

## **Agenda item 8.4.2**

### **Weighing of freight (shipping) containers**

#### **Legal metrology implication of an amendment to the International Maritime Organisation's Safety Of Life At Sea (SOLAS) Convention**

#### **Introduction**

In early 2015, this subject was brought to the BIML's attention by a message from New Zealand Trading Standards. They had been asked to help implement new regulations from the International Maritime Organisation (IMO) which will make it compulsory to weigh freight containers before they are loaded onto ships. The current requirements simply require a weight to be declared by the shipper, and these have been shown to be highly inaccurate.

The BIML approached the IMO and the World Shipping Council about this, and the subject was to be followed up at a later date.

In August 2015, the BIML was approached by the International Cargo Handling Coordination Association (ICHCA) to participate in a seminar on this subject in London in September 2015. A report of this seminar, which was published in the October 2015 OIML Bulletin, is attached.

The purpose of this paper is to ensure that OIML Member States and Corresponding Members are aware of these regulations so that they can ensure that they are involved with any other government departments in their countries who may be implementing these regulations nationally. It is essential that an international approach be taken in this area to avoid technical barriers to trade in this crucial area of international trade, and to ensure that the weight values obtained under these regulations are metrologically sound.

There is considerable concern that those who may be responsible for the enforcement of these regulations are not currently aware of their existence, and that the deadline for their implementation is 1 July 2016.

The affected requirements are contained in the Safety of Life at Sea (SOLAS) Convention Chapter VI Regulation 2 – Cargo information. The IMO guidelines on this subject can be downloaded from here:

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/433904/MSC.1-Circ.1475.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/433904/MSC.1-Circ.1475.pdf)





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Can legal metrology help the container transport sector?

## CONTAINER WEIGHING

### A technical seminar from ICHCA International

11 September 2015, London

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#### 1 Introduction

New regulations from the International Maritime Organisation (IMO) requiring the verification of a freight container's gross mass will become mandatory across the world from 1 July 2016. Many organisations and countries are not yet prepared for this significant change to global container operations.

This technical seminar was held just before the second meeting, in London, of the body which developed this legislation, the IMO's Carriage of Cargoes and Containers (CCC) sub-committee. It was a practical one-day seminar which brought all the interested parties together to discuss how the new IMO regulations on container weighing can be implemented with minimum disruption to the container logistics chain. It was organised by the International Cargo Handling Coordination Association (ICHCA), an independent, not-for-profit organisation dedicated to improving the

safety, security, sustainability, productivity and efficiency of cargo handling and goods movement by all modes and through all phases of national and international supply chains.

#### 2 Background

Until now, the gross mass of freight containers has simply been declared by the shipper when they are loaded onto a vessel, without a requirement for this mass to be checked by weighing. These declared gross mass values are very often significantly over or under the true mass value, both being a major problem for the safe loading of ships.

Over about seven years, results of incidents, published reports and concerns expressed by carriers and others within the transport supply chain have indicated problems with the mis-declaration of the gross mass of packed freight containers. The IMO has therefore amended the Safety of Lives at Sea (SOLAS) Chapter VI Regulation 2 to address these concerns.

From 1 July 2016, all freight containers will be required to have a verified gross mass before they are loaded onto a ship. Since the supply chain is a complex and dynamic system consisting of a number of different companies that work together to produce, transport and deliver goods from the supplier to the customer, compliance with these provisions will mean that these participants need to work together to ensure that verified gross mass values are available prior to loading.

#### 3 Guidance on the new SOLAS requirements

The IMO has issued a guidance document on the new SOLAS requirements (*MSC.1/Circ.1475 Guidelines regarding the verified gross mass of a container carrying cargo dated 9 June 2014*) which is intended to establish a common approach for implementation and enforcement of the SOLAS requirements. It asks its Member Governments to bring the Guidelines to the attention of all parties concerned.

##### 3.1 Main principles

It is the responsibility of the shipper to obtain and document the verified gross mass of a packed container. A packed container cannot be loaded onto a ship unless the master and terminal operator have received its verified gross mass in advance of loading.



How can the mass of containers be measured in order to distribute the load evenly on the ship during loading?

## Seminar Programme

09:00 Welcome and introductions

*Rachael White, CEO Secretariat, ICHCA International*

### **09:15 SESSION 1: WHAT IS REQUIRED UNDER THE NEW LAW AND HOW WILL IT BE ENFORCED?**

09:15 Moderator's opening remarks

*Capt. Richard Brough OBE, Technical Advisor, ICHCA International*

09:20 IMO: the legislative route and global expectations

*Loukas Kontogiannis, Technical Officer, Maritime Safety Division, International Maritime Organization (IMO)*

09:40 Background and new operational reality

*Lars Kjaer, Senior Vice President, World Shipping Council*

10:00 Enforcement in the UK and the MCA approach to Methods 1 & 2

*Keith Bradley, Hazardous Cargoes Advisor, UK Maritime and Coastguard Agency*

10:20 A first look at the UK's Accredited Shipper approval scheme

*Chris Welsh M.B.E., Secretary General, Global Shippers' Forum & Freight Transport Association*

10:40 EDI and exchange of messages: Challenges and solutions

*Alan Long, Chief Executive, Maritime Cargo Processing*

### **11:40 SESSION 2: panel DEBATE: FROM LEGISLATION TO IMPLEMENTATION: MAKING IT HAPPEN**

*John Foord, President Designate, FONASBA*

*Peregrine Storrs-Fox, Risk Management Director, TT Club*

*Chris Welsh M.B.E., Secretary General, Global Shippers' Forum & Freight Transport Association*

*Robert Windsor, Policy & Compliance Manager, CLECAT*

13:30 Moderator's opening remarks

*Laurence Jones, Director Global Risk, TT Club*

### **13:40 SESSION 3: LEGAL, CONTRACTUAL AND COMMERCIAL IMPLICATIONS**

*Matthew Gore, Senior Associate, Holman Fenwick Willan*

### **14:00 session 4: CONSIDERATIONS AND OPTIONS FOR WEIGHING CONTAINERS UNDER METHOD 1**

14:00 Evaluating alternative weighing methods

*Bill Brassington, Owner, ETS Consulting*

14:20 Weighing containers in ports - people, process and technology

*Beat Zwygart, Manager, LASSTEC Container Weighing Systems, Conductix-Wampfler*

14:40 Container weights and loads from the perspective of the Rail Regulator

*Richard Thomas, HM Inspector of Railways, Track Team, Office of Rail and Road*

15:00 Calibration and certification of weighing equipment from a global perspective

*Ian Dunmill, Assistant Director, BIML*

### **15:50 SESSION 5: PANEL DEBATE: WEIGHING PRACTICALITIES AND ISSUES WITH METROLOGY**

*Bill Brassington, Owner, ETS Consulting*

*Ian Dunmill, Assistant Director, BIML*

*Marc Lefebvre, Cargo / Terminals / Dry Ports Director, CMA CGM*

*Nichola Lund, Metrology Partnership Manager, UK Trading Standards*

*Beat Zwygart, Manager, LASSTEC Container Weighing Systems, Conductix-Wampfler*

16:45 Conclusions and next steps

*Capt. Richard Brough O.B.E., Technical Advisor, ICHCA International*

17:00 Closing remarks and acknowledgements

*Rachael White, CEO Secretariat, ICHCA International*

## **3.2 Methods for obtaining the verified gross mass of a packed container**

The SOLAS regulations prescribe two methods by which the shipper may obtain the verified gross mass of a packed container:

### *Method 1*

Weighing the container once it has been packed and sealed using calibrated and certified weighing equipment. This equipment needs to meet "the accuracy standards and requirements of the State in which the equipment is being used".

### *Method 2*

Weighing all packages and cargo items, including the mass of pallets, dunnage and other securing material to be packed in the container and adding the tare mass of

the container to the sum of the single masses. This method may not be suitable for all types of cargo. The procedure used for *Method 2* is subject to certification and approval in the state in which the packing and sealing was completed.



Was excess container mass a contributory factor in the breakup of this ship?

## 4 The seminar

Around one hundred participants attended the seminar. The programme consisted of presentations covering the main regulatory and technical aspects of the new regulations as well as panel discussions following each of the sessions. The OIML was invited to participate in the seminar as a speaker following some initial approaches to the IMO and the World Shipping Council to explore the relevance of these new regulations to legal metrology.

## 5 Issues

During the seminar, a number of concerns were expressed, which have not yet been resolved:

- The timescale for the implementation of these regulations is very short considering the new infrastructure which may be required.
- Ports operators are generally not equipped to weigh containers on arrival at the port, and some are unwilling to invest in this area. There is also the issue of what to do with containers which arrive at a port unweighed, or which on weighing at the port are found to be illegal for the road transport which got them there!
- Although the procedure used for Method 2 needs to be "certified and approved", the way in which this is done may vary across the world since it is left to individual countries to decide.

■ Method 2 also relies on the declared tare mass of the containers, which is usually calculated from the design and construction, and is frequently highly inaccurate.

■ The guidelines contain no information on the required accuracy of the "verified gross mass", nor on the kind of weighing instruments to be used, which will lead to different rules being applied in different countries.

■ Although accurate gross mass is an important step in maritime freight security, the uneven loading of the cargo inside a container will still be a problem for the safe handling of containers within ports, as well as being a contributory factor to a significant number of accidents during the road transport of freight containers.

■ It is up to IMO Member States to bring these new requirements to the attention of all interested parties, but most legal metrology authorities do not appear to be aware of them, probably since they are not part of the same government departments or ministries as those responsible for maritime matters. There is also the issue of whether weighing instruments used for the weighing of containers under the SOLAS regulations will fall under legal metrology control in individual countries.

These issues, and others raised during the seminar are being discussed by the various industry and regulatory groups concerned. Due to its significance in world trade and the reduction of technical barriers to trade, we hope to publish a more in-depth article on this subject in a future OIML Bulletin. ■

