



23rd APLMF Meeting
Tokyo, Japan

Economy Report

Singapore

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SECTION 1 – Organisation and structure for metrology

Organisation Structures

Legal Metrology Authority

Singapore's authority for legal metrology is SPRING Singapore, which is an agency under the Ministry of Trade and Industry responsible for helping Singapore enterprises grow, and building trust in Singapore products and services. SPRING is also the national standards and accreditation body which develops and promotes an internationally recognised standards and quality assurance infrastructure.

The Consumer Protection, Weights and Measures Division in SPRING Singapore plays an important role in protecting consumers and traders, by regulating the use of weighing and measuring instruments used for trade and pre-packaged goods. It administers Singapore's Weights and Measures programme, which ensures that a uniform and accurate system of weights and measures is used in Singapore, thereby ensuring fair trade and correct measurement for excise tax computation.

Custodian of National Standards

The National Metrology Centre (NMC) of the Agency for Science, Technology and Research (A*STAR) serves as the custodian of the national measurement standards in Singapore. It is responsible for the establishment and maintenance of Singapore's highest metrology reference standards traceable to the International System of Units established under the Metre Convention.

Legislative Frameworks

SPRING Singapore administers the following legislation as part of the Weights and Measures Programme:

- Weights and Measures Act, Chapter 349
- Weights and Measures Regulations 2005
- Weights and Measures (Savings) Regulations 2005
- Weights and Measures Fees Regulations 2005
- Weights and Measures (Defences under Section 19) Regulations 2005
- Weights and Measures (Sales of Goods in Metric Unit) Order

International arrangements and engagement

ASEAN Consultative Committee on Standards and Quality (ACCSQ)

SPRING Singapore participates in the ACCSQ's Working Group on Legal Metrology (WG3). The WG3 is a platform for ASEAN Member States (AMS) to share experiences and cooperate on legal metrology matters, with the aim of removing technical barriers to trade associated with legal metrology. The most recent WG3 meeting was held from 2-4 Aug 2016, in Da

Nang, Vietnam, where AMS discussed on the harmonization of technical requirements, particularly for non-automatic weighing instruments and pre-packaged products.

Under the WG3, SPRING Singapore is playing a coordinating role in consultation with New Zealand's Ministry of Business, Innovation and Employment, on the development of a case study for a potential ASEAN quantity mark system. Singapore is also contributing to the development of a set of ASEAN guidelines on implementation of Type Approval Controls for Weighing and Measuring Instruments.

Regional Train-the-Trainer Workshop on the “Control of Pre-packaged Products”

SPRING participated in the Regional Train-the-Trainer Workshop on the “Control of Pre-packaged Products” organised by Germany's Physikalisch-Technische Bundesanstalt (PTB), from 25 – 29 Jul 2016 in Cambodia. The workshop intended for AMS, is in support of the capacity building activities of the ACCSQ WG3 to promote uniform implementation of the ASEAN Common Requirements of Pre-packaged Products. The workshop enhanced understanding on the:

- ASEAN Common Requirements of Pre-packaged Products;
- Verification procedures; and
- Methodologies in conducting inspections.

OIML Training Course on Non-Automated Weighing Instruments (NAWI)

Singapore attended the inaugural training course organised by the OIML Pilot Training Centre, from 18-22 July, in Beijing, China. The objective of the training course on NAWI was to enhance technical capabilities of participants, and provide harmonized procedures (aligned with OIML R 76) for testing of NAWI.

Participants were given the opportunity to have hands-on practice in conducting the various tests for verifying and determining the acceptability of instruments.

SECTION 2 – Key activities of 2015/16

Working with industry

Implementation of the International Maritime Organisation’s Safety of Life At Sea (SOLAS) Regulations

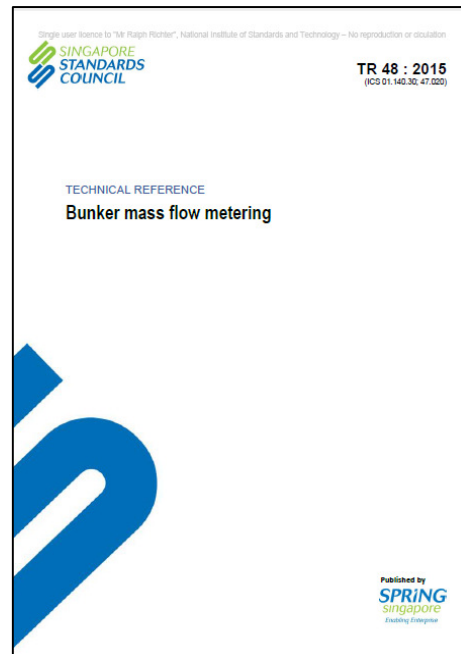
SPRING Singapore worked with Singapore’s regulator for maritime shipping, the Maritime Port Authority (MPA) on the regulation/verification of weighing and measuring instruments for fulfilment of SOLAS requirements. For obtaining the “verified gross mass” of containers as required under SOLAS, MPA has imposed a requirement for shippers to use equipment that comply with, and are verified in accordance with requirements of SPRING’s Weights and Measures Programme.

Development of TR 48:2015 – Technical Reference on Bunker Mass Flow Metering

SPRING Singapore has contributed to the development of a new standard, TR 48:2015 on bunker quantity measurement, to specify the approval stages and acceptance test methods for Mass Flowmeter (MFM) systems installed on board bunker barges, as well as the processes for the handling, analysis and tracking of the MFM data.

The implementation of MFM systems for bunkering has presented significant improvements in productivity, reliability, and accuracy, as well as helped to increase port capacities to handle larger volumes of fuel transacted in Singapore waters.

The development of the TR 48 took about 5 years, and has been based on extensive trials and the expertise of various industry and government stakeholders.



Singapore International Bunkering Conference (SIBCON) 2016

The SIBCON event was held from 4 - 7 Oct 16 in Singapore. The event aimed at engaging industry stakeholders through dialogues and networking sessions. Key highlights of the event included:

- (i) Effective risk management and post implementation challenges of TR48:2015 Technical Reference for Bunker Mass Flow Metering (TR48);
- (ii) Delivery of bunkers through Mass Flow Meter (MFM);
- (iii) Development of LNG bunkering standards; and
- (iv) Outlook of the marine fuel industry.

Protecting consumers

SPRING undertakes regular outreach and educational activities to raise traders' awareness of the requirements under the Weights and Measures Act and Regulations. For example, SPRING partners the trade associations (e.g. Singapore Jewellers Association, Singapore Pawnbrokers Association) to educate their members.

Spring Singapore to conduct more spot checks for product safety this year



1 of 4 Spring-appointed authorised verifiers Mr Vincent Tan (right) and Mr James Lai (left) place calibrated weights onto a weighing scale as they demonstrate how they ensure the accuracy of weighing and measuring instruments. ST PHOTO: NEO XIAOBIN

SPRING also works with the Consumers Association of Singapore (CASE) to raise consumer awareness on how to check that weighing and measuring instruments used by traders are providing accurate measurements. The annual CASE Carnival was held from 8-12 Mar 2016, where SPRING operated an exhibition booth to educate consumers on choosing safe products, and getting what they pay for when purchasing goods.

SECTION 3 – Future focus

New initiatives planned (next 1-2 years)

Development of Standards for Liquefied Natural Gas (LNG)

Under the Singapore Standardisation Programme, Singapore has established a Technical Committee (TC) on LNG Bunkering to develop standards for the procedures and specifications of LNG for bunkering.

Specifically, there are three new standards being developed, which aim to help our industries transit to the usage of more sustainable fuels for bunkering. The standards will also look into the guidelines in determining the quality and quantity measurement:

1. Specification of LNG grade as marine fuel
2. LNG bunkering procedures and safety distance
3. Training of crew of fixed and mobile bunkering facilities designed to supply LNG fuel at cryogenic temperature to ships

Emerging issues – challenges and opportunities

As Singapore looks to implement new measurement techniques and technologies for use in fields such as bunkering and LNG, we need to ensure that infrastructure developments and available resources/expertise are able to keep up with increasing demands.