

Beam Stress Test Wireless Telemetry System

Industry: IoT

Summary

Customer Challenge

A customer wants to conduct stress tests on their beams to determine the peak force and the linear displacement reading until the point of failure.

Interface Solution

Interface's WTS 1200 Standard Precision LowProfile™ Wireless Load Cell is installed in the test rig. A hydraulic ram, with an installed LDVT sensor, pushes up onto the beam until it cracks or bends, and the WTS 1200 measures the forces. Data results are wirelessly transmitted to the WTS-BS-6 Wireless Telemetry Dongle Base Station when connected to the customer's PC. The WTS-AM-2 Wireless Voltage Sensor Transmitter can also transmit results from the LDVT sensor using Log100 software.

Results

Interface's wireless telemetry system and products successfully graphed and logged the results of the beam's peak force and linear displacement during the customer's beam stress test.

Materials

- WTS 1200 Standard Precision LowProfile™ Wireless Load Cell
- WTS-BS-6 Wireless Telemetry Dongle Base Station with supplied Log100 software
- WTS-AM-2 Wireless Voltage Sensor Transmitter
- Customer Beam and test rig
- Customer supplied LDVT sensor
- Customer PC or Laptop

How It Works

1. The WTS 1200 Standard Precision LowProfile™ Wireless Load Cell is installed under the beam being tested in the test rig.
2. A hydraulic ram pushes upwards onto the beam during the stress test. The WTS 1200 measures the amount of force it took for the beam to snap or bend.
3. The installed LDVT sensor within the ram measures its linear displacement, and results are transmitted when connected to the WTS-AM-2 Wireless Voltage Sensor Transmitter.
4. The WTS 1200 Standard Precision LowProfile™ Wireless Load Cell transmits the force data onto the customer's PC using the WTS-BS-6 Wireless Telemetry Dongle Base Station. Force and linear displacements results can be both displayed, logged, and graphed using supplied Log100 software.

