

# Wireless Load Cell Solves Access Challenge

A wired interface to a load cell can present several challenges in environments that span large areas, have moving parts, or are hazardous for humans to access. A Nuclear operations company had a particularly challenging load cell application that required a customized wireless solution.

Morehouse Instrument Company discussed the application with the end-user to evaluate their current state. The pain points identified were:

- A wireless transmitter was required due to application restraints
- A pin design was in place that the load cell would need to accommodate
- 200 Ton wide body shackles would need to connect to the load cell
- Rod ends could disconnect from the load cell during use unless an anti-rotation control was applied
- The required accuracy of 0.3 % of the applied load from 10 % to 100 % was not commercially available with other solutions such as tension links
- The load cell had to proof load two times their capacity of 600,000 lbf

With these design constraints in mind, the Morehouse team comprised of Ed Lane, Sales Manager, and Mark Jones, Engineering Manager, developed a custom-designed load cell solution for the end-user.



Wireless 300,000 lbf Load Cell with Custom Rod Ends

## The Morehouse Impact

The Nuclear operations company overcame the challenges associated with wired interfaces. It implemented a new load cell design without replacing its existing pins and shackles while meeting the accuracy needed for the application.

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Morehouse designed and delivered a wireless 300,000 lbf load cell with custom rod ends. A custom pin set connected the rod ends into the clevis to provide anti-rotation control and prevent disconnection from the load cell while in use.

A wireless transmitter was attached to the load cell to eliminate the problems associated with a wired interface. The load cell was calibrated in tension with an accuracy of 0.3 % of the applied load from 10 % to 100 %.



Load Cell Setup with Pins and Clevis

#### Force Calibration Solutions by Morehouse

Force calibration can be difficult, but Morehouse is here to help. We welcome the opportunity to answer your questions and develop a solution that meets your specific requirements. Our technical experts are here to help. Contact us at (717) 843-0081 or [sales@mhforce.com](mailto:sales@mhforce.com) for a consultation.

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Contact Morehouse at (717) 843-0081 or [sales@mhforce.com](mailto:sales@mhforce.com) for your custom solution