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Can live operational container weight checking increase operational efficiency in the yard?



On the 1 December 2010 the World Shipping Council (WSC) urged the International Maritime Organisation to establish an international legal requirement that all loaded containers be weighed at the maritime port facility before they are stowed aboard a vessel for export

At first glance the weighing of all export containers on a terminal would add significantly to the operational overhead especially if the terminal dealt predominantly with Transshipment cargo and needed to weigh these as well. This may well be the case where the original loading terminal may not have all the modern facilities and equipment to reliably determine the weight.

However, long before the WSC's suggestions were brought to press, the forward looking terminal management at Ignazio Messina's Genoa terminal in Italy had already decided that weighing export containers was the philosophy they wanted to adopt and had embarked on a project to do just this. The Genoa terminal services various routes in Europe, Africa and the Middle East, and have been working with International Terminal Solutions Ltd (ITS) to provide a solution that integrates fully with their operational strategy and their new Terminal Operating System, Jade Master Terminal.

Messina Lines Director of operations at the terminal, Capt. Adriano Spotti commented "Data integrity and accuracy is an important part of our terminal operation, we were keen to ensure that when our new TOS software went live the quality of data we used ensured the terminal operates efficiently and the data exchange with the line was correct. In order to do this we realised we needed to integrate various lower level operations such as container weighing. For the integration of these type of system we selected ITS as they had experience in similar projects providing a high degree of customisation in their systems. This and their ability to provide solutions that would operate on a Narrowband and/or WIFI backbone made them a good partner for a terminal like ours."

Whilst the terminal already had a weigh bridge at the gate for road hauled containers, congestion at busy times was a concern, as was the fact that the transshipment and rail containers did not pass any existing weight checkpoint. Messina decided that in order to avoid congestion and bottle necks at the terminal and entrance they had to ensure that the actual weight and any discrepancy were identified without additional operational moves or delays and as soon as possible in the operational sequence. To achieve this Messina decided to weigh the containers whilst being lifted by the yard Container Handling Equipment (CHE) as part of the normal operation. This philosophy not only eliminates gate delays and additional moves to weigh the containers, but also ensures further yard shift moves are not required as the container can be planned to the vessel with an accurate weight "right first time".

As part of a wider project ITS were already working with Messina Lines providing the integration of a new radio data network, with intelligent mobile computer terminals. The ITS system provided also included the ITS middleware solution to manage, co-ordinate and route the mobile data to the TOS using an XML interface. Within the interface the TOS and ITS exchange information on theoretical declared weight and actual weight appropriate to the individual containers.