

Measurement Technology NW designs and manufactures sophisticated testing and measurement instrumentation systems for a variety of commercial, research, and government clients worldwide.

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*Your source for advanced winch line control and monitoring systems*

## LCI-90 Customized for Bardex Corporation:

Due to expected new US government safety regulations, floating drill rigs that use a standard 8-mooring line layout are pursuing upgrades to more secure 12-mooring line configurations, for increased holding capacity in the hurricane-prone Gulf of Mexico. As part of this upcoming government initiative, Bardex Corporation worked with Measurement Technology NW to develop tension monitoring displays for an upgraded Linear Chain Jack Mooring System to be installed on the semi-submersible rig, "Jack Bates".

Bardex designs and supplies heavy load moving, handling and positioning systems for the offshore and shipyard industries, and for "Jack Bates" the upgraded Bardex mooring system consisted of four linear chain jack assemblies and four deck-mounted idler sheave assemblies, all designed with a stall/hold capacity of 550 kips/600 kips.

A load monitoring system was included to provide individual line tension display at both the control console and in the central control room, and that's where MTNW came in. Measurement Technology NW developed a custom LCI-90 model that would accept four analog tension signals from a pair of dual-bridge load cells installed on opposite sides of the stopper latches in each Chain Jack. These four signals feed into one LCI-90 display unit as 4-20mA inputs. The inputs are calibrated individually in the LCI display, and then averaged to generate a tension readout on the LCI-90's main screen.



The LCI-90 main screen was further modified to show the four signals in engineering units as well as the enabled/disabled status of each load cell bridge. If any bridge readings drift outside a pre-determined range, that bridge is automatically disabled and a warning is displayed on the LCI-90. In the event a load cell bridge is disabled the value from the remaining bridge is used twice in the averaging calculation (and if both bridges are disabled that load cell is removed from the computations), for full redundancy and uninterrupted mooring operations.

Certified for operation in temperatures ranging from -40°C to 75°C, every LCI display features a rugged watertight stainless steel and Lexan front panels, sealed stainless steel pushbuttons, and bright 320x240 electroluminescent displays with a 160° viewing angle that's clearly visible even in direct sunlight. The compact LCI-90's from Measurement Technology NW have proven their durability and reliability time and again in some of the most extreme environments on earth. In fact, every LCI winch display we've built over the years, *every single one*, is still hard at work out in the field.

Measurement Technology NW produces a wide range of precision line control products, including the LCI-90 and LCI-100 series displays, WinchDAC and MarQuip® Mooring software, and much more. **Look for MTNW at the Offshore Technology Conference in Houston, Texas, April 30 – May 3, 2007. Our LCI systems will be on display in Pavilions booth 8409.** Come check out all the LCI models and learn why so many offshore companies have chosen the LCI display system for their winch monitoring needs. If you can't stop by our OTC booth, feel free to call us at 206-634-1308, or send an email to [lci@mtnw-usa.com](mailto:lci@mtnw-usa.com).

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