

April 2016

## **Verified gross mass**

**Dennis L. Bryant**

The requirement that shippers of marine containers in international commerce provide the carrier with the verified gross mass of each container prior to loading enters into effect on 1 July 2016. Some shippers are asking that the effective date be delayed or that the requirement be repealed or, at least, not enforced. These shippers seem to be arguing that the requirement has caught them by surprise and that it is unnecessary.

Development of the so-called container revolution greatly increased the speed and efficiency with which cargoes could be transported, particularly in the marine environment. Someone acting on behalf of the shipper 'stuffs' a container, fills out the necessary paperwork showing the nature of the cargo, its weight or mass, the sender, the receiver, the destination, and other details. The container and the paperwork are then provided to the carrier, who assumes responsibility for getting the container to its destination (or at least the port of disembarkation).

This efficiency sacrificed two important items: the actual nature of the cargo and the actual weight of the cargo. To accommodate the speed required by the modern maritime transportation network, the carrier took the shipper at his word that the cargo was that shown on the manifest and that the mass of the container was also as shown. There have been a number of incidents where containerized cargoes listed as non-hazardous have been found to be hazardous, presenting unexpected dangers to the crew of the container ship, the ship itself, salvors, and the marine environment.

In addition, there have been numerous incidents where the actual mass of a container has far exceeded the mass declared by the shipper in the paperwork provided to the carrier. Since the cost charged by a carrier to transport a container is largely based on the size of the container (not its mass) and because the container vessel trade is highly competitive, carriers have generally turned a blind eye to this latter issue.

Loading a container where there is a significant disparity between the declared mass and the actual mass can be fraught with danger. Ideally, heavy containers should be placed low in the hold and distributed so as not to put excess stress on the hull. Heavy containers should not be placed atop light ones and should not be placed outboard, where lateral stresses experienced in a seaway are greatest. The ship (generally the chief mate) makes stowage decisions based in large

part on the information provided by the shipper. Like misdeclared hazardous cargo, misdeclared mass can place the crew, the ship, and others at unnecessary risk.

On 11 June 2011, the container ship DENEBA, while loading containers at the port of Algeciras, listed heavily to port, coming to rest at an angle of 50° against the pier. Investigation by the Spanish Standing Commission for Marine Accident and Incident Investigations found that the excessive listing and near-capsizing of the vessel was due in part to the fact that the weights declared for many of the containers were much lower than the actual weights.

On 27 January 2006, during heavy weather in the North Atlantic, the container ship P&O NEDLLOYD GENOA incurred the loss of 27 containers overboard and the collapse of 28 other containers. Subsequent investigation revealed that two of the damaged containers were significantly over their declared weight. The UK Marine Accident Investigation Branch (MAIB) noted that no mechanism existed for verifying declared container weights.

On 18 January 2007, during heavy weather in the English Channel, the container ship MSC NAPOLI broke its back. Taken under tow, the ship was intentionally grounded in Branscombe Bay, Devon, UK. During the complex salvage operation that followed, 660 containers that had been stowed on deck and remained dry were weighted. The weights of 137 of those containers (20.8%) were each more than three tonnes greater than their declared weights. The largest single difference was 20 tonnes and the total weight of the 137 misdeclared containers was 312 tonnes heavier than on the cargo manifest. The MAIB investigation went on to state:

*This discrepancy is widespread within the container ship industry and is due to many packers and shippers not having the facilities to weigh containers on their premises. It is also due to shippers deliberately under-declaring containers' weights in order to: minimize import taxes calculated on cargo weight; allow the over-loading of containers; and to keep the declared weight within limits imposed by road or rail transportation.*

The container ship sector has been complaining about under-declared container weights for years. It has prepared and distributed to shippers guidance on how to determine the weight of containers, either by actually weighting stuffed containers or by exercising more care in calculating the weight of cargo placed into a container. These efforts have been unsuccessful. In recent years, the sector (with assistance and support from other, larger carrier groups) has taken the problem to the IMO. After several years of study, a correspondence group of the IMO Subcommittee on Dangerous Goods, Solid Cargoes and Containers (DSC) in 2013 recommended that the International Convention for the Safety of Life at Sea (SOLAS Convention) be amended to include provision for mandatory verification of the gross mass of packed containers. After deliberation, DSC approved the recommendation and forwarded it to the Maritime Safety Committee (MSC) for consideration.

On 30 May 2014, the 93rd Session of the MSC approved a proposed amendment to the SOLAS Convention to make verification of the gross mass of containers mandatory prior to

loading of the containers on ships engaged on international voyages subject to the Convention. This was followed shortly by the issuance on 9 June 2014 of guidelines regarding the determination of the verified gross mass of a container carrying cargo (MSC.1/Circ.1475). On 21 November 2014, the 94th Session of the MSC formally adopted the SOLAS amendment [Resolution MSC.380(94)] and, under the tacit approval process, provided for an effective date of 1 July 2016 so as to give all stakeholders sufficient time for implementation.

There are several process issues that remain unresolved. These involve the actual calculation of the mass of individual containers, the recordation of that mass, and the transmission of that calculation to the ship master. Uniformity may not be desired or even possible, but procedures must be developed. There is also the question of identifying the 'shipper' of a particular container. In many cases this will be obvious, but in other instances as where cargoes are aggregated, less so. Finally, there is the question of who will pay the added costs.

In recent months a shipper group has vocally complained about the upcoming requirement. Arguments have been brought forth that this world-wide requirement will cause a significant competitive disadvantage to US exports; that the process does not account for container or weight variance; and that it imposes new costs on all participants in US export supply. A shipper position paper also states: "The amendment was created as a response to claims that there have been incidents of damage caused by overweight containers, although the International Maritime Organization's SOLAS committee (sic) did not reference any instance where a ship had been damaged or sunk exclusively due to overweight under (sic) reported containers (emphasis added)." We don't stop making incremental improvements to highway safety just because each individual improvement won't prevent all accidents!

There have been assertions (with some degree of validity) that the IMO and the SOLAS Convention lack the authority to impose conditions on shippers of cargoes in international commerce. This ignores the reality that a carrier that loads a container for carriage in international commerce where a verified gross mass of the container has not been provided will be in violation of the SOLAS Convention. Since substantial compliance with applicable conventions is a standard condition of marine insurance, a carrier that does not require documentation of the verified gross mass runs the risk of loss of insurance coverage.

As with any change, there will be a certain amount of confusion and misunderstanding initially. Soon though, providing the verified gross mass of containers will be the new normal.