



Solving the Problem of Overweight Containers

December 1, 2010

Today, the World Shipping Council and the International Chamber of Shipping urged the International Maritime Organization (IMO) to establish an international legal requirement that all loaded containers be weighed at the marine port facility before they are stowed aboard a vessel for export.

The following statement explains the nature of the problem with overweight containers, the efforts that have been taken to date to address the issue, and the reason that the industry is calling for a strong international solution to the problem from the IMO.

Background

The issue of overweight containers has been a subject of industry, insurance, and at times government, concern over the years, and has from time-to-time become an issue of concern to the general public after incidents involving overweight boxes.

Most recently, the Maritime Research Institute of the Netherlands has concluded a joint industry-government research project about cargo securing, including collapsing container stacks, and included in its recommendations a call for compulsory weighing of containers prior to vessel loading.

The conclusions and recommendations from the research project ("Lashing@Sea") were recently reviewed at the 15th meeting of the International Maritime Organization (IMO) Dangerous Goods, Solid Cargoes and Containers Subcommittee. The Subcommittee agreed that, in the interest of safety, there is a need to consider ways and means to ensure that the correct weight of the containers is declared to the carrier and communicated to the ship's master in order to allow for correct and well-informed handling and stowage. The Subcommittee then invited Member Governments and international organizations to submit further information to the Committee for appropriate action.

The Problem

There is no available data that reliably indicates how many containers are overweight¹; however, the problem is significant, and arises in almost every trade to some extent. In some geographic trade lanes, the problem is common and, at times, rampant. Shipping lines have reported that in severe cases, the overweight or incorrectly declared weights reaches 10% of the total cargo on board a vessel. Some carriers report that it is not uncommon for actual total cargo weight aboard ship to be 3-7% greater than the declared weight.

The problems resulting from overweight containers include the following:

- Incorrect vessel stowage decisions
- Restowage of containers (and resulting delays and costs), if the overweight condition is ascertained
- Collapsed container stacks
- Containers lost overboard (both the overweights and containers that were not overweight)
- Cargo liability claims
- Chassis damage
- Damage to ships
- Stability and stress risks for ships
- Risk of personal injury or death to seafarers and shoreside workers
- Impairment of service schedule integrity
- Supply chain service delays for shippers of properly declared containers
- Last minute shut-outs of confirmed, booked and available loads when the actual weight on board exceeds what is declared, and the total cargo weight exceeds the vessel limit or port draft limit.
- Lost revenue and earnings
- Liability for accidents and fines for overweights on roads, and resulting time and administrative efforts and costs to seek reimbursement from responsible parties²
- Impairment of vessels' optimal trim and draft, thus causing impaired vessel efficiency, suboptimal fuel usage, and greater vessel air emissions.³

¹ There are varying contexts or definitions of "overweight". A loaded container can exceed road weight limits, rail weight limits, crane lifting limits, container carrying capacity limits, or its weight as declared by the shipper. Each of these overweight situations presents operational and safety problems. The most common overweight situation is when the actual container weight exceeds the shipper's declared weight. Having the actual weight of a container would enable a carrier and a terminal operator to knowledgeably address all the various container weight issues and requirements.

² For example, Shanghai and Shenzhen municipal governments in the People's Republic of China have recently undertaken tougher new penalties for containers that exceed road weight limits, subjecting ocean carriers, drivers and cargo owners to expanded potential penalties.

In short, overweight containers can and do present a risk to industry workers, to ships, to equipment, to operational reliability, to shippers of accurately declared shipments, to higher operating costs, to road safety problems, to higher liability claims, and to higher administrative costs.⁴

Industry Self-Help Efforts Have Not Solved the Problem

It is general practice for all ocean carriers to instruct their shipper customers on the appropriate and permissible stuffing of containers.

In response to several highly publicized container vessel safety incidents involving container stowage, the World Shipping Council (WSC) and the International Chamber of Shipping (ICS) jointly produced a document: *“Safe Transport of Containers By Sea: Guidelines on Best Practices”*. That document was published at the end of 2008 and presented to the IMO Maritime Safety Committee (MSC) in December 2008. Both organizations distributed it globally to various shipper organizations. Various insurance organizations were complimentary of the Guidelines. At its May 2010 meeting, the MSC invited Member Governments to urge shipowners and operators to make the WSC/ICS Guidelines available on board all ships carrying containers.

The Guidelines specifically addressed the issue of containerized cargo weight and the importance of not overloading containers, stating:

- **“Chapter 6: Container Stuffing**
 - 6.2: **“Never** load by weight above the payload limits of the container.... **Never** load by weight above the road regulations applicable on the transit... Distribute the weight of the cargo evenly over the floor of the container. **Never** stow heavy items in one section and light items in another....”
 - 6.5.1: “Overloading is something which can **NEVER** be condoned and when accepting cargo the following should always be obtained or checked. The party stuffing the container is responsible for ensuring that ... the gross mass of the container is in accordance with the gross mass given on the shipping documents.”
 - 6.5.2: “Apart from the immediate dangers to the safety of ships created by overloading, the gross weight of the container (cargo plus container tare) must

³ DNV has projected that the liner industry could improve fuel efficiency by 0.5% by operating at optimum trim and draft.

⁴ Misdeclared weights can also deprive Customs authorities of revenues in cases where duties or tariffs are applied by weight measurement of a commodity.

not breach the applicable road or rail limits on all legs of the transit journey. The importance of observing these limits cannot be overstressed.”

- 6.5.6: “After finalisation of stuffing and securing of containerized cargo, the total container weight must be verified and documented.”
- **“Chapter 7: Marine Terminal Operations**
 - 7.5: The terminal should undertake the following actions at the first entry gate of the export yard, or while the container is in the terminal and before it goes onto a ship: ...
 - Verify the container weight against documentation by use of a weighbridge or weight gauge/load indicator on yard equipment or, alternatively, verify that weighing has occurred before entry and that such weighing was compliant with accepted best practice.”

The Guidelines have been generally regarded as positive and correct guidance, and have been widely disseminated. These Guidelines can only recommend best practices, however, and have had little discernible effect on reducing the incidences of shippers’ providing incorrect container weights, or on ensuring that marine terminals verify the weight of loaded containers upon receipt/prior to loading.

In addition, notwithstanding an ocean carrier’s best intentions, the fact that a shipper may find another ocean carrier or marine terminal operator that may be less attentive or scrupulous about overweight containers can be a significant competitive issue. Unilateral action by a shipping line to weigh containers can be commercially difficult where there is no regulatory requirement to weigh containers, and practically impossible if the marine terminal at the load port does not have the appropriate scales. In addition, port facilities may be reluctant to establish mandatory container weighing regimes if they fear that such requirements may cause diversion of cargo to nearby competitive port facilities that do not have such a regime.

Safety Requires A Universal Container Weighing Requirement **Prior to Vessel Lading**

In order to address the various problems caused by overweight containers noted above, containers need to be weighed before being loaded onto a ship for export. Weighing a box after it has sailed and been unloaded at the import port does not protect the port workers handling the container or the ship or its crew, or provide an appropriate remedy for the problem. Weight data derived at the import port after vessel unloading cannot be used in proper vessel planning.

In the absence of a legal requirement that marine terminal operators perform a weighing function for all loaded (“stuffed”) containers before vessel loading, it seems likely that a substantial number of containers will continue to go unweighed and that overweight containers will continue to create the various problems noted.

WSC and ICS on Solving the Problem of Overweight Containers

The IMO should establish a universal international regulatory requirement that export cargo containers must be weighed by the marine terminal upon receipt and before vessel loading, and that the actual container weights be made available to the vessel operator and used for vessel stowage planning.

A legal requirement to weigh stuffed containers is feasible and practical. The United States by regulation requires the weighing of every export loaded container before vessel loading.⁵ No problems have been reported with respect to the ability of marine terminals to comply with this requirement. In some other geographies, there are an increasing number of container terminals that are weighing boxes at in-gates, and we are unaware of any resulting operational disruptions. Such container weighing practices do not appear to be a result of government regulatory requirements, but are performed according to local port arrangements. These practices demonstrate that there is no technical or operational reason that stuffed containers cannot be weighed in advance of vessel loading. In the absence of a legal requirement to weigh containers, however, it would appear that most marine terminals and vessel stowage planning will continue to operate on the basis of accepting shipper declared container weights.

Specifically, it is proposed that --

1. the SOLAS Convention, which has competence and jurisdiction over the “ship-port interface”, be amended
2. to require marine terminal operators to weigh a stuffed cargo container upon receipt and to have a verified container weight before loading a stuffed container aboard a ship for export,
3. that this requirement apply to all loaded containers, whether received through the port facility gate or transhipped at the port facility via another vessel, barge or rail, and
4. that such verified container weight be provided to the vessel operator for use in confirming and finalizing vessel stowage plans.

This industry does not envision that such a weighing requirement needs to apply to empty containers being received by a marine terminal, as shipping lines have not identified any significant safety issue arising from the weight of empties, and because port facilities may have separate entry gates for empties which should not need to be equipped with scales or weigh bridges.

⁵ U.S. Department of Labor’s Occupational Safety and Health Administration (OSHA) regulations require loaded cargo containers to be weighed to obtain actual gross weight before being loaded aboard ship. (Title 29, Code of Federal Regulations, Section 1917.71)

Summary

The problem of overweight containers continues to present risks to workers, to industry operations, to ships, to properly declared cargoes, and to the environment. Industry self-help measures have not been successful in addressing the problem. Those jurisdiction that have instituted container weighing requirements for loaded export containers show that the efficient facilitation of commerce need not be impaired by such procedures; however, the number of nations with such requirements are in the minority.

This is an appropriate issue for the IMO to address, and the IMO will have the full support of the World Shipping Council and the International Chamber of Shipping to create such an international requirement.

Specifically, we will work with others towards having agreement at the IMO's Maritime Safety Committee (MSC) 89th meeting in May 2011 to include the issue of overweight containers in the IMO's work program so that a specific proposal is introduced to amend the SOLAS convention.

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Notes:

WSC is the trade association representing the world's leading container shipping lines. For more information about WSC, visit www.worldshipping.org.

ICS is an international trade association concerned with the operational safety of ships in all sectors and trades. For more information about ICS, visit <http://www.marisec.org>