

**SINGAPORE STANDARD**

# **Code of practice for bunkering**

Incorporating Corrigendum No. 1 and 2



Published by

**Enterprise**  
**Singapore**

**SS 600 : 2014**

(ICS 01.140.30; 47.020)

---

SINGAPORE STANDARD

**Code of practice for bunkering**

---

All rights reserved. Unless otherwise specified, no part of this Singapore Standard may be reproduced or utilised in any form or by any means, electronic or mechanical, including photocopying and microfilming, without permission in writing from Enterprise Singapore. Request for permission can be sent to: [standards@enterprisesg.gov.sg](mailto:standards@enterprisesg.gov.sg).

ISBN 978-981-4557-45-0

This Singapore Standard was approved by the Chemical Standards Committee on behalf of the Singapore Standards Council on 18 September 2014.

First published, 2008

First revision, 2014

The Chemical Standards Committee, appointed by the Standards Council, consists of the following members:

	<b>Name</b>	<b>Capacity</b>
<b>Chairman</b>	: Dr Keith Carpenter	<i>Member, Standards Council</i>
<b>Deputy Chairman</b>	: Dr Tay Kin Bee	<i>Individual Capacity</i>
<b>Secretary 1</b>	: Ms Elane Ng	<i>Standards Development Organisation @Singapore Chemical Industry Council</i>
<b>Secretary 2</b>	: Ms Jillian Chin	<i>Standards Development Organisation @Singapore Chemical Industry Council</i>
<b>Members</b>	: Prof Andy Hor	<i>Individual Capacity</i>
	Mr Khong Beng Wee	<i>Individual Capacity</i>
	Mr Koh Min Ee	<i>National Environment Agency</i>
	Mr Terence Koh	<i>Singapore Chemical Industry Council Limited</i>
	Prof Lee Hian Kee	<i>National University of Singapore</i>
	Dr Lee Tong Kooi	<i>Chemical Metrology Division, Health Sciences Authority</i>
	Mr Leong Kwai Yin	<i>Individual Capacity</i>
	Prof Leung Pak Hing	<i>Nanyang Technological University</i>
	Mr Lim Eng Kiat	<i>Individual Capacity</i>
	Mr Lim Kian Chye / Mr Ng Eng Fu	<i>Housing &amp; Development Board</i>
	Dr Lim Mong Hoo	<i>Individual Capacity</i>
	Dr Jerry Liu Jian Lin	<i>Singapore Water Association</i>
	Dr Loh Wah Sing	<i>Individual Capacity</i>
	Dr Ng Sek Yeo	<i>Singapore Polytechnic</i>
	Dr Parry Oei	<i>Maritime and Port Authority of Singapore</i>
	Ms Pamela Phua	<i>Singapore Paint Industry Association</i>
	Mr Seah Khen Hee	<i>Individual Capacity</i>
	Mr Tan Nguan Sen	<i>PUB, the National Water Agency</i>
	Ms Bernice Tay	<i>SPRING Singapore</i>
<b>Co-opted Members</b>	: Assoc Prof Thomas Liew	<i>Individual Capacity</i>
	Mr Nee Pai How	<i>Individual Capacity</i>
	Mr Pitt Kuan Wah	<i>Individual Capacity</i>

The Technical Committee on Bunkering, appointed by the Chemical Standards Committee, consists of representatives from the following organisations:

	<b>Name</b>	<b>Capacity</b>
<b>Chairman</b>	: Mr Seah Khen Hee	<i>Individual Capacity</i>
<b>Secretary</b>	: Ms Elane Ng	<i>Standards Development Organisation @Singapore Chemical Industry Council</i>
<b>Members</b>	: Ms Ang Chin Chin/Mr Jackson Koh	<i>Maritime and Port Authority of Singapore</i>
	Mr Chong Kam Wah	<i>Individual Capacity</i>
	Capt. Rahul Choudhuri	<i>DNV Petroleum Services Pte Ltd</i>
	Mr Darajit Daud	<i>SGS Testing &amp; Control Services Singapore Pte Ltd</i>
	Mr Kenneth Kee	<i>Society of Naval Architects and Marine Engineers Singapore</i>
	Mr Kwok Fook Sing	<i>International Bunker Industry Association (Asia) Ltd</i>
	Mr Lee Wai Pong	<i>Singapore Chamber of Maritime Arbitration</i>
	Mr Ken Lim	<i>ExxonMobil Marine Fuels</i>
	Capt. Say Eng Sin	<i>Singapore Nautical Institute</i>
	Mr Thiang Cheong Sheng	<i>Singapore Shipping Association</i>
	Ms Thng Hui Hien	<i>Shell Eastern Trading Pte Ltd</i>
	Mr Tim Wilkins	<i>The International Association of Independent Tanker Owners</i>
	Mr Wu Jian	<i>National Metrology Centre, Agency for Science, Technology and Research</i>
	Capt. Yoon Peng Kwan	<i>Singapore Shipping Association</i>

The Working Group, appointed by the Technical Committee and responsible for the preparation of this standard, consists of the following experts who contribute in their *individual capacity*:

	<b>Name</b>
<b>Convenor</b>	: Dr Khorshed Alam
<b>Secretary</b>	: Ms Elane Ng
<b>Members</b>	: Mr Francis Chin
	Mr Darajit Daud
	Mr Mathews George
	Mr Dennis Ho
	Mr Kan Hoi Yuen
	Mr Jackson Koh
	Mr Kwok Fook Sing
	Mr Simon Neo
	Mr Douglas Raitt
	Mr Subramanian Viswanathan
	Mr Thiang Cheong Sheng
	Ms Thng Hui Hien
	Mr Thomas Yeo
	Mr Yeoh Teik Chye

The organisations in which the experts of the Working Group are involved are:

*Aegean Bunkering (Singapore) Pte Ltd*  
*APL Co. Pte Ltd*  
*DNV GL (South-East Asia and Pacific)*  
*International Bunker Industry Association (Asia Branch)*  
*Lloyd's Register Asia*  
*Maritime and Port Authority of Singapore*  
*NYK Shipmanagement*  
*Ocean Tankers Pte Ltd*  
*Pacific International Lines Pte Ltd*  
*Piroj International Pte Ltd*  
*SGS Testing & Control Services Singapore Pte Ltd*  
*Shell Eastern Trading*  
*Singapore Accreditation Council*  
*Stellar Shipmanagement Services Pte Ltd*  
*Veritas Petroleum Services (Asia) Pte Ltd*

## Contents

	Page
Foreword _____	7
0 Introduction _____	9
1 Scope _____	9
2 Normative references _____	9
3 Terms and definitions _____	9
4 General requirements _____	11
5 Bunker delivery processes, roles and responsibilities _____	14

## Annexes

A	Safety, health and the environment (normative) _____	26
B	Examples of hand signals for bunkering communication (informative) _____	29
C	Bunkering pre-delivery safety checklist (informative) _____	30
D	Example of a bunker requisition form (normative) _____	32
E	Example of a non-cargo tank declaration/inspection form (normative) _____	33
F	Example of a bunker tanker measurement report (normative) _____	34
G	Example of a bunker delivery note (normative) _____	35
H	Quantity measurement and determination (normative) _____	36
I	Sampling (normative) _____	40
J	Example of a sample label (informative) _____	46
K	Example of daily entries of stock movement logbook (informative) _____	47
L	Examples of note of protest (informative) _____	48
M	Resolution of disputes (informative) _____	50
N	Singapore bunker claims procedure (SBC Terms) (informative) _____	51
O	Example of a survey time log (informative) _____	56
P	Example of a statement of fact (informative) _____	57
Q	Example of a pre-survey vessel acknowledgement (informative) _____	58
R	Example of a vessel measurement report (informative) _____	59
S	Example of a gauging ticket (informative) _____	60
T	Example of a volumetric meter delivery report (informative) _____	61
U	Example of sample witnessing and receipt (informative) _____	62
V	Precautions and limitations (informative) _____	63
W	Bibliography (informative) _____	64

As amended  
Dec 14

**Tables**

1	Documents to be obtained by respective stakeholders during entire bunkering operation _____	15
2	Sizes of reducers and adaptors depending on gross tonnage of bunker tankers _____	24
H.1	Recommended thermometer immersion time _____	39

**Figures**

I.1	Design of sampling equipment - Example 1 _____	43
I.2	Design of sampling equipment - Example 2 _____	44
I.3	Example of design of sample bottle neck and cap _____	45

## **Foreword**

This Singapore Standard was prepared by the Working Group appointed by the Technical Committee for Bunkering under the purview of the Chemical Standards Committee.

CP 60 on bunkering by bunker barges/tankers was first published in 1993 and underwent two revisions in 1996 and 2004. CP 60 was based on the second edition of the "Singapore bunkering procedure (for bunkers delivered by bunker barges/tankers to ships)", published by the Singapore Shipping Association (SSA) in association with the Maritime and Port Authority of Singapore (MPA) in 1992.

In 2008, SS 600 was developed to replace CP 60 : 2004 – 'Code of practice for bunkering by bunker tankers' and CP 77 : 1999 – 'Code of practice for bunker surveying'.

SS 600 : 2008, a combination of the requirements of CP 60 and CP 77, was in compliance with Maritime and Port Authority of Singapore (MPA)'s requirements on bunker delivery in the Port of Singapore by bunker tankers to vessel. MPA is the implementing authority of this standard.

In this 2014 revision, the particular changes include the following:

- a) Merging of Chapters 1 and 2 of SS 600 : 2008 and restructuring of the code according to the bunkering processes (pre, during and post);
- b) Clause 4 describes the general requirements and Clause 5 covers detailed processes, procedures, roles and responsibilities of all stakeholders (cargo officer, chief engineer and bunker surveyor (if engaged)).

This standard was developed for the benefit of the ship bunkering industry in Singapore comprising shipowners, operators, charterers, bunker suppliers, bunker craft operators and bunker surveyors.

This standard will ensure that the correct quality and quantity of the bunkers is delivered in a safe and efficient manner.

It aims to achieve zero bunkering disputes. If however, a dispute should arise, this standard should provide the technical basis for the resolution of the dispute through negotiation, conciliation or arbitration.

When approved mass flow meters are used instead of tank gauging for bunker delivery, the interested parties involved in the bunker operation shall refer to the MPA approved MFM bunkering procedure available onboard of the bunker tanker. The bunker operation shall be carried out in accordance with this approved procedure.

In cases where arbitration is sought, the Singapore Chamber of Maritime Arbitration (SCMA), Maritime and Port Authority of Singapore (MPA) and Singapore Shipping Association (SSA) have drawn up a "Singapore bunker claims procedure (SBC Terms)" (see Annex N) for the resolution of disputes arising from bunker deliveries (see Annex M). Shipowners/buyers and bunker suppliers are encouraged to incorporate an arbitration clause into their contract for the supply of bunkers in order to facilitate the settlement of any dispute arising from bunker deliveries (see Annex M).

In preparing this standard, reference was made to the publications listed in Annex W.



In Annex H, points f) and g) of H.1.4 and Table H.1 were adapted from API Manual of Petroleum Measurement Standards, Chapter 3.1A and Chapter 7 respectively. Acknowledgement is made for the use of information from the above reference.

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

**NOTE**

1. *Singapore Standards (SSs) and Technical References (TRs) are reviewed periodically to keep abreast of technical changes, technological developments and industry practices. The changes are documented through the issue of either amendments or revisions.*
2. *An SS or TR is voluntary in nature except when it is made mandatory by a regulatory authority. It can also be cited in contracts making its application a business necessity. Users are advised to assess and determine whether the SS or TR is suitable for their intended use or purpose. If required, they should refer to the relevant professionals or experts for advice on the use of the document. Enterprise Singapore shall not be liable for any damages whether directly or indirectly suffered by anyone or any organisation as a result of the use of any SS or TR.*
3. *Compliance with a SS or TR does not exempt users from any legal obligations.*

## **Code of practice for bunkering**

### **0 Introduction**

This Singapore Standard is promulgated to standardise acceptable bunkering practices by bunker tankers to vessels. The standard provided herein is not intended to overrule any guidelines contained in any contract or applicable recommended practices of other regulatory or standard bodies, or to conflict with safety and environmental considerations or local conditions.

It is important that sufficient time is allocated by shipowners/buyers and suppliers for the thorough measurements required on the bunker tanker and vessel for the proper completion of the bunkering operation.

This standard does not alter the contractual obligations of the parties involved in the bunker delivery.

### **1 Scope**

The scope of this standard specifies the processes and procedures, requirements, roles and responsibilities of all parties concerned, for the delivery of bunkers by bunker tankers in the Port of Singapore, including documentation, equipment standards and verification processes during a bunkering operation. It covers pre-delivery, actual delivery and post-delivery checks and documentation.

### **2 Normative references**

The following referenced documents are indispensable for the application of this standard. For undated references, the latest edition of the referenced document (including any amendments) applies, unless otherwise stated by the implementing authority.

ASTM D1250	Standard guide for use of the petroleum measurement tables (equivalent to API <i>MPMS</i> Chapter 11.1/Adjunct to IP 200)
IMO Regulations - Annex VI of MARPOL 73/78	Regulations for the prevention of air pollution from ships
ISO 8217	Petroleum products – Fuels (Class F) – Specifications of marine fuels
SS 524	Quality management for bunker supply chain (QMBS)