





A US Manufacturer of: Pressure, Temperature, Load/Force/Torque, and Displacement Sensors

Stellar Technology

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Stellar Technology's Load Pin Measures Locomotive Forces



Rail cars are connected to locomotives and other rail cars by huge couplers located on each end. The couplers self-align and lock together when two cars are pushed together. A transportation company wants to measure the forces that these couplers are subjected to when the pull of the locomotive gets tons of rail cars moving from a dead stop, and while pulling the train. Additionally, the forces encountered during braking are significant as the momentum of the rail cars push against each other.

To determine the forces, they applied gauges directly to the couplers of a rail car. However the external gauges were exposed to the elements and didn't last more than a few tests, creating downtime and expense as the gauges were replaced. Additionally, when it was necessary to do the test at a customer's location they had to transport the entire rail car to the site which was very expensive and time consuming.

The STI solution was a portable, more accurate, and more reliable way to get the job done. Stellar Technology Engineers replaced the clevis pin which connects the coupler to the rail car with a Model LDP990 400,000 lb. load pin. Designed to work in tension and compression and held in position by an anti-rotation slot, this load pin is an exact form, fit, and function replacement for the existing clevis pin. Once in place and holding the coupler securely, the load pin is connected via a rugged MS3116F-10-6S connector and real time data is read to a portable meter.

What's more, now they can do remote location testing by simply replacing the existing pin with the STI load pin at the customer's site. Thanks to Stellar Technology's "Application-Solution" attitude, this test has become easier, more reliable, and more accurate too!