

The Solution

The Alternating Current Field Measurement, or ACFM®, electromagnetic testing technique has been recognized for its remarkable inspection performance by a range of certifying bodies, and US regulators have included ACFM into government regulations for tank rail car weld inspection. ACFM was designed to work in the challenging environment that railcar welds usually present being particularly susceptible as manual welds.

One of the greatest advantages of ACFM is its ability to work

through paint and coatings, effectively eliminating the labor-intensive surface preparation requirements of MPI. ACFM offers a higher probability of detection, or PoD, and therefore inspection reliability. Commercially available ACFM instruments enable better inspection planning with increased productivity and advanced yet easy reporting. The digital record allows historical data management and more a more robust risk management program thanks to data modelling with more precise information available.

The Benefits

Advances in ACFM technology have dramatically reduced railroad freight tank car external weld inspections. With powerful embedded software and purpose-built probes, inspecting an entire tank car is achievable in a mere two hours. A newly available ACFM array probe allows for one inspection pass compared to four with a single sensor probe, the technology covering the typical 16-millimeter, or 0.6-inch, wide weld cap. With the automated sizing functionality removing the need for an encoder, a constant scan speed facilitates defect depth sizing not available with conventional inspection methods.

This significant increase to productivity literally saves asset owners millions of dollars every single year.

With an increasingly prevalent pressure to protect the planet, employing ACFM over techniques that depend on chemical consumables affords a clear benefit while supporting rail freight's reduced carbon footprint over other transportation and logistical measures. Eddyfi Technologies offers the industry leading ACFM instruments for better railway tank car weld inspections. Contact us to learn more now.