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## **SOLAS** Weighing Regulations Revisited

**Intercomp's Solutions for  
Method 1 and Method 2  
SOLAS Weighing Regulations**



# Intercomp's Solutions for Method 1 and Method 2 SOLAS Weighing Regulations

By Christopher Cussat

**T**his past July, *iWAM* published an article which discussed the newly amended chapters of the International Convention for the Safety of Life at Sea (SOLAS) regarding safety provisions and requirements related to bulk carriers and shipping standards. As reported then, one of the main objectives of SOLAS is “to specify minimum standards for the construction, equipment and operation of ships, compatible with their safety.” Through the SOLAS Convention, certain provisions and regulations continue to be established in order to promote international trade and business prospects, and to ensure that a balance of universal safety

and other related concerns are implemented and adhered to within international shipping practices.

Today, the Convention incorporates several Articles that spell out general obligations and amendment procedures, followed by an Annex which is divided into 12 chapters. The last three of these SOLAS amendment chapters include additional safety measures for bulk carriers; verification of compliance; and safety measures for ships operating in polar waters. These amendment chapters have either been established within and during this past year or will be required by 2017. Intercomp has been leading the checkweighing industry

with procedures and offerings that address all current and future SOLAS provisions.

The International Maritime Organization (IMO) also updates SOLAS periodically to suggest and improve international safety standards for cargo carriers and member nations. With regards to cargo and container weights, SOLAS Chapter VI was updated with new wording that was implemented as of July 1, 2016. A three month “light touch” enforcement was observed until October 1, 2016 to allow for clearing of transshipped cargo and containers to be processed.

This most recent implementation states that the verified gross mass (VGM) of



A shipping crate is positioned onto four Intercomp aluminum RFX™ Wireless PT300™ electronic scales while port authorities prepare to log in the weight in accordance to the SOLAS method1. These fully equipped scales are capable of weighing up to 20,000 lbs and come standard with solar charging panels.

packed containers must be determined using calibrated and certified equipment by one of the two following weighing methods (note that the shipper is responsible for providing the VGM and the ship master or terminal should not load the container without a VGM):

- Method 1—Weighing the packed container as a whole, including its contents.
- Method 2—Weighing all cargo, and adding this to the mass of packing materials and the tare weight of the container to yield the gross mass.

According to Jon Arnold, market specialist at Intercomp, these revisions are both general and flexible in their defi-

nitions, allowing for weighing methods to be certified and approved in the state (country) from where the container originates. “This is both a strength and a weakness of the SOLAS guidelines, as it allows each state (country) to implement based on their regulations. But it has been observed that there are sometimes significant differences in the guidelines and enforcements in different areas, and there was significant confusion in the industry leading up to the implementation of the guidelines without clarity and harmonization from the different authoritative bodies around the world.”

Further, he adds that since the shipper

is clearly responsible for supplying the VGM, and because enforcement happens at the terminal or with the ship master (if it happens at all), there is often a large distance in the supply chain between where the responsibility lies and where the SOLAS guidelines are enforced.

These new SOLAS regulations were prompted by several notable accidents at sea, in which subsequent investigations attributed misdeclared cargo weights as a contributing factor to the accidents. More frequently, there are documented incidents within terminals where containers with misdeclared cargo weights caused accidents or failures of container handling

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equipment—with damage or destruction of the equipment—and in some cases, human life.

Intercomp has been working with shippers and terminals for many years prior to the SOLAS Chapter VI updated requirements. “With Intercomp’s wide array of weighing products that allow for weighing

SOLAS regulations. For example, Intercomp has Method 1 weighing systems utilizing Weigh-In-Motion (WIM) equipment for rapid processing of truck traffic at terminals or trucking distribution centers. Low Speed WIM (LS-WIM) axle scales or WIM strip sensors are installed directly into existing vehicle lanes, and gather weights while processing the vehicle and cargo while entering or within the facility (see reference photograph inserts for illus-



Though not as common as other Method 1 options, Intercomp offers the CS3000™ Crane Scale with RFX™ Wireless Weighing Technology. It's capable of weighing up to 100,000 lbs and it's built to thrive in rugged environments.

equipment is an ideal choice for semi-automated and automated ports and terminals. The two different configurations of systems—Intercomp strip sensors and the LS-WIM scales—give the customer options to adjust the system to any site requirements or constraints that are common in the terminal environment.”

For lower container volume shipping operations, using scales for under-corner container weighing provides an inexpensive alternative for simple VGM acquisition. Arnold notes that to address this need, Intercomp's PT300™ portable scales have proven their performance over decades and can be easily acquired, enabling shippers to be compliant with SOLAS guidelines in almost any geography. “In addition, both wireless TL™ Series tension links installed with multiple pick points and CS3000™ 100,000 lbs crane scales have been used by our customers for acquiring Method 1 container weights when they have the ability or capacity to suspend the containers from overhead supports.” He adds that Method 2 (weighing the contents) is a somewhat less prevalent way of acquiring the VGM, but that Intercomp also offers material handling scales, PW800™ pallet truck scales, and the SW™ Series under-corner scales for highly accurate weighing (0.1%) of cargo prior to loading into a container.

Intercomp has also designed SOLAS



Top: In ports that need weigh-in-motion applications, Intercomp's minimally invasive installation WIM strip sensors are available for both low and higher speeds. Below: For low speed weigh-in-motion applications the LS-WIM Axle weighing scale from Intercomp is the best choice. Both are SOLAS Method 1 options.

at many points in the supply chain, we renewed our efforts to make these solutions visible to customers who now required weighing equipment or access to weighing services,” said Arnold.

With certified weighing solutions for either Method 1 or Method 2 VGM weighing, Intercomp is uniquely positioned to offer equipment at almost any point in the supply chain. Arnold explains, “From cost-effective, low-volume weighing equipment to highly-automated systems that acquire cargo weights at trucking and distribution centers or terminals, we have refreshed our approach to these customers and added the ability to address any concerns about the SOLAS guidelines that they might have.”

In fact, Intercomp has implemented specific company solutions to address the new Method 1 and Method 2 designated



tration). This equipment and technology have been developed and demonstrated in other industries over the years, and they translate very well to use for acquiring container VGMs. Arnold adds, “For compliance with the Occupational Safety and Health Administration (OSHA) standards in the United States (which the US Coast Guard has made equivalent with SOLAS requirements), Intercomp WIM

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driven solutions specifically regarding scale dealers selling to shippers. The company has found that scale dealers have



Above: The Intercomp PW800™ Pallet Truck Scales work well for Method 2.

Left: Intercomp's SW™ Series Portable Scales weigh up to 20,000 lb in Method 2 applications.

the opportunity to provide weighing equipment to customers all along the supply chain: from the shippers originating the cargo; to trucking and freight forwarding companies; to terminals closer to the end of the land-side supply chain; as well as those closest to the enforcement of the SOLAS

regulations. "Shippers, depending on the number of qualified shipments they make, can employ a variety of Intercomp equipment that is customized to their particular needs. As mentioned above, equipment ranging from simple sets of scales to fully-automated systems are available for the

dealers so that they can then offer them to the shippers they work with," said Arnold.

When asked how Intercomp plans to keep addressing future SOLAS regulations and effectively adjusting and adapting to this ever changing industry, Arnold restates how, as previously explained, Intercomp has been manufacturing equipment for decades that gives the customer the ability for VGM weighing compliance—and it will continue to do so. "Intercomp has taken a closer look at regulations as they have developed, and continues to participate in panels and discussions with organizations such as the International Cargo Handling Coordination Association (ICHCA) and Terminal Operations Conferences (TOC) to monitor customer concerns and contribute to the knowledge base available for customers and consumers," he concludes.

### Author

You can read more of Christopher's work at [www.cussat.com](http://www.cussat.com)