MATERIAL VERIFICATION SOLUTIONS



PHMSA MEGA RULE

The PHMSA Mega Rule significantly expands federal pipeline safety regulations by strengthening requirements for material verification, traceability, reconfirmation, and documentation—particularly for legacy pipelines where records may be incomplete, inaccurate, or missing.

Under 49 CFR §192.607 and §195.56, operators must establish and maintain traceable, verifiable, and complete (TVC) material records or perform material verification when records are insufficient. In addition, 49 CFR §192.624 requires MAOP reconfirmation for gas transmission pipelines, which relies on verified material properties including specified minimum yield strength (SMYS), chemical composition, seam type, and material toughness to support engineering analyses and fracture control considerations. Integrity management requirements under 49 CFR §192.917 and §195.452 further require evaluation of material-related threats, including seam-related failure susceptibility, as part of risk-based integrity assessments.

These requirements present challenges including limited access to pipe, aging infrastructure, data gaps, and the need to balance regulatory compliance with operational efficiency.

JANX, in partnership with MMT, addresses these regulatory and technical challenges by delivering advanced, non-destructive material verification solutions that provide defensible data on strength, ductility, and seam toughness.

Key Benefits of JANX and MMT HSD Material Verification

- Non-destructive, in-situ verification aligned with 49 CFR §192.607 and §195.56
- Direct correlation to SMYS and tensile strength for material verification
- Evaluation of hardness and ductility to support engineering assessments
- Improved data confidence to support MAOP reconfirmation (§192.624)
- Enhanced traceability and documentation aligned with TVC requirements
- Seam toughness screening through localized hardness and ductility evaluation of longitudinal seams and heat-affected zones, supporting fracture control and material threat assessments under 49 CFR §192.917 and §195.452
- Field-deployable technologies applicable to legacy and in-service pipelines
- Defensible, repeatable results suitable for regulatory audits and compliance reviews

MMT HSD TESTER



JANX, in partnership with MMT, provides a solution to the PHMSA Mega Rule through the application of the MMT HSD (Hardness, Strength, and Ductility) Tester, a non-destructive, in-situ technology designed to verify pipe material properties on in-service pipelines. In addition to correlating quantitative measurements to specified minimum yield strength (SMYS), tensile strength, and ductility, HSD testing supports seam toughness screening by evaluating localized material response in longitudinal seams and adjacent heat-affected zones. This enables operators to identify potential seam-related susceptibility without removing pipe samples or interrupting operations. Through our partnership with MMT, JANX helps operators efficiently close material data gaps, support MAOP reconfirmation and integrity assessments, and establish defensible compliance with the PHMSA Mega Rule while minimizing excavation, downtime, and operational risk.

Data collected using JANX's MMT HSD instrumentation is securely uploaded to MMTConnect™, where it is processed and analyzed by MMT subject-matter experts in collaboration with JANX. The MIT-developed HSD tester captures up to eight times more data points than conventional methods and incorporates vibration-resistant design to preserve data integrity, reduce test failures, and deliver consistent, high-confidence results that support regulatory compliance and long-term sustainability objectives.

Contact us today to learn more about our Material Verification Solutions.

CONTACT US

E: GARY.ZUPPER@JANXNDT.COM
PH: 724-710-7434

JANX



ABOUT US

With over 40 years of experience, advanced technology, and a highly skilled workforce, JANX delivers comprehensive pipeline integrity services to help operators ensure the reliability and safety of their pipelines. Our industry-leading non-destructive testing (NDT) methods provide accurate and detailed data, supporting operators in making informed decisions to protect people, property, and the environment.

LONG-TERM RELATIONSHIPS

Many of our clients have been with us for years, and some have trusted JANX since we were founded in 1981.

RAPID RESPONSE

We are able to staff up quickly, reporting to work sites within 24 to 48 hours of a service call, often in less time.

ADVANCED EVALUATION METHODS

We utilize both conventional and cutting-edge evaluation techniques, including proprietary technologies, for the highest accuracy and efficiency.

EXPERIENCED TECHNICIANS

Our skilled technicians and team leaders have an in-depth understanding of our clients' needs and the industries we serve.

PRIVACY.FLOWCODE.COM