuel on board ships subject to the IGF Code.

Duration:

2 days

STCW Advanced Training for Service on Ships Using Fuels Covered Within the IGF Code (AIGF)

Course Description:

This course covers the hazards, operational requirements and safety considerations of working with low flashpoint fuels covered by the IGF code.
We will enhance the training experience with practical experiences, and the course will cover the safety of operations in depth.

Prerequisites:

- 1 month seatime on ships covered by the IGF code
- At least 3 bunkering operations on IGF code vessels
- STCW Certificate of Proficiency in Basic Training for Service on Ships Using Fuels covered within the IGF code.

Who is this Course For?

Senior Officers engaged in the planning and operation of machinery on IGF code vessels.

Duration:

5 days

STCW Basic and Advanced Combined Training for Service on Ships Using Fuels Covered Within the IGF Code (AIGF)

Course Description:

This STCW Basic and Advanced Combined Training for Service on Ships Using Fuels Covered Within the IGF Code (AIGF) is available only at Stream Marine Training. The 53 hour course will cover:

- Contribute to the safe operation of a ship subject to IGF code
- Take precautions to prevent hazards on a ship subject to the IGF code
- Apply occupational health and safety precautions and measures
- Respond to emergencies
- Take precautions to prevent pollution of the environment from the release of fuels found on ships subject to the IGF code
- The hazards, operational requirements and safety considerations of working with low flashpoint fuels covered by the IGF code.

Prerequisites:

- 1 month seatime on ships covered by the IGF code not needed to do course
- At least 3 bunkering operations on IGF code vessels not needed to do course
- But required to get full certificate
- STCW Certificate of Proficiency in Basic Training for Service on Ships Using Fuels covered within the IGF code. Or basic gas tanker course

Who is this Course For?

Senior Officers engaged in the planning and operation of machinery on IGF code vessels.

Duration:

Duration: 7 days

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STCW Basic Training for Service on Ships using Fuels Covered within the IGF Code (BIGF) Online via Webinar

Course Description:

The Bahamas Maritime Authority approved Online Basic Training for Service on Ships using Fuels Covered within the IGF Code intends to provide a basic training for seafarers responsible for designated safety duties associated with the care, use or in emergency response to the fuels on board ships subject to the IGF code.

- Contribute to the safe operation of a ship subject to IGF code
- Take precautions to prevent hazards on a ship subject to the IGF code
- Apply occupational health and safety precautions and measures
- Respond to emergencies
- Take precautions to prevent pollution of the environment from the release of fuels found on ships subject to the IGF code

Prerequisites:

- Photographic ID (A Government issued, photographic proof of identity on the day of the course and this should take the form of either a valid Passport or a driving license or a valid discharge book).

Who is this course for?

Officers and ratings who are responsible for designated safety duties associated with the care, use or in emergency response to the fuel on board ships subject to the IGF Code.

Duration:

3 days

SMT Liquefied Natural Gas (LNG) Awareness Training

Course Description:

Training for LNG fuel systems and implementing the correct procedures with confidence within the safety management systems and have confidence around risk managing the process. This is a more detailed look at the hazards and practical elements of Liquified Natural Gas as a bunker fuel, with demonstrations that the delegates will remember.

Prerequisites:

There are no prerequisites for this course.

Who is this Course for?

For those working with LNG as a vessels fuel.

Duration:

2 days

Hydrogen Awareness Training

Course Description:

Training for Hydrogen Gas and Cryogenic Hydrogen fuel systems and implementing the correct procedures with confidence within the safety management systems and have confidence around risk managing the process. This is a more detailed look at the hazards and practical elements of Hydrogen Gas and Cryogenic Hydrogen as a bunker fuel, with demonstrations that the delegates will remember.

Prerequisites:

There are no prerequisites for this course

Who is this Course for?

This course is for those working with Hydrogen gas and cryogenic hydrogen as a vessels fuel. It can also be for shoreside staff and anyone who does not require basic or advanced IGF

Duration:

1 day

Methanol Awareness Training

Course Description:

Training for Methanol Awareness fuel systems and implementing the correct procedures with confidence within the safety management systems and have confidence around risk managing the process. This is a more detailed look at the hazards and practical elements of Methanol as a bunker fuel, with demonstrations that the delegates will remember.

Prerequisites:

This course has no prerequisites

Who is this Course for?

For those working with Methanol as a vessels fuel. Can also be shore side staff and everybody who does not requires basic or advanced IGF

Duration:

1 day

Ammonia Awareness Training

Course Description:

Training for Ammonia Awareness fuel systems and implementing the correct procedures with confidence within the safety management systems and have confidence around risk managing the process. This is a more detailed look at the hazards and practical elements of Ammonia as a bunker fuel, with demonstrations that the delegates will remember.

Prerequisites:

This course has no prerequisites

Who is this Course for?

The course is for those working with Ammonia as a vessels fuel. It can also be for shoreside staff and anyone who does not require basic or advanced IGF.

Duration:

1 day

Battery and Fuel Cells Awareness

Course Description:

This course offers training related to fixed battery and fixed fuel cell installation.
Our course covers half day on battery application, construction, hazards, legislation and operational requirements and a half day on fuel cell application, construction, hazards, legislation and operational requirements.
This course offers training for batteries and fuel cells systems and implementing the correct procedures with confidence within the safety management systems and have confidence around risk managing the process. This is a more detailed look at the hazards and practical elements of Batteries and Fuel Cells as a bunker fuel, with demonstrations that the delegates will remember.
Please note, this course can be tailored in line with company safety management systems and client specific requirements.
Learning Outcomes:
· An understanding of Battery applications
· An understanding of Battery construction and Hazards
· An understanding of legislation and operational requirements for batteries
· An understanding of Fuel Cell applications
· An understanding of Fuel cell construction and Hazards
· An understanding of legislation and operational requirements for fuel cells

Prerequisites:

This course has no prerequisites

Who is this Course for?

This course is aimed at shore staff, management and senior officers working with batteries and fuel cells as a vessels fuel.

Duration:

1 day

Battery Construction and Battery Fire

Course Description:

This course is a one-day safety and awareness course for vessels carrying vehicles which are powered by battery. It has been found that vessel fires caused by these batteries and fuel cells can be extremely violent and difficult to control, this course aims to ensure delegates gain the knowledge and understanding to develop and implement appropriate procedures for preventing or minimising battery fires onboard vessels.

The course incorporates both theoretical and practical elements.

Learning Outcomes:

· An understanding of battery powered vehicles
· An understanding of the fire properties of battery powered vehicles
· An understanding of how to extinguish and protecting against thermal runaway
· An understanding of environmental impacts of battery fuelled cars should the vehicle be compromised
· An understanding of the impact on the vessel structure and surrounding cargo
· On this course you will learn how to deal with a battery fire from a battery powered vehicle

Prerequisites:

This course has no prerequisites

Who is this Course for?

This course is aimed at those working with batteries and fuel cells as a vessels fuel or carriage of battery powered vehicles as cargo.

Duration:

1 day

Bunkering Operations

Course Description:

This course focus on the practical bunkering of low flash point fuels related to safe operations and what has to be in place

- Bunkering: Early stage and Operational Risk Management
- Bunkering Hazard identification (HAZID) and SIMOPS facilitator
- Advanced and traditional Safety Zones analyses for Bunkering
- Risk Subject Matter Expert
- Accidental LNG release modelling with CFD (but also with simpler tools, e.g. Phast)
- Qualitative/Quantitative risk assessments

Prerequisites:

This course does not require prerequisites.

Who is this Course for?

The course is for all people involved in bunker operations including ship operations, shoreside operations and harbours.

Duration:

1 day

Shoreside Legislation Awareness Training

Course Description:

This course includes all the requirements for port and ship to carry out bunkering of low flash point. The course highlights the shore site requirements to carry out bunkering/repairs and dry dock operations.

Prerequisites:

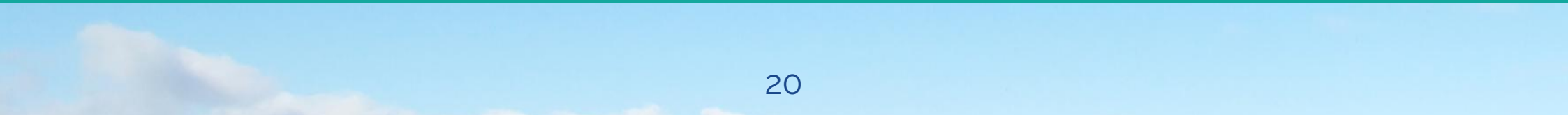
There are no prerequisites for this course

Who is this Course for?

This includes all the requirements for workers on shoreside, dry dock, ports and harbours

Duration:

1 day



Government/Flag State Training

Course Description:

This course includes basic or advanced IGF code course for non seafarers and Early stage and Operational Risk Management and General Risk Management and aligns with International Maritime Organisation requirements for ships carrying alternative fuels. This is an upgraded basic or advanced IGF course which has the additional aspect of risk management.

Prerequisites:

This course does not require any prerequisites

Who is this Course For?

The course is aimed at Flag State officials like inspectors and government employees involved in maritime activities

Duration:

2 - 5 days

Decarbonisation Requirement and Solutions

Course Description:

This course handles what course decorbanisation is and will go over the process of decarbonating a company, an existing vessel or a new vessel. By the end of this course you will acquire a solid understanding of all options to prepare for low-carbon and no-carbon shipping and will be empowered to make the right decisions based on realistic assessments of your roadmap towards decarbonising shipping.

Prerequisites:

There are no prerequisites for this course

Who is this Course for?

This course is available to all

Duration:

1 day

Cryogenic Low Flash Point Fuel Fire Fighting

Course Description:

This course is designed for ships sailing under the IGF code using Cryogenic classed fuels and covers a range of fire fighting techniques to control a fire or escalating emergency situation including environmental controls regarding this class of fuels.

- Fire fighting equipment used to fight cyrogenic fires.
- Safe entry and rescue to the engine room or storage areas onboard.
- Fire fighting techniques and boundary cooling and insolation.
- Remote fire compressions systems and venting safely.
- Damage control and environmental measures.

Prerequisites:

Basic Fire Fighting

Who is this Course for?

This course is available to all

Duration:

1 day

STCW Tanker Fire Fighting
(MCA Flag Requirement Only)

Course Description:

The STCW Tanker Firefighting course is set up to offer teaching on firefighting and operations on board tankers (oil, chemical and liquefied gas). The course is required to meet that essential knowledge, understanding and proficiency requirements set out in Tables A-V/1-1-1 and A/V/1-2-1 for oil and chemical tankers and liquefied gas tanker cargo. This course is a required prerequisite for BIGF.

Prerequisites:

- People looking to attend this course must have completed/be in the process of completing the STCW Fire Prevention and Firefighting course or an MCA approved equivalent.
- Prospective delegates must be physically capable to undergo the demanding practical aspects of the course. You must fill out a Medical Self Declaration Form before undergoing the course. Please consult a doctor if you are uncertain.
- Photographic proof of identity on the day of the course and this should take the form of either a valid Passport or a driving license or a valid discharge book).

Who is this course for:

In relation to alternative fuels courses, this course is for those who wish to take part in BIGF, AIGF and Combined IGF

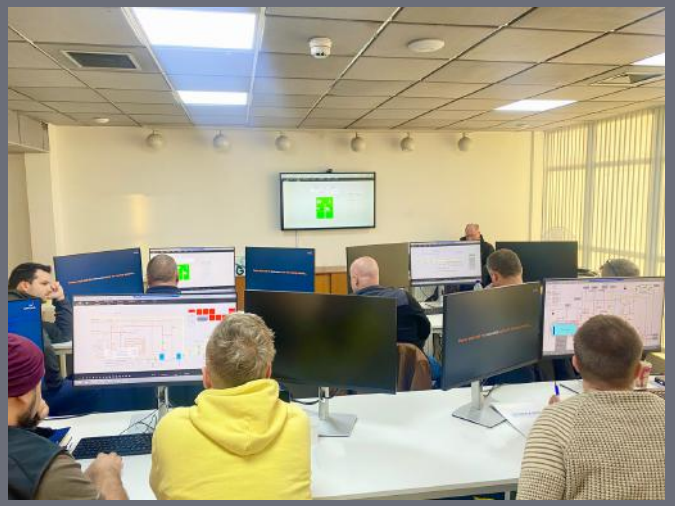
Duration:

1 day

Simulation Training

Course Description:

This section of the course will cover a range of simulated scenarios and assessments on how the situation was controlled and effectively carried out, including emergency escalation and damage control. This is designed to teach safe practise and preventive measures, and effective response to a rapid developing dangerous or potentially dangerous situations.



- Bunker simulation and venting.
- Leak detection and awareness.
- Pressure build-up and system failure.
- Bunker barge failure and escalating situation.
- Engine room fire and isolating the system safely.
- Damage assessment from a collision or running aground.
- System failure and closed space leak in engine room.

Are Bespoke Courses Available at SMT?

At Stream Marine Technical, we pride ourselves in offering the highest quality service and experience. All Alternative Fuels and Systems Courses are tailored to each client. This means that our clients will receive a bespoke course which will fit your company requirements perfectly.

LED BY INDUSTRY LEADERS

SMT have in house and industry leading technical directors that have led training and competency programmes, to be world leading and training the world's first maritime personnel and technologists.

The team leader brings a wealth of experience to the SMT team and is a fully qualified Chief Engineer and experienced Construction and Technical Manager. Our team leader worked on the systems integration and logistical systems as superintendent, before taking on a role as Technical Manger at a large ferry company. They have also been the driving force behind SMT's movement into the LNG marketplace, with their key knowledge and contacts playing a vital role in its success.

Key qualifications include:

- Chief Engineer Certificate of Competency
- Master Mariners
- Bunkering and Infrastructure for LNG Fueled Vessels
- Basic & Advanced Firefighting
- LNG as Fuel Certificate
- High Voltage Management Certificate
- Maintenance and Operation About Diesel Engine
- Engine Room Resource Management
- Diploma in Ship Superintendency

What Our Clients Say?

Orkney Council

"Orkney Marine services are at the forefront of development in marine renewables and particularly the use of hydrogen as a propulsion fuel. Our successes in developing certificated Hydrogen ships crew have been ably assisted by Stream Marine who provided the basic and advanced IGF training that our flag state required as pre-qualification. Stream Marine Training were extremely helpful by providing flexibility for our small team and also tailoring the course content as far as possible towards the need of our further development leading to very positive feedback from those that participated"

The Bahamas Maritime Authority

"[We] [The Bahamas Maritime Authority (BMA)] were very pleased with the bespoke low flashpoint fuels training provided by Stream Marine in Glasgow"

What Our Clients Say?

Caledonian MacBrayne

"Since 2017 Stream Marine have continued to deliver consistently high-quality tailor-made LNG training for Caledonian MacBrayne. Delegates have the opportunity to gain experience and develop their understanding of the hazards associated with LNG. Through this unique course delegates experience live demonstrations and are able to witness the effects of LNG releases"

V.Ships

“As V.Ships Leisure company, we are happy to have the opportunity to work with you and your professional team which led to have a full course program satisfaction ensuring competence and compliance. Our Seafarers have provided positive feedback stating that they found the IGF training course highly informative and the lecturer to be engaging and exceptionally knowledgeable in his field ”

Our Partners

The Bahamas Maritime Authority

beazley

BlueTack.

sgmf

HOW TO CONTACT US

If you are interested in any of the Training and Competency for Alternative Fuels and Systems training courses we offer at SMT, or require further information, please do not hesitate to contact us.

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