

Strainstall offers single-source jetty management systems

In addition to its new terminal projects, Strainstall is helping existing terminals accommodate larger LNG ships with low-cost solutions

Strainstall UK Ltd, the supplier of jetty management systems, reports a strong commercial performance in 2005, with a significant number of new orders having been secured during the last quarter of the year.

"We attribute the good results not only to the current buoyant state of the LNG market but also to the acquisition of AMTS International BV, the Belgian quick release hook manufacturer in 2002", reports Sandy Thomas, marine sales director for Strainstall UK Ltd. "The purchase of that company gave us the ability to provide complete berth management systems in-house. Following an intensive sales effort to market this capability and the benefits of 'one-stop shopping', we are now seeing the results."

Strainstall designs, manufactures, supplies, installs and commissions complete jetty management systems. The company's packages include the design and manufacture of quick release hooks, sensors for load/tension monitoring, speed of approach systems and large-digit displays. Hull stress monitoring systems that provide advanced monitoring of structural integrity throughout the life of a vessel are also provided, as are loading arm monitors for measuring the motion of marine loading arms.

Over the past year Strainstall has devoted special attention to the improvement of system communications links between equipment on the jetty and displays in the control room. The aim has been to provide the client with a simpler installation and increased reliability. Some of the resultant systems have included specially configured PCs for use by jetty crews in specified hazardous areas on the jetty.

"Our ability to supply a complete package of systems from our in-house resources provides us with an unprecedented level of control over a project and enables the final design to be configured to the exact requirements of the customer," continues Sandy Thomas. "An increasing number of our clients prefer to deal with a single supplier for all their jetty management requirements."



A jetty-mounted large digit display from Strainstall, providing interested parties with the relevant berthing parameters

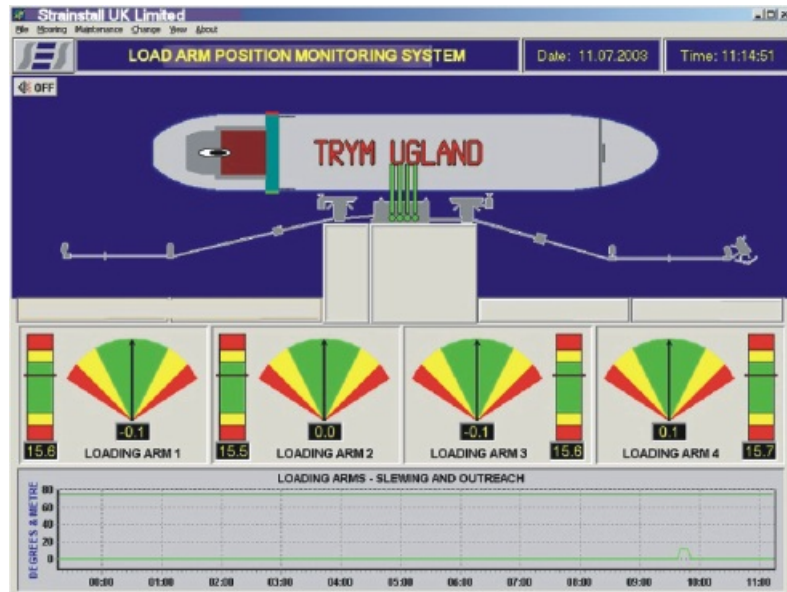
One recent example of such a Strainstall contract is that with the new Dragon LNG import terminal being built at Milford Haven in South West Wales. Dragon has opted for a full packed of systems, including quick release mooring hooks, the Strainstall DockAlert speed of approach system, the company's MoorAlert mooring load monitoring system, meteorological and oceanographic sensors, large-digit displays, a portable display unit and Strainstall's BerthManager software to integrate to facility management networks. The latter software enables the berth operator to store and recall mooring configurations and alarm levels for all sensors; log all the data from a PC hard disc; view trends of any measured parameter, output reports, alarm logs, etc; and control the remote release of the hooks.

With the design of new terminals and their associated marine facilities, suppliers of jetty management systems are able to accommodate all

relevant parameters including the much larger sizes of ship being specified for new projects, from the outset. One of the problems emerging, however, is the ability of existing marine jetties to accommodate these larger ships. Operators of terminals are always anxious to provide a flexible service and, if there is a possibility of handling larger ships at existing facilities, terminal operators would like to exercise it.

“Many of the existing terminals around the world were never built to accommodate LNG carriers of 200,000m³ and above,” explains Sandy Thomas. “As a result, terminal owners are faced with the prospect of costly facility rebuild or upgrade projects. These would put the facility out of action for a significant length of time, resulting in substantial loss of revenue. Not surprisingly, terminal operators are reluctant to take this step and are looking for cheaper and less disruptive solutions.

“Fortunately, the installation of a sophisticated berth management system, enabling control of the all important speed of impact of the vessel onto the fender, can provide a low-cost, alternative solution. Such a system prevents damage to the berth, and hence



Screen from the Strainstall marine loading arm monitor

reduces the potential environmental hazards caused by ruptured loading connections following a collision with dock structures. Once the vessel is safely moored, the system also monitors any drift-off of the vessel and provides appropriate warning signals to the operators. By reducing these risks to a safe and acceptable level, larger vessels are permitted to berth without the need to make changes to existing facilities.”

Another Strainstall field of expertise is the monitoring of marine loading arms. Traditional methods of measuring the motion of a loading arm have involved complex arm-specific brackets and fittings, so that the angular motion of the various joints could be measured and the loading arm outreach determined.

Commenting on his company’s involvement in this sector, Sandy Thomas reports, “Our Strainstall loading arm monitor simplifies this requirement so that it can be adapted for virtually all configurations and sizes of loading arm. This is achieved by using sensors which do not rely on complex mounting arrangements to measure both rotation and angle of the outreach and drop arms.

“These sensors are connected to an electronic interface mounted at the base of the loading arm. This interface converts the signals to a serial data interface that is connected to a Strainstall display where the data is presented as a screen graphic. The system ensures that the loading arms are used within their operational envelopes, which avoids damage to the seals that could result in spillage of the cargo. Fender deflection and/or load can also be monitored.” [LNG](#)



A Strainstall Zone 1 hazardous area-compliant PC for use by mooring personnel on the jetty