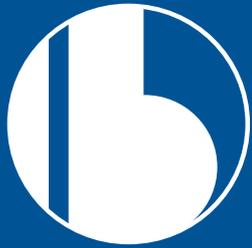


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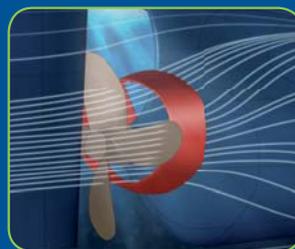
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Tanker terminal idle time measurement and analysis

Dock utilisation is a typical key performance indicator (KPI) used by marine tanker terminals to measure efficiency. It is generally calculated as a percentage of time a dock is occupied as opposed to vacant or experiencing an outage.*

A more objective KPI is dock idle time, or the time a tanker is alongside and not transferring cargo. Properly measuring dock idle time and establishing a systematic approach for this KPI's data collection, reporting, benchmarking and trending analysis can significantly improve dock operations and enable terminal operators to work collaboratively with their stakeholders on achieving quantifiable reductions in overall vessel call times.

Utilisation is normally presented as the percentage of time the dock is occupied, and is classified into three categories - occupied, vacant and outage. Based on the definition of dock outages, however, dock occupancy may not necessarily equate to effective dock utilisation. While an outage is defined as a period of time when vessels are restricted from occupying the dock or when a vessel cannot leave the dock after the cargo transfer has completed, it is further classified into two types based on the terminal's ability to impact the outage.

Local factors add complexity to the outage equation. For instance, if the terminal's waterway has tidal or daylight transit restrictions, how do you incorporate the time a vessel is alongside waiting for high water or sunrise? Is this time considered an outage outside the terminal's control, or is it a dock occupancy? A terminal's operations department might categorise these restrictions as dock occupancy to show a higher utilisation number. These are just a couple of examples of why dock utilisation is a less objective KPI than dock idle time, which is defined as the time a vessel is alongside and not transferring cargo.

Measuring and logging

The dock idle time KPI is actionable and relevant for any operations team that wants an efficiency measurement for vessel call management. Lower dock utilisation is a direct result of any dock idle time reduction, and only by measuring dock idle time is it possible to optimise dock operations.

The first step in reducing dock idle time is identifying root causes of dock idle time by classification of delays and routine events. The first layer of idle time classification is the three distinct periods of a vessel call evolution. The pre-transfer period includes events from vessel 'NOR' through managing the vessel arrival. Transfer event periods include events associated with preparing for, performing and completing cargo moves. To better aid reporting, concurrent and consecutive cargo moves on the same vessel call should be managed by separate transfer event periods. Finally, the post transfer period encompasses any events that occur after all transfer periods are complete.

Each vessel call event time must be accurately, consistently captured by the dock team in order to facilitate accurate trending. Is this done with a paper log in the dock shack where the primary goal is to comply with local regulations? Does the process rely on third parties to manage the logging of dock event times? Either of these approaches is a much greater risk of error, and forfeits the opportunity to exploit valuable information. A much better approach is to replace paper logs with an easy-to-use system for entering events in real time.

Accurate and consistent data logging is critical for both routine events and delays as both impact idle time.

Once the data is being consistently

collected, it is possible to identify areas where idle time can be reduced. Is one shift consistently beating the benchmark time between 'Hoses Off' and 'Vessel Ready' status? Learn how they are accomplishing this, and establish it as a best practice for all shifts. Or, perhaps there is the opportunity to compare call-out times between third parties, as the basis for initiating customer service conversations with clients.

Pay special attention to delays. By categorising delay start and stop times, terminals can identify what delays are most severely impacting dock alongside time. Once these delays have been identified, look first at the categories which are under the terminal's control and represent the largest piece of the overall delay pie. For instance, is the most frequent delay type the waiting times for tank space? Work with customers to help them be better prepared for the upcoming transfer, and consider charging tenants for dock time, if customer-related delays exceed a specific threshold.

No matter who is responsible, delays eat into a cargo owner's lay time and have an impact on demurrage costs, which is of great concern to any terminal's current and potential clients.

Implementing a process to measure dock idle time in a consistent fashion with an easy-to-use system can significantly increase vessel calls per year for every dock, and provide the necessary metrics and a collaborative environment for improving efficiency and client relationships.

**This article was written by Robert Kessler, director, business development, enterprise solutions PortVision (R), a service of Oceaneering (R).*