

Interface

FORCE MEASUREMENT SOLUTIONS.

CASE STUDY

Infrastructure Projects Rely on Interface



About

From dams to roads and bridges, the infrastructure industry is the backbone of our society and the need for sensor technologies used in the development and monitoring of these structures is never going away. According to Forbes, the global infrastructure market sits at \$3.6T. ResearchandMarkets.com reports one of the largest Infrastructure sub-sectors global construction, notes a compound annual growth rate (CAGR) of 9% from 2020 to 2021, with no slowing down. One of the factors accelerating growth is accurate and reliable test and measurement equipment, which is necessary to ensure durability, quality, and safety in all infrastructure projects.

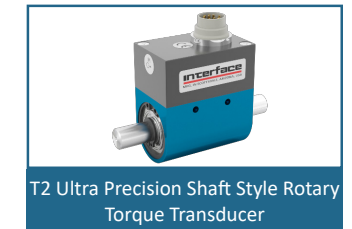
Challenge

Safety and dependability of infrastructure is the most important factor in the design, development, and manufacturing of products in the industry. Buildings, bridges, dams, and more are expected to hold up over time and this makes it overwhelmingly necessary to engineer these structures to near perfection. Accurate and trustworthy equipment used for testing and actual construction is where Interface plays a pivotal role. Take for instance the massive amount of design, engineering and quality control that goes into a suspension bridge requires testing before and after it's built. Not only does it need to be constructed with supreme accuracy, it needs to be monitored constantly to ensure it's safe for use, especially because infrastructure projects are exposed to extreme elements.

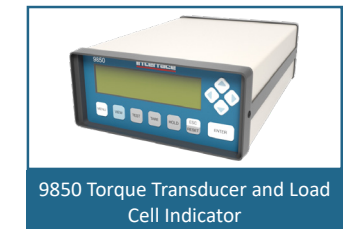
Interface is a supplier of choice to the infrastructure industry. Our engineers have designed products used for civil infrastructures, such as structural monitoring, vibrational monitoring, load bearing testing, tunnels, bridges, and road construction.

Interface Solutions

We provide a wide range of load cells, load pins and shackles, instrumentation, multi-axis sensors and torque transducers, which are top choices for infrastructure projects and testing with precision when quality matters most. Our sensor solutions are commonly used in measuring the related hardware used for industry products and structures.



T2 Ultra Precision Shaft Style Rotary Torque Transducer



9850 Torque Transducer and Load Cell Indicator



3AXX Multi-Axis Load Cell

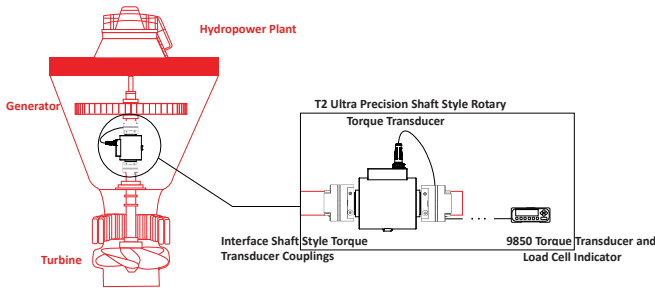


WMC Miniature Sealed Stainless Steel Load Cell

The types of infrastructure projects that Interface has supplied measurement solutions for includes transportation systems, communication structures, water and electrical facilities, and numerous inventions that are used to build, support, and maintain them.

The range of projects are broad, so we are highlighting a few below that highlight our capabilities when accuracy, quality and reliability matter in design, testing, construction, and assessing current and limitations for safety requirements.

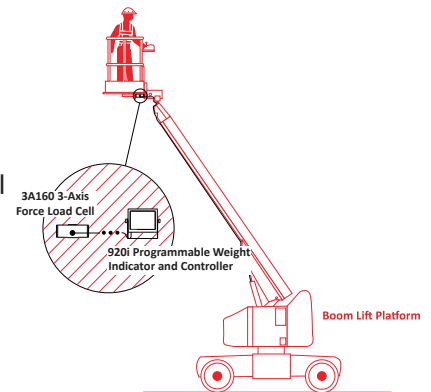
Hydropower Turbine Generator Monitoring



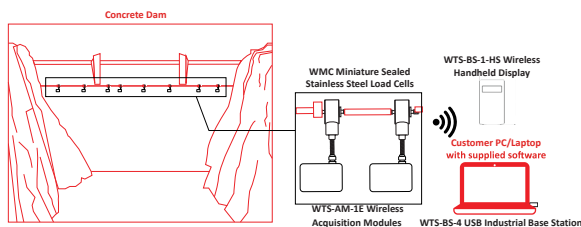
A customer needed to monitor and detect any turbine generator faults in their hydroelectric power plant located on a river. Interface's solution was to use the T2 Ultra Precision Shaft Style Rotary Torque Transducer and attach it to the turbine generator with Interface's Shaft Style Torque Transducer Couplings. When water from the river pushes through the penstock to the outflow, it moves the turbine blades, creating electricity through the generator shaft. Torsion measurements can be graphed and logged with the 9850 Torque Transducer and Load Cell Indicator catching any unusual fluctuations and vibrations. Using this solution, the customer was able to monitor, graph, and log the torque measurement results of the turbine generator.

Aerial Lift Overload Control

A manufacturing company for aerial lifts wanted to test its self-propelled boom lift to ensure it could operate at heavy capacities when in use, and at different angles. The ultimate goal to prevent any accidents in case of a lifting overload, for the safety of any working individual who uses it. Interface proposed attaching a 3A160 3-Axis Force Load Cell to the bottom of the bucket of the boom lift. The 3A160 3-Axis Force Load Cell gives high accuracy results and results could be displayed using the 920i Programmable Weight Indicator and Controller in real time. The company was able to use these products to test their aerial boom lifts and determined it was safely operable when maximum capacities has been reached.



Concrete Dam Flood Monitoring



A customer wanted to monitor and be notified if a concrete dam has reached high flooding levels. Interface's proposed using WMC Miniature Sealed Stainless Steel Load Cells with multiple WTS-AM-1E Wireless Acquisition Modules connected to the dam. The WMC products are small in size and perfect for measuring tension and compression. Multiple WMC's were installed around the arch of the dam, so when flooding occurs, the WMC transmitted data and notified the customer through one of our Wireless Telemetry Systems.

Learn More

Interface provides a host of additional information on application examples and products fit for the Infrastructure industry on our new solutions page. In addition, you can call Interface at 480-948-5555 to speak to an applications engineer to discuss your next infrastructure project.