

# SESSIONS

2020 AGENDA DAY 1 - 11/02/2020

LNG Bunkering Europe Training Course

11 - 13 February 2020  
Radisson Blu Edwardian New Providence Wharf Hotel  
London

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## Registration

08:30 - 09:00

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## COURSE INTRODUCTION TO LOW FLASH POINT FUELS

09:00 - 09:30

### Why low flash point fuels?

This session will introduce the (environmental) drivers for changes in fuel use including

- How fuel use impacts the environment
- IMO and 2020
- ECAs and SECAs
- Alternative options for cleaner shipping – other low flash point fuels

### Participants

**David Haynes** - Consultant and Technical Director, SOCIETY FOR GAS AS A MARINE FUEL (SGMF), Penguin Energy

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## Use of LNG as a marine fuel

09:30 - 10:30

This session will look at how the shipping (and other transport) industry are adapting to current regulatory requirements

- How many ships are operating on LNG and where
- What does the LNG infrastructure look like?
- What is the future perception of fuel use
- Are there any analogies with other industries?

### Participants

**David Haynes** - Consultant and Technical Director, SOCIETY FOR GAS AS A MARINE FUEL (SGMF), Penguin Energy

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## Morning coffee and networking break

10:30 - 11:00

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## Introduction to the properties and behaviour of LNG

11:00 - 12:30

This session will look at how LNG behaves in storage and in use. Topics covered will include:

- What are liquefied gases?
- Compositions of fuels
- Physical properties
- Impacts of temperature and pressure on behaviour
- Vapour pressure
- Energy content and methane number
- Flammability

### Participants

**Ray Gillett** - General Manager, GTT Training

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## Lunch

12:30 - 13:30

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## MANAGEMENT OF SAFETY: Impact of spills on humans, equipment and environment

13:30 - 14:15

This session will look at the implications of using LNG should it escape its containment systems. Topics covered will include:

- How do liquefied gases behave when spilled – gas dispersion
- Ignition and fire fighting
- Impact of liquefied gases on humans - medical emergencies

### Participants

**Ray Gillett** - General Manager, GTT Training

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## Safety management

14:15 - 15:00

Safely managing LNG requires a different culture to traditional liquid based fuels. This session will look at the management systems that can be implemented to produce this; topics covered will include:

- Implications of the ISM Code
- Requirements for training

### Participants

**David Haynes** - Consultant and Technical Director, SOCIETY FOR GAS AS A MARINE FUEL (SGMF), Penguin Energy

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## Afternoon coffee and networking break

15:00 - 15:30

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## RISK ASSESSMENT: Risk assessment methods

15:30 - 16:15

- When are risk assessments required?
- Stages of a risk assessment
- Overview of some available methods
- How to do a risk assessment

### Participants

**David Haynes** - Consultant and Technical Director, SOCIETY FOR GAS AS A MARINE FUEL (SGMF), Penguin Energy

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## Case Study

16:15 - 17:00

Delegates in groups, perform a risk assessment exercise.

### Participants

**David Haynes** - Consultant and Technical Director, SOCIETY FOR GAS AS A MARINE FUEL (SGMF), Penguin Energy

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## Debriefing session

17:00 - 17:30

Review key take-away points from the day's sessions, share questions with the course leader and fellow course attendees to clarify areas of uncertainty.

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## Close of Day 1

17:30 - 17:35

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# SCHEDULE

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TIME	
08:00	08:30 - Registration
09:00	09:00 - COURSE INTRODUCTION TO LOW FLASH POINT FUELS 09:30 - Use of LNG as a marine fuel
10:00	10:30 - Morning coffee and networking break
11:00	11:00 - Introduction to the properties and behaviour of LNG
12:00	12:30 - Lunch
13:00	13:30 - MANAGEMENT OF SAFETY: Impact of spills on humans, equipment and environment
14:00	14:15 - Safety management
15:00	15:00 - Afternoon coffee and networking break 15:30 - RISK ASSESSMENT: Risk assessment methods
16:00	16:15 - Case Study
17:00	17:00 - Debriefing session 17:30 - Close of Day 1

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### Morning coffee and networking break

08:45 - 09:00

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### Normal vessel operations: Safety in design

09:00 - 09:45

- How safety is included in the design process via the IGF Code. Discussion of topics such as:
- Fuel system arrangement
  - Control systems and safety mechanisms
  - Tank location

### Participants

Ray Gillett - General Manager, GTT Training

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### Fuel supply & use equipment

09:45 - 10:30

LNG is used as a gas but stored as a liquid. This session will give an overview of how LNG is supplied and the impacts of consumption on operation and design including

- Engine/generator selection
- Need for pumps and compressors
- Vaporisation requirements and equipment

### Participants

Ray Gillett - General Manager, GTT Training

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### Morning coffee and networking break

10:30 - 11:00

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### Fuel storage

11:00 - 11:45

The gaseous nature of LNG requires different storage solutions to traditional liquid fuels. The containment system can greatly influence design. This session explores different tank systems

- Pressurised (Type C) tanks
- Unpressurised (Type A, B & membrane) tanks
- Understanding the key differences in fabrication, location and use

### Participants

Ray Gillett - General Manager, GTT Training

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### Vessel operations

11:45 - 12:30

This session will address how the fuel system needs to adapt for "normal" ship operations such as sailing and moored alongside. Topics covered will be

- Implications of major load changes on fuel system operation
- What happens when changing fuels
- Management of storage tank pressures

### Participants

Ray Gillett - General Manager, GTT Training

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### Lunch

12:30 - 13:00

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### Bunkering (I): Bunkering methods and equipment

13:00 - 13:45

Transfer of fuel requires temporary connections between a gas-fuelled vessel and the bunker supplier. There are many different options and this session will investigate these including

- Bunker vessel, road tanker and ISO container fuel supply
- Hose and fixed transfer systems including connectors

### Participants

Ray Gillett - General Manager, GTT Training

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### Bunkering safety

13:45 - 14:30

The temporary systems used for bunkering provide additional challenges for safe and responsible operation. This session will explore some of these issues including

- Controlled zones
- SIMOP issues
- PPE

### Participants

David Haynes - Consultant and Technical Director, SOCIETY FOR GAS AS A MARINE FUEL (SGMF), Penguin Energy

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### Site visit to Grain LNG Terminal

14:30 - 16:30

Delegates will visit the Klaipeda LNG terminal. After a safety briefing, the site tour will include a visit to a LNG tanker loading facility and show the main functions of this large LNG terminal.

Please remember to bring I.D with you. You may not gain entry to the site visit without it.

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### End of day 2 and Coach drop back to hotel

16:30 - 17:00

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# SCHEDULE

2020 AGENDA DAY 2 - 12/02/2020

LNG Bunkering Europe Training Course

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TIME	
08:00	08:45 - Morning coffee and networking break
09:00	09:00 - Normal vessel operations: Safety in design 09:45 - Fuel supply & use equipment
10:00	10:30 - Morning coffee and networking break
11:00	11:00 - Fuel storage 11:45 - Vessel operations
12:00	12:30 - Lunch
13:00	13:00 - Bunkering (I): Bunkering methods and equipment 13:45 - Bunkering safety
14:00	14:30 - Site visit to Grain LNG Terminal
15:00	
16:00	16:30 - End of day 2 and Coach drop back to hotel

# SESSIONS

2020 AGENDA DAY 3 - 13/02/2020

LNG Bunkering Europe Training Course

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## Morning coffee and networking break

08:45 - 09:00

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## Bunkering (II): Bunkering operations

09:00 - 10:30

This session will step through each stage of a LNG transfer process covering

- Preparation and check lists
- Hose inspection, testing and connection
- Fuel transfer (bunkering)
- Completion of bunkering including draining and purging

### Participants

**Ray Gillett** - General Manager, GTT Training

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## Morning Coffee

10:30 - 11:00

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## Custody transfer

11:00 - 11:45

This session will cover the measurement of fuels, both in terms of quantity and composition. Topics will include

- How fuels are bought and sold
- What measurements are required
- How key parameters such as quantity and quality are calculated

### Participants

**David Haynes** - Consultant and Technical Director, SOCIETY FOR GAS AS A MARINE FUEL (SGMF), Penguin Energy

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## Other operations: Maintenance, inspection and repair

11:45 - 12:30

The ways LNG behaves also has implications for ship board and dry-dock maintenance procedures. This session will look at the implications:

- Maintenance on board
- Dry-docking
- Gas-freeing and gassing up fuel tanks

### Participants

**David Haynes** - Consultant and Technical Director, SOCIETY FOR GAS AS A MARINE FUEL (SGMF), Penguin Energy

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## Lunch

12:30 - 13:30

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## LNG economics: Markets and economics

13:30 - 14:15

This session will look at the economics of LNG. Topics covered will include:

- Bulk LNG/gas pricing
- How bulk LNG pricing is reflected in LNG bunker costs
- LNG price links to other fuels

### Participants

**David Haynes** - Consultant and Technical Director, SOCIETY FOR GAS AS A MARINE FUEL (SGMF), Penguin Energy

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## Final assessment

14:15 - 15:00

Delegates will be assessed on the 4 core modules covered in the course in a multiple-choice test.

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## Case study round up

15:00 - 15:15

### Participants

**David Haynes** - Consultant and Technical Director, SOCIETY FOR GAS AS A MARINE FUEL (SGMF), Penguin Energy

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## Afternoon Coffee & Close of course and certificate collection

15:15 - 15:30

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# SCHEDULE

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10:00	10:30 - Morning Coffee
11:00	11:00 - Custody transfer 11:45 - Other operations: Maintenance, inspection and repair
12:00	12:30 - Lunch
13:00	13:30 - LNG economics: Markets and economics
14:00	14:15 - Final assessment
15:00	15:00 - Case study round up 15:15 - Afternoon Coffee & Close of course and certificate collection