



# Circle Systems, Inc.

1210 Osborne Road • St. Marys, GA 31558 • 815-286-3271 • Fax 815-286-3352 • www.CircleSafe.com

## Case Study for Frontier Tubular Inspection of Oil Country Tubular Goods Using Mi-Glow® 834

### Company profile

For more than 80 years, **Frontier Tubular Solutions, LLC** has provided OCTG services, storage and transportation to North America's energy sector. They primarily serve steel mills, OCTG distributors and exploration companies. Their facilities provide customers a one source solution to store, service and transport OCTG. Frontier services include inspection, threading, maintenance, reclamation, complement one another and are offered separately or on an integrated basis.

### Business situation

The NDT department was searching for a new magnetic particle that helped enhance the detection of discontinuities and was a cost effective solution compared to the leading competition's product. The timing of the evaluation couldn't have been better due to the installation of new Special End Area magnetizing equipment.

### Technical situation

Frontier was using a petroleum/solvent based magnetic particle solution that was expensive to dispose of, produced fumes in the inspection booth and was lacking in brightness.

### Solution

Circle Systems introduced Mi-Glow® 834 as a cost effective, superior performing magnetic particle inspection solution. Frontier performed an evaluation on the proposed material in June of 2013 and the Mi-Glow® 834 has become an integral component in the inspection of surface and near surface discontinuities.

### Benefits

Mi-Glow® 834 provided Frontier with a brighter more sensitive magnetic particle inspection solution. Increased productivity was experienced due to the brightness and ease of detection of discontinuities. A cost savings of up to 50% is also experienced when compared to the leading competition's equivalent product. When asked why they would recommend Mi-Glow® 834 to other companies performing magnetic particle inspection on related OCTG their response was "quality of product, customer service, pricing and availability."

### Products and Specifications Used

- Mi-Glow® 834
- Special End Area Magnetizing Equipment
- LED UV-A lighting
- UV-A Radiometer
- API 5CT Specification for Casing and Tubing
- API RP 5A5 Field Inspection of New Casing, Tubing, and Plain-End Drill Pipe
- ASTM E1444M Standard Practice for Magnetic Particle Inspection
- ASTM E709 Standard Guide For Magnetic Particle Testing

