



ASIA-PACIFIC
LEGAL METROLOGY FORUM

24th APLMF Meeting
Siem Reap, Cambodia

Economy Report - 2017

Singapore

Report developed by

Andrew Yap

Position

Senior Manager

Organisation

SPRING Singapore

Contact details

andrew_yap@spring.gov.sg (Email), 62791839 (DID)

SECTION 1 – Organisation and structure for metrology

Organisation Structures

Authority for Legal Metrology – SPRING Singapore

SPRING Singapore is an agency under the Ministry of Trade and Industry responsible for facilitating the growth of local enterprises, 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. Singapore's Weights & Measures Authority comes under the Consumer Protection, Weights & Measures Division of SPRING Singapore.

SPRING plays an important role in protecting consumers and traders, by administering Singapore's Weights & Measures Programme which regulates the use of weighing and measuring instruments used for trade, and the net contents of pre-packaged goods. It 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 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 participates in the ACCSQ's Working Group on Legal Metrology (WG3). The WG3 serves as a platform for ASEAN Member States (AMS) to learn from one another, to align and improve AMS' national legal metrology systems, and to ensure that technical barriers to trade associated with legal metrology are not introduced.

The last WG3 meeting was held from 12-14 July in Yangon, Myanmar. Fruitful discussions were held on the harmonisation of verification procedures for weighing and measuring (WM) instruments, and for testing of pre-packaged products. The working group is also exploring avenues for collaboration with scientific metrology experts under ASEAN’s “Expert Group on Metrology” (EGM) to develop an integrated roadmap for metrology in ASEAN.

MEDEA Train the Trainer Course on the Verification of Bulk Flow Metering Systems using a Master Meter

SPRING took part in the MEDEA training course on verification of bulk flowmeter measuring systems using the master meter method, from 24 - 27 July 17, in Pattaya, Thailand. The course objectives were to enhance the technical capabilities of participants and provide harmonized procedures for testing of flowmeter systems, in line with OIML R-117 recommendations. Thailand’s Eastern Weights and Measures Centre demonstrated the capabilities of their flowmeter calibration set-up, based on the master meter and prover tank proving methods.



MEDEA Training Course on Verification of Weighbridges

SPRING also participated in the MEDEA training course on verification of weighbridges held from 26 - 29 September 17 in Beijing, China. The course was organised by Germany’s Physikalisch-Technische Bundesanstalt (PTB) and the APLMF, and taught participants on the verification procedures for weighbridges utilising substitution materials in accordance with OIML R76.



SECTION 2 – Key activities of 2016/17

Working with industry

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

SPRING contributed to the development of Singapore's Technical Reference for Bunker Mass Flowmetering (TR 48), to specify the procedures and requirements for use of Mass Flowmeter (MFM) systems installed on board bunker barges.

The TR 48 was launched in June 2016, and the use of MFMs for custody transfer of marine fuel oil was mandated by Singapore's Maritime Port Authority (MPA) since January 2017. SPRING has been supporting this initiative through the acceptance of MFMs for custody transfer applications in Singapore.

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.

Development of Technical Reference for Liquefied Natural Gas Bunkering (TR 56)

Under the direction of Singapore's Chemical Standards Committee, SPRING has worked on the development of a Technical Reference for Liquefied Natural Gas (LNG) Bunkering (TR 56).

The TR aims to help Singapore industries transit to the usage of more sustainable fuels for bunkering, in view of the International Maritime Organisation's implementation for a 0.5% global sulphur cap in 2020. It is applicable to bunkering of both seagoing and inland trading vessels, and covers the procedures and requirements for safety, competency and custody transfer measurements of LNG delivery.

TR 56 was launched in April 2017, and will be used as a provisional standard for guiding industry members in implementing LNG bunkering procedures. The TR is intended to be adopted into a full Singapore Standard taking into consideration industry experience and feedback from the initial implementation period.

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 with businesses, trade associations, as well as other regulatory authorities to educate and share on regulatory requirements pertaining to weights and measures.

Industry Seminar for Food Product Manufacturers

For example, in February 2017, SPRING took part in an industry seminar organised by the Singapore Agri-Food & Veterinary Authority of Singapore for food manufacturing/packing

companies to share on food safety, good manufacturing practices, and average quantity requirements for the contents of pre-packaged food products.



Market Surveillance on Pre-packaged Products

SPRING has also recently initiated active market surveillance on pre-packaged products and conducted testing on brands of infant milk powder and other food items available in the market.



Routine Inspection on Weighing & Measuring Instruments

SPRING continues to conduct routine inspections of weighing and measuring instruments used for trade purposes, for compliance with regulatory requirements. In Singapore, such instruments are required to be verified annually. In 2016, inspections were made on more than 12,000 instruments in places such as the wet markets, pawn shops, medical halls and petrol kiosks. In the same year, SPRING had partnered the media for a coverage on the enforcement activities undertaken to create greater awareness on the regulatory requirements.



SECTION 3 – Future focus

New initiatives planned (next 1-2 years)

SPRING will continue to work with the MPA and technical experts from industry to enhance the technical references to accommodate the use of Mass Flowmeters for measuring of low sulphur content marine bunker fuel and LNG.

SPRING also intends to conduct further testing on pre-packed goods in the market, to gather data in order to conduct an analysis of the compliance rates, as well as enhance outreach and awareness of consumers and traders in this area.

Emerging issues – challenges and opportunities

Singapore is exploring ways to develop effective market surveillance approaches for pre-packaged products and weighing and measuring instruments. This is becoming increasingly relevant as new technologies and products are ever more rapidly being introduced to the market.

Singapore is also reviewing our Weights & Measures Act and Regulations to ensure that they remain effective and relevant to the types of instruments, products and practices affecting consumers and traders.