TR 48: 2015

SS 648: 2019

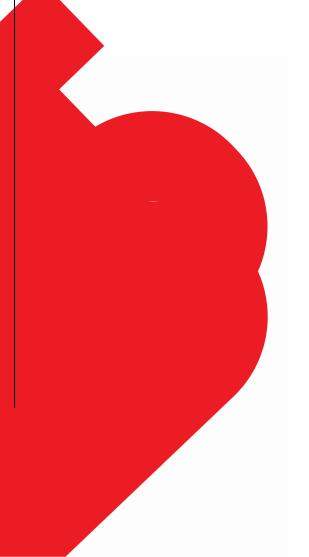
(ICS 01.140.30; 47.020)

TECHNICAL REFERENCE

Bunker mass flow metering

SINGAPORE STANDARD

Code of practice for bunker mass flow metering





TR 48: 2015 SS

648:2019

(ICS 01.140.30; 47.020)

TECHNICAL REFERENCE SINGAPORE STANDARD Code of practice for bunker mass flow metering

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ExxonMobil Asia Pacific Pte Ltd

Krohne (South East Asia) Pte Ltd

Maersk Oil Trading Singapore Pte Ltd

Maritec Pte Ltd

Maritime and Port Authority of Singapore

Metcore International Pte Ltd

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Peninsula Petroleum Limited

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Sentek Marine & Trading Pte Ltd

SGS Testing & Control Services Singapore Pte Ltd

Shell International Eastern Trading Company

Sinanju Tankers Pte Ltd

Veritas Petroleum Services (Asia) Pte Ltd

^{*}Served till May 2019.

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Foreword

This Technical Reference (TR) Singapore Standard was prepared by the Working Group (WG) on Mass Flow Metering appointed set up by the Technical Committee for on Bunkering under the purview of the Chemical Standards Committee (CSC).

This TR is based on the current knowledge, extensive field trials and experience gained in the new application of Coriolis standard was first developed as TR 48: 2015, "Technical Reference for bunker mass flow metering technology for the bunkering industry.". TR 48 was

This TR is a provisional standard made available for application over a period of two 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 two 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.

The changes resulting from the review are as follows:

- Expanded the scope of the standard to cover 2020 compliant fuels such as distillate fuels;
- Included multi meter installation;
- Enhanced zero verification procedure;
- Provided better clarity on the role of bunker surveyors.

In preparing this TR standard, reference was made to the following standards publications:

American Petroleum Institute Manual of Petroleum Measurement Standards

API MPMS 5.6:2002(2008) Measurement of liquid hydrocarbons by Coriolis meters

American Society of Mechanical Engineers

ASME MFC-11:2006 (R2014) Measurement of fluid flow by means of Coriolis mass flow

meters

International Organization for Standardization

ISO 10790:19992015 Measurement of fluid flow in closed conduits – Guidance to the

selection, installation and use of Coriolis meters flowmeters

(mass flow, density and volume flow measurements)

ISO/IEC 17025:2017 General requirements for the competence of testing and

calibration laboratories

Bureau International des Poids et Mesures

Joint Committee for Guides in International vocabulary of metrology – Basic and general

Metrology JCGM 200:2012 concepts and associated terms (VIM) 3rd Edition

International Organization of Legal Metrology

OIML D028:2004 Conventional value of the result of weighing in air

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