



## Container weight verification: Self verification may not achieve goal of new IMO regulation

By Colin Laughlan

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“Weighing in” is about to acquire new meaning for the global shipping industry — sort of! Despite long-sought changes to the international convention for the Safety of Life at Sea (SOLAS), achieved in November, some signatory states, including Canada, may have difficulty enforcing limits on the weight of laden containers before vessel loading. The new regulations come into effect in July 2016.

### New IMO requirement for container weight verification

For the past seven years, shipping associations around the world, along with Maritime Safety Committee (MSC) of the International Maritime Organization (IMO), worked ardently to make container weight verification an international legal requirement. With the breakup of the *MSC Napoli* in the English Channel in 2007, the problem had reached catastrophic proportions. Misdeclared container weights were identified as a factor causing structural failure of the 900-foot containership. The following year, the International Chamber of Shipping (ICS) and the World Shipping Council (WSC) jointly issued Guidelines, endorsed also by the Global Shippers Forum, advising shippers to ensure that container weights were accurate and verified. The voluntary measures, however, had “no discernible effect” according to the WSC, and in 2011 an IMO sub-committee observed that “the shipper’s obligation to provide correct container weight is often not met.” In 2012, another containership, *MOL Comfort*, broke in two and sank off the coast of Yemen.

“The loss of the containership *Napoli* gave the UK Marine Accident Investigation Branch an almost unique opportunity to compare actual container weight with the manifest, and

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*Despite long-sought changes...some signatory states, including Canada, may have difficulty enforcing limits on the weight of laden export containers before vessel loading when the new regulations come into effect in July 2016.*

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serious discrepancies were discovered,” Peter Hincliffe, Secretary-General of the International Chamber of Shipping, told *BC Shipping News*. “ICS and WSC picked up the need for ships to be assured of the actual container weight and produced first a guidance publication and then supported the IMO in the development of what is now a mandatory requirement for the shipper to declare a weight for each container that can be verified. It is worth noting that if the actual weight differs from the declared weight then safety and security concerns should be raised. Recent press coverage on the loss of the *MOL Comfort* also indicates that misdeclared container weights may have been a contributory factor.”

### Options for compliance

The new IMO requirement stipulates that one of two methods may be used to verify a container’s weight, either (1) by weighing the packed container, or (2) by weighing all the packages, including cargo items, dunnage and pallets, and adding the container’s tare mass which is stencilled on the outside of every container.

Chris Welsh, Secretary General of the U.K.-headquartered Global Shippers’ Forum (GSF), told BCSN, “The Global Shippers’ Forum supports the compromise proposal recently adopted by the IMO Cargoes and Containers Committee. The so-called ‘method 2 calculated weight option’ proposed by GSF will provide considerable flexibility for regular shippers to comply with the new rules which will enter into force on July 1, 2016. Shippers

opting to use the calculated method will be required to comply with accreditation schemes subject to enforcement by national maritime safety administrations. GSF is currently working with a number of governments and maritime stakeholders on developing an accreditation scheme blueprint which the GSF hopes will be adopted more widely by maritime safety administrations. Similarly, the GSF is working with stakeholders in developing a suggested container weight calculation method which the GSF hopes will be adopted universally by shippers. The best practice advice will be adopted by early 2015, giving shippers time to plan for implementation of the weight verification rules.”

### Canada’s approach

In Canada, the shipper’s declaration of the container weight is accepted as the verification. There is no obligation on the terminal to weigh the container, and Transport Canada has advised that under the amended SOLAS, the obligation will remain solely with the shipper. The efficacy of Canada’s policy, however, cannot be assessed by its inspection practices. Transport Canada data since 2009 suggest there are limited resources for proactive verification. The average number of inspections each year was only 314 on an average of 2.2 million TEUs exported each year. Statistically, the expected value of misdeclaring an overweight container instead of using two containers was 0.999154. That is, for each \$1,000 saved by using one rather than two FEUs, the risk was \$8.46.

Looking to the U.S. for a comparison, Dr. Geraldine Knatz, Professor of Policy and Engineering at the University of Southern California, disagreed with the policy of self declaration. “The whole point of the SOLAS amendment was to have an international, uniform regulation. If the shipper has to declare — well they’ve always had to declare — so it sounds like there’s not going to be much change in Canada,” she told BCSN.

Knatz, who formerly held the positions of Executive Director of the Port of Los Angeles, and President of the International Association of Ports and Harbours (IAPH), said, “In the United States, it’s been required by law for a long time: containers for export have to be weighed so the container terminals have scales, and the process can be right in the terminal — that’s verification! I’m not aware of any problems with this method of verification. It doesn’t cause cargo to back up in the port or anything like that.”

Bob Ballantyne, President of the Freight Management Association of Canada agreed. “I haven’t heard anyone say that misdeclarations should be tolerated,” Ballantyne told BCSN. “I think it’s fair to say the most complete verification is to weigh the loaded container, and so long as it doesn’t cause any significant delays, that’s probably the preferable way to do it.”

According to the IMO Sub-Committee on Dangerous Goods, Solid Cargoes and Containers, “substantial discrepancies between declared and actual container weights are not uncommon, and they create safety and operational issues for the vessel, other cargo, the crew, and the shoreside operations in ports.” Additional issues were identified by the WSC including chassis damage, liability for accidents and fines for overweight on roads, collapsed container stacks, as well as diminished fuel efficiency in the liner industry. “There is little or no reason to believe that future enforcement of a SOLAS requirement applicable only to the shipper to ensure container weight verification would be more effective,” the IMO committee stated.

“If the shipper has nothing to lose, nothing is going to change,” agreed Maksim Mihic, General Manager of DP World’s Centerm terminal at Port Metro Vancouver. However, Mihic pointed out that a declared container weight may be perfectly legal but nonetheless inaccurate. “It is the discrepancy between the

declared and the actual weight that causes the biggest problem. For example, on paper you may get 15 tonnes declared. It’s still within the legal limit of the container so it has nothing to do with the terminal. The terminal is not the verifier. But, if you had 2,000 containers and an average misdeclaration of three tonnes, that’s 6,000 tonnes discrepancy — that’s huge. The cumulative overweight is the biggest problem,” Mihic told BCSN.

Noting that the primary goal of the new SOLAS regulation was to prevent more catastrophes at sea, Mihic felt that its enforcement was meant to be consistent around the world. “It’s a global market and it has to be the same for everyone,” he said. Mihic thought this will be achieved eventually because the new regulation would spur on a large international terminal company, or possibly some countries, to create a standardized audit system which in turn would motivate all governments to adopt more rigorous verification methods. “Verification has to be a global system that is audited and accurate,” he said. “I think that Transport Canada will have to follow suit instead of leaving it to shippers to interpret the rules.”

## Addressing the Issues

Rowena Lo, System Development Manager at Vancouver, B.C.-headquartered Cnaan Group, has worked for several years on the verification issue, first from the perspective of a large shipping line and now from that of a leading transload and freight forwarding company. “It’s a safety issue,” Lo told BCSN. “Yes, keep the onus on the shipper. It’s their cargo,” she said, “but logistics is not about one party. It’s a chain of obligations. It needs buy-in by terminal operators and the carriers, rail and truck, the parties responsible for the physical moving, because it has to be safe on the road and on the vessel.” Lo said her experience with supply chain stakeholders has taught her that “we always talk about global, but at some point it always becomes regional, so it’s hard to get agreement. The one big question is: ‘Who can determine what is the best method?’” For Canada, Lo suggested, it would be an important topic to deal with under the federal government’s current review of the Canada Transportation Act.

Indeed, the Canada Transportation Act Review Secretariat agreed. “The Panel would welcome submissions concerning

how changes to SOLAS could impact Canadian marine policy and regulations,” the Secretariat told BCSN. Submissions can sent to:

[secretariat@reviewcta-examenitc.gc.ca](mailto:secretariat@reviewcta-examenitc.gc.ca)

## Useful tools

**T**he new SOLAS requirement for container weight verification has spawned technological innovations to assist shippers in accurately declaring the weights of loaded containers.

1) From **Logico Carbon Solutions Inc.**, Sidney, B.C. — Logico’s load planning tool XacPac monitors cargo weight while optimizing cubic space utilization in containers. XacPac will not violate declared cargo weight limits, nor exceed load density capacities of the container or stacked goods. Cargo is positioned to achieve balanced loads and the electronic manifest that is generated declares total cargo weight, the centre of gravity and weight distribution within the container. If cargo is loaded according to an XacPac loading plan, the manifest could be used to comply with the new SOLAS container weight regulation. [www.xacpac.com / info@xacpac.com](http://www.xacpac.com/info@xacpac.com)

2) From **Deploy Technologies Inc.**, Delta, B.C. — Deploy’s InstaWeigh can be installed in any type of vehicle and equipment to monitor, capture, and transmit operational data. For example, the 5-by-7-inch data terminal is installed with hydraulic transducers on a forklift and accurately weighs loads on the fly without having to travel to floor scales. Encrypted data is transmitted into a corporate database via a connected cellular modem, private WIFI module, or VHF/UHF radios. The system is scalable and can integrate into any environment. [www.deploy.ca / info@deploy.ca](http://www.deploy.ca/info@deploy.ca)

3) From **BISON Group Ltd.**, New Zealand — BISON Weighing Jacks comprise four small jacks that fit to the corners of a grounded container, lift it slightly and measure the container’s gross mass. The weight at each corner is displayed on each jack and can be summed by the operator to provide an accurate container weight. The jacks can also transmit the weight data to a smart device, with a BISON App to automatically calculate the containers gross mass, net payload and centre of gravity. The operator can store, print and distribute this information as needed. [www.bison-jacks.com / info@bisonjacks.com](http://www.bison-jacks.com/info@bisonjacks.com)