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**Calibration Specification for Test Systems of Ducted Silencers
(English Translation)**

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9 Re-school interval (9)

Appendix A Contents of Calibration Records (10)

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Appendix C Examples of Measurement Uncertainty Evaluation (14)

Introduction

This specification is prepared in accordance with the requirements and format of the JJF 1071-2010 "Rules for the preparation of national measurement calibration specifications".

This specification mainly refers to the technical aspects of GB/T 25516-2010 "Acoustic pipe muffler and duct ends Laboratory Measurement Methods for Insertion Loss, Airflow Noise, and Total Pressure Loss in a Unit's Pipeline Muffler Test System Performance parameter requirements and test methods.

This specification gives the limit insertion loss test according to JJF 1059.1-2012 "Uncertainty Evaluation and Representation of Measurement".

Examples of assessments of quantity uncertainty.

This specification is the first release.

Pipe Muffler Test System Calibration Specifications

1 Scope

This specification specifies the calibration conditions for the pipeline muffler test system and calibration methods for its main metrological characteristics.

This specification applies to pipelines including ventilation and air conditioning systems, gas intake and exhaust systems, and other similar systems.

Calibration of a muffler performance measurement test system (called a pipeline muffler test system).

2 references

This specification refers to the following documents.

JJG188 sound level meter JJF 1001-2011 Universal Measurement Terms and Definitions
JJF 1034-2005 Acoustic Measurement Terms Terms and Definitions GB/T 3102.5-1993
Electrical and magnetic quantities and units GB/T 3102.7-1993 Acoustic quantities and
units GB/T 6881.1-2002 Acoustics and sound pressure method for determining sound
power levels of noise sources Reverberation room method GB/T 17697-2014 Acoustics
Fans and other ventilation equipment Sound power measuring tubes radiated into pipes
Road Act for dated references, only dated editions apply to this specification; all undated

references the latest version (including all amendments) applies to this specification.

3 Terms and units of measure

3.1 Terms and Definitions the following terms and definitions defined in JJF 1001-2011, JJF 1034-2005, and JJG188 apply to this specification.

3.1.1 insertion loss the difference in sound power level measured in the downstream pipeline before and after installation of the test piece in the pipeline, and the insertion loss symbol D_i Shown, see equation (1).

$$D_i = L_{WII} - L_{WI} \quad (1)$$

In the formula.

L_{WI} -Before installing the test piece, propagate along the test pipe or radiate into the reverberation room (or half-silenced) connected to the pipe.

The measured sound power level in the room);

L_{WII} ---After installation of the test piece, it propagates or radiates along the test pipe to the reverberation room (or semi-silencer) connected to the pipe.

The measured sound power level in the room.

Note: The insertion loss is in decibels, dB.

3.1.2 Face Velocity

The wind speed (v_f) in front of the test specimen, in m/s, see equation (2).