

Magnetic Analysis Corporation

Multi-Test System for Automotive Shock Absorber Tubing & OCTG

Magnetic Analysis Corp. has supplied a combined ultrasonic/eddy current test system to inspect cold drawn welded tube to be used in manufacturing shock absorbers at a new plant in Monterrey, Mexico, built by Prosankin, formerly known as A-4C-Sankin. The new plant's focus is production and sales of cold drawn tubes primarily for automotive use, although the test system is also designed to provide the future capability of meeting API 5CT testing requirement for oil country tubular goods (OCTG)."

Most cars produced in mass production today feature gas-filled shock absorbers. Accurate and thorough testing of the tube during its production is essential in order to prevent leaking gas. The test system supplied by Magnetic Analysis Corp. to the tube producer utilizes two technologies for inspecting the cold drawn welded tubes during production – ultrasonic and eddy current. The 100mm Echomac® rotary ultra-

sonic system uses 4 test channels to detect transverse defects, 4 channels for longitudinal defects, and 4 for measuring wall thickness. In addition, a Multimac® eddy current encircling coil test fulfills the API requirement for detecting a through wall drilled hole, representing a transverse defect, required for some grades. The system is designed to run in an automatic mode, performing both the ultrasonic and eddy current tests. Defects are marked and included in a comprehensive report with test parameters and other data for each tube and batch, while keeping pace with the production line. Data from the tests is stored locally and can be transferred to the customers network.

The tubes range from 12mm to 100mm diameter with wall thickness of 1.5mm to 7mm. A new Water Package, designed by MAC, features a counter weight that allows the water box cover, including the attached heavy copper heat

exchanger coil, to be easily raised up and remain in the open position for access during maintenance. The system includes automated drive mechanisms on a V- Roll Bench and a Demagnetizer for any residual magnetism created by the eddy current test saturation coil.

A-4C-Sankin was formed in 2015 as a joint venture of Grupo Prolamsa, a leading steel pipe manufacturer in Mexico; the Sankin Corporation, a manufacturer of cold drawn steel tube; and JFE Shoji Trade Corporation, the trading arm of Japan's second largest steel company.

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Multi-Test System for Automotive Shock Absorber Tubing, & OCTG featuring 100mm ultrasonic Echomac® Rotary test and a MultiMac® eddy current tester.