Question 11.12

Topic: Fuel Flowmeters -- Accuracy Information

Question: What information must I submit with my certification or recertification application to demonstrate accuracy of a fuel flowmeter?

Answer: Submit data and calculations to demonstrate that the fuel flowmeter meets an accuracy of 2.0% of the upper range value. When calibration is done using one of the allowable methods in Section 2.1.5.1 or by comparison against a reference flowmeter, as described in Section 2.1.5.2 of Appendix D, include:

(1) Range of the instrument at which calibration was conducted (usually expressed as a percentage of the upper range value). Data should include a high-level value and at least two other values (e.g., low-level and mid-level).

(2) The upper range value -- URV (full scale).

(3) Readings from the flowmeter being tested (in lbs/min, scfh, or other appropriate units).

(4) Readings for the reference device (same units as the flowmeter).

(5) Error or accuracy calculations, as a percentage of URV. If possible, present data in a table, such as Table D-1 in Appendix D to Part 75.

(6) When using a NIST traceable procedure, include certificates to show that equipment currently meets NIST standards.

(7) For orifice, nozzle, and venturi-type flowmeters, you may certify by design. If you select this option, provide a certificate from the vendor showing that the fuel flowmeter meets the requirements of AGA Report No. 3. Also provide calibration data to indicate that the pressure, temperature, and differential pressure transmitters/transducers meet the 2.0% flowmeter accuracy requirement (see Section 2.1.6.1 of Appendix D).

References: § 75.59(b), § 75.63; Appendix D, Section 2.1.6.1 and Table D-1

History: First published in November 1995, Update #7; revised in October 1999 Revised Manual; revised in 2013 Manual