PIT5000 Pipeline Integrity Tester
Compliance with 49 CFR Part 192 Subpart J and 49 CFR Part 195 Subpart E

The purpose of this document is to compare the requirements of the subject 49 CFR Parts and Subparts to the applicable features of the PIT5000 Pipeline Integrity Tester from Meriam Process Technologies. The comparisons in this document represent the opinions of the manufacturer after examination of the CFR requirements and consultation with pipeline industry representatives and U.S. Department of Transportation officials.

49 CFR 192 Subpart J 192.505 Strength Tests	Summary of CFR requirement	PIT5000 Compliance Method
a	Each segment of steel pipeline that is to operate at a hoop stress of 30 percent or more of SMYS must be strength tested. Requirements for hydrostatic testing near buildings designed for human occupancy. Allowances for air or inert gas testing.	PIT5000 is designed for hydrostatic, air or inert gas pressure testing. Default test media is water. User can change to gas on the Test Info tab using drop down menu.
b	Class 1 or 2 locations require compressor, regulator and measuring stations to be tested to Class 3 requirements.	PIT5000 will document tests for all pipe Classes as required by user. Test pressures up to 3300 PSI are supported.
c	Strength test must be conducted by maintaining pressure at or above the test pressure for at least 8 hours.	PIT5000 will document tests up to 28 hours depending on battery option selected (12 or 28 hour). User determines and enters desired test time. PIT provides an elapsed time clock.
d, d(1) – d(3)	Components other than pipe are the only replacement or addition requires no pipeline pressure testing.	Not applicable
e	For fabricated units and short sections of pipe, for which post installation testing is impractical, a preinstallation strength test must be conducted by maintaining the pressure for at least 4 hours.	PIT5000 supports 4 hour tests.

49 CFR 192 Subpart J 192.517, Records	Summary of CFR requirement	PIT5000 Compliance Method
a	Operator must make and retain a record of each 192.505 and 192.507 test…	See below.
a(1)	Document Operator name, Operator's responsible employee name, and name of any test company used.	Provides for Operator name, Operator's responsible employee, Test Company name, Division, Location, Area and Station number.
a(2)	Document test media used	Default is water; drop down box to select another liquid (enter density) or gas
a(3)	Document Test pressure	Documents test pressure in electronic file and in strip chart format.
a(4)	Document Test duration	Documents test duration using time stamped data sets, elapsed timer and strip chart.
a(5)	Pressure recording charts or other record of pressure measurement	Collects to an electronic file and displays digital pressure records from NIST traceable

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Compliance with 49 CFR Part 192 Subpart J and 49 CFR Part 195 Subpart E

		measurement devices. Data sets and strip chart provided in spreadsheet format.
a(6)	Document elevation variations whenever significant for the particular test.	Provides data entry for upstream and downstream elevation, high point and low point elevation, and PIT5000 elevation.
a(7)	Leaks and failures noted and their disposition.	Operator notes can be entered any time after "Start Program" is selected until "End Program" is selected. Notes are time stamped.
b	Operator must maintain a record of each test required by 192.509, 192.511 and 192.513 for at least 5 years.	Operator can print out and file test results or they can save the .csv file and electronic spreadsheet file on a secure computer.

49 CFR 195 Subpart E, 195.304 Test Pressure	Summary of CFR requirement	PIT5000 Compliance Method
Paragraph	Test pressure must be maintained throughout the section being tested for at least 4 continuous hours at 125% or more of the maximum operating pressure and in some case for at least an additional 4 hours at 110% or more of the maximum operating pressure.	Operator inputs the required test pressure and the required test duration into PIT5000 software. PIT5000 software provides visual alarms for test pressure that is out of tolerance. The software collects the data sets and records them electronically to a file. Battery options are available for 12 hours and for 28 hours of portable use.

49 CFR 195 Subpart E, 195.310 Records	Summary of CFR requirement	PIT5000 Compliance Method
a	A record must be made of each pressure test required by this subpart, and the record of the latest test must be retained as long as the facility tested is in use.	Operator can print out and file test results or they can save the .csv file and electronic spreadsheet file on a secure computer.
b	The record required by paragraph (a) of this section must include:	
b(1)	The pressure recording charts	Operator can print out pressure strip charts for filing or, if acceptable, save electronic file(s) to a secure computer for record storage.
b(2)	Test instrument calibration data	NIST traceable certificates for measurement devices are included with PIT5000. Serial number of each device can be confirmed through PIT5000 software and MFT measurement device.
b(3)	Name of the operator, the name of the person responsible for making the test, and the name of the test company used, if any.	Provides for Operator name, Operator's responsible employee, Test Company name, Division, Location, Area and Station number.

PIT5000 Pipeline Integrity Tester
Compliance with 49 CFR Part 192 Subpart J and 49 CFR Part 195 Subpart E

b(4)	The date and time of test	PIT5000 software time stamps all data collected.
b(5)	The minimum test pressure	The target test pressure, as well as minimum and maximum allowable test pressures, is recorded.
b(6)	The test medium	Default is water; drop down box to select another liquid (enter density) or gas
b(7)	A description of the facility tested and the test apparatus	PIT5000 allows for Operator Name, Company, Division, Location, Area, Station No., Work Order No., and Test Report Number. Documentation of the test includes the PIT5000's measurement device serial numbers.
b(8)	A description of any pressure discontinuities, including test failures, that appear on the pressure recording charts.	Operator notes can be entered any time after "Start Program" is selected until "End Program" is selected. Notes are time stamped.
b(9)	Where elevation differences in the section under test exceed 100 feet (30 meters), a profile of the pipeline that shows the elevation and test sites over the entire length of the test section	Provides data entry for upstream and downstream elevation, high point and low point elevation, and PIT5000 elevation. Profiles are not supported.
b(10)	Temperature of the test medium or pipe during the test period.	Provides for pipe temperature and ambient temperature measurement and recording.