ADMET

ADMET Transforms Automotive Supplier Dexter Axle's Rubber Component Testing

Challenge

With its nine manufacturing centers and international distribution network, Dexter Axle is a leading supplier of running gear and components for the trailer industry. The company has invested heavily in manufacturing and testing technology, with in-house laboratories conducting rigorous metallurgical, stress, and fatigue testing.

The company performs routine tests of daily in-process manufacturing friction welds on axle assemblies using a Reihle electromechanical tensile testing machine. However, Dexter Axle's main line of heavy duty axles, Torflex, uses rubber components that are integral to the product's performance. Management decided that the rubber cord should be tested upon receipt at the facility. As a result, James Bryan, a Dexter Axle quality technician, was asked to a conduct a modulus test on one or two rubber core samples from each case.

"At the beginning I was using our manual system. It was very difficult to accurately control the different speeds. Our results were all over the map and I had no confidence in the results," commented Bryan. He contacted ADMET to see if there was a way to improve reliability of their results.

Solution

The answer was ADMET's MTESTQuattro test system. By adding MTESTQuattro and replacing the motor amplifier, ADMET was able to upgrade the Reihle frame to handle the necessary modulus tests. Now, using MTESTQuattro both to control the testing process and record the results for the bend and modulus tests, Bryan and quality control inspectors were able to conduct up to 100 tests per week.

Results

This improved confidence in their results has had a positive impact on Dexter's business. "Now we get results that we can rely on and we can easily transfer them to our Statistical Quality Control system or to a spreadsheet," said Mr. Bryan. The system came with some unanticipated side benefits. It frees up Bryan's time allowing him to easily train QC technicians to oversee the modulus testing. In addition, MTESTQuattro manages the entire testing cycle. Explained Mr. Bryan, "Previously, I was completely tied to the machine during the test. Now, I can log information from earlier tests or do something else. It even shuts itself down at the end of the cycle."