

## A Weigh-In-Motion System Solution

### **P&O Ports of Louisiana Napoleon Ave. Container Port Overview**

P&O Ports of Louisiana has two miles of contiguous deep water berth space, over one million sq. ft. of covered space, and 400,000 sq. ft. of open wharf. A new 57 acre container facility was recently completed. This facility includes a new Gatehouse Complex and Terminal with the latest in technology, including OCR and GPS systems, to better service truckers, carriers and shippers.



### **P&O Ports Napoleon Ave. Terminal Portal System Overview**

Trucks delivering containers to the port have a toll type tag, mounted to the windshield, containing a unique identifier number. This tag is pre-registered by the carrier at the P&O Ports website including information such as carrier name, equipment type, and license plate number. Prior to making a drop-off at the port the carrier registers their planned visit via the P&O website.

The truck approaches the inbound portal at a speed of about 15mph and passes a RFID tag reader. The tag reader reads the tag and sends the tag # via serial communication to the portal system. At the same time the truck passes over a weigh-in-motion (WIM) scale that measures the gross weight of the truck to within +/- 2% accuracy. The WIM system sends the gross weight of the truck via serial communication to the portal system.

As the truck is passing over the WIM scale, several cameras take images of the container ISO code #, the truck chassis #, and the license plate #. Also, an overview image is taken and any container damage is identified. Optical character recognition (OCR) software quickly analyzes the images and reports the container record, including the vehicle's tag # and container weight to the P&O ports' GEM system.

The GEM system provides feedback to the driver via both a dedicated AM radio band and a variable message sign advising the driver at what location in the port facility to place the container. The driver is also instructed which container to pick up for outbound shipment from the port.

After picking up an outbound container the driver passes through an outbound portal where images are again captured. The driver then receives an Equipment Interchange Receipt (EIR), showing the container and chassis number that the driver is now hauling. If needed, a phone handset is available for communication with the port operations personnel.

## System Advantages

The key advantages of this state of the art system include:

- Increased container throughput with reduced truck waiting times
- High accuracy recognition system assures reliable container data even under adverse weather conditions
- Improved operational safety by separating vehicles from port operations personnel
- Ability to track container weights and location, helping ensure optimal vessel loading
- Ability to compare manifest container weights against actual measured container weights, allowing for significant discrepancies to be flagged and corrected

## Further Information on the METTLER TOLEDO Weigh-in-Motion (WIM) System

Federal regulations require that all containers be weighed prior to being lifted by port cranes to ensure that safe loading limits are not exceeded. Traditionally ports have used static scales to determine inbound container weights.

A WIM system allows truck weights to be captured with the vehicle crossing the scale at speeds up to 30 mph. Gross and axle weights are captured, stored, and can be communicated to another PC in a comma separated value format via serial connection. The user can set thresholds in the WIM software allowing for overweight loads to trigger signal lights or other outputs. Remote displays can also be used to show the driver actual weights.

The METTLER TOLEDO WIM system features the most accurate WIM technology available, with a rugged load cell based dual platform design. Four load cells per platform ensure excellent weight accuracy, even when the load is not centered on the platform. METTLER TOLEDO WIM systems exceed ASTM 1318-02 Type III and IV accuracy requirements.