

**TR 56 : Part 4 : 2020**  
(ICS 01.140.30; 47.020; 47.040)

**TECHNICAL REFERENCE**

## **LNG bunkering**

– Part 4 : Competency requirements for personnel

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ISBN 978-981-48-9488-3

The content of this Technical Reference was approved on 31 March 2020 by the Chemicals Standards Committee (CSC) under the purview of the Singapore Standards Council.

First published, 2017

First revision, 2020

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The Technical Committee set up the Working Group on LNG Bunkering Crew Training to prepare this standard. The Working Group consists of the following experts who contribute in their *individual capacity*:

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*DNV GL Singapore Pte Ltd*

*FueLNG Pte Ltd*

*Hong Lam Marine Pte Ltd*

*Maritime and Port Authority of Singapore*

*Ministry of Manpower*

*Mitsui O.S.K. Lines (MOL)*

*PSA Marine (Pte) Ltd*

*Shell Eastern Trading (Pte) Ltd*

*Sinanju Tanker Pte Ltd*

*Singapore Maritime Academy, Singapore Polytechnic*

*Wilhelmsen Ships Service (S) Pte Ltd*

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## **Foreword**

This Technical Reference was prepared by the Working Group on LNG bunkering crew training set up by the Technical Committee on LNG bunkering under the purview of CSC.

TR 56 consists of the following parts under the generic title “LNG bunkering”:

- Part 1 : General introduction
- Part 2 : Requirements for custody transfer
- Part 3 : Procedures and safety distances
- Part 4 : Competency requirements for personnel

In this revision, the following changes were made:

- Inclusion of a new element “recommended training methodologies”;
- Alignment of training requirements with the changes to TR 56 : Part 2 and TR 56 : Part 3;
- Revision of Clause 6, Clause 7 and Annexes A, B and C.

Acknowledgement is made to The Society for Gas as a Marine Fuel (SGMF) for their kind assistance in the development of this Technical Reference and for their permission to reproduce/adapt the works from the following SGMF Guidelines:

- SGMF Quality and Quantity – Contractual Guidelines (definitions into TR 56 : Part 1 : 2020 and clause 5.4 into TR 56 : Part 2 : 2020)
- SGMF LNG Bunkering Safety Guidelines (clauses 4.1.1 and 4.2 into TR 56 : Part 3 : 2020)
- SGMF Training and Competency Guidelines (definitions into TR 56 : Part 1 : 2020 and clauses 4.1 to 4.8 and clause 5 into TR 56 : Part 4 : 2020)
- SGMF Recommendation of Controlled Zones during LNG Bunkering (clause 4 controlled zones definitions into TR 56 : Part 1 : 2020)

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This TR is a provisional standard made available for application over a period of three years. The aim is to use the experience gained to update the TR so that it can be adopted as a Singapore Standard. Users of the TR are invited to provide feedback on its technical content, clarity and ease of use. Feedback can be submitted using the form provided in the TR. At the end of the three years, the TR will be reviewed, taking into account any feedback or other considerations, to further its development into a Singapore Standard if found suitable.

This TR is expected to be used by all stakeholders involved in the LNG bunker supply chain including LNG bunker suppliers, bunker tanker owners / operators, LNG fuel receiving vessels, ship owners / operators, training institutions, third party agencies and relevant authorities.

Attention is drawn to the possibility that some of the elements of this TR may be the subject of patent rights. Enterprise Singapore shall not be held responsible for identifying any or all of such patent rights.

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## **Technical Reference for LNG bunkering – Part 4 : Competency requirements for personnel**

### **1 Scope**

This part of the TR covers competencies and knowledge required by LNG bunker personnel (Management, Operation, Support and Emergency) for four modes of LNG bunkering (shore-to-ship, truck-to-ship, ship-to-ship and cassette bunkering), to supply LNG fuel safely and efficiently to ships. This part specifies the appropriate training required to achieve the requirements set out in this TR.

### **2 Normative references**

There are no normative references in this part of the TR.