Technology Comparison Report Truck Scale Performance in Your Industry



As the leading global provider of precision weighing equipment, METTLER TOLEDO is uniquely positioned to serve the Ports & Terminals industry. Over the past 3 years, we have collected data from the 165 scales we service at Ports in North America. See below results and consider how your truck scales would compare, you might be surprised.

Site Statistics: Ports & Terminals

- Average of 5 scales per Port/Terminal
- 50% report 300 trucks or more per day
- 78% concrete v. 22% steel deck
- 77% report scale length of 70 to 80 ft.



Are You Certain About Your Scale Accuracy?

The below accuracy table is based on over 616 service records from the past 3 years. Have you considered how inaccurate your scales could be, and how non-compliant scales would impact the safety of your business?

Weighing Technology	% Outside Legal Tolerance	Accuracy Range (95%)	
POWERCELL Digital Sensors	7%	+- 76 lb. (38 kg)	
Analog Load Cell	14%	+- 238 lb. (119 kg)	
Mechanical / Electric Conversions	14%	+- 210 lb. (105 kg)	

Hidden Scale Costs

As a truck scale owner or operator, you know there are two major buckets that expenses fall in to: planned preventative maintenance and unplanned break fixes. For Ports operating multiple truck scales, choosing analog technology can mean spending **+123% more** on repair spend for every scale.

The table below shows the accumulation of repair spend on top of initial truck scale investment. You can see in this example the break even point happens at year 10 - based on your maintenance spend per scale, how fast could you achieve a return on your investment?

Weighing Technology	Day Zero Aquisition Cost	Total Spend at 5 Years	Total Spend at 10 Years	Total Spend at 15 Years	Total Spend at 20 Years	Total Repair Cost for 5 Scale Site
POWERCELL PDX	\$60,500	\$61,365	\$62,230	\$63,095	\$63,960	\$17,300
Analog Load Cell	\$55,000	\$58,675	\$62,350	\$66,025	\$69,700	\$73,500

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Case Study: North American Port/Terminal

From Statistically Speaking, to Reality



While group statistics can tell a compelling story about an overall population, it is often a **real customer example** that can be most impactful at demonstrating how our superior products can positively impact your business. For one Port on North America's East Coast, the numbers tell a clear story.

This Port has several METTLER TOLEDO truck scales and a single competitor scale, as the current service provider for the port we have been tracking the activity of their scales for the past three and a half years. Although all scales are used evenly to weigh an average of 425 trucks per day, the service technician noticed an **obvious difference in equipment performance**, including:

- Competitor scale has been found outside of legal accuracy tolerance during 40% of routine tests, the METTLER TOLEDO scales have not failed a single accuracy test
- Total 3 year repair spend on the competitors scale is nearly \$3,215, 7X's more than repair spend on the METTLER TOLEDO scales
- Days lost due to downtime for repairs: competitors scale total 4 days. METTLER TOLEDO scales 1 day

Upon bringing these findings to the attention of the port transportation manager, they decided a change was needed. While the competitive model may have saved the company money at the time of purchase - it had turned in to a money pit. Additionally it was a **liability for accuracy compliance laws** including SOLAS. They are currently evaluating solutions to replace the competitive equipment including a load-cell system upgrade, as well as entirely new truck scale system.

For more information on compliance with SOLAS, visit www.mt.com/VEH-SOLAS

Methodology

METTLER TOLEDO's North American service organization provides state Weights & Measures legal-for-trade calibration testing, stamping and sealing services for over 6,000 truck and rail scales. Additionally, we follow both NIST Handbook 44 and Measurement Canada requirements for re-certificationand test tolerances of installed scale systems. Over the last 3 years our direct service organization has completed over 35,000 truck and rail scales calibration data has been collected and analyzed to provide you with the results that are found in this document.

Accuracy tests are made with certified test weights, typically 20,000 to 25,000lb, first checking the scale accuracy "As-Found" in operation. The scale is tested in sections, or at each pair of load cells and in the center. As-found accuracy compares the certified test load to Handbook 44 maintenance tolerances, or allowable error.

The large database of certified As-found test results allows MT to compare long-term performance of truck and rail scales by load cell technology, manufacturer, or scale type with statistical certainty.

METTLER TOLEDO Service

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For more information

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