

ICS 17.140
CCS A 59

JJF

**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

JJF 1651-2017

**Calibration Specification for Underwater Noise Sources in the
Frequency Range 20 Hz to 100 kHz
(English Translation)**

Issued on: November 20, 2017

Implemented on: February 20, 2018

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine**

Table of Contents

Introduction (II)	
1 Scope (1)	
2 References (1)	
3 Terms and units of measure (1)	
3.1 Underwater noise sources (1)	
3.2 [Underwater] noise band sound pressure level (1)	
3.3 [Underwater] Noise Band Source Sound Pressure Level (1)	
3.4 [Underwater] noise sound pressure spectrum [density] level (2)	
3.5 [Underwater] noise sound pressure spectrum [density] sound source level (2)	
4 Overview (2)	
5 Metrological characteristics (2)	
6 Calibration Conditions (2)	
6.1 Environmental Conditions (2)	
6.2 Measurement Standards and Other Equipment (2)	
7 Calibration Items and Calibration Methods (3)	
7.1 Calibration Items (3)	
7.2 Calibration Methods (3)	
8 Expression of Calibration Results (6)	
8.1 Calibration Data Processing (6)	
8.2 Calibration Certificate (6)	
8.3 Measurement uncertainty of calibration results (6)	
9 Re-school interval (6)	
Appendix A Content of Calibration Certificate (7)	
Appendix B Example of assessment of uncertainty in sound source level measurement of underwater noise sound pressure spectrum density (9)	

3.1 Underwater noise sources (1)

3.2 [Underwater] noise band sound pressure level (1) 3.3 [Underwater] Noise Band Source Sound Pressure Level (1) 3.4 [Underwater] noise sound pressure spectrum [density] level (2) 3.5 [Underwater] noise sound pressure spectrum [density] sound source level (2)

9 Re-school interval (6)

Appendix A Content of Calibration Certificate (7)

Appendix B Example of assessment of uncertainty in sound source level measurement of underwater noise sound pressure spectrum density (9)

Introduction

This specification is prepared in accordance with JJF 1071-2010 "Rules for the preparation of national measurement calibration specifications." this specification is issued for the first time (development).

20Hz~100kHz Underwater Noise Source Calibration Specification

1 Scope

This specification applies to the calibration of underwater noise sources used within the frequency range of 20Hz to 100kHz. Independent explosion Measurement of sound sources, burning sound sources, etc. may be performed with reference to this specification.

2 references

This specification refers to the following documents.

JJG4-2015 Steel tape measure JJG449-2014 Octave and Fractional Octave Filters JJF 1001 Universal Measurement Terms and Definitions JJF 1034 Acoustic Measurement Terms Terms and Definitions JJF 1059.1-2012 Evaluation and Expression of Measurement Uncertainty GB/T 3102.7 Acoustic quantities and units GB/T 3947 Acoustic Terms GB/T 5265-2009 Acoustic underwater noise measurement 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 it is defined by JJF 1001, JJF 1034, GB/T 3102.7, GB/T 3947 and GB/T 5265-2009 and the following terms and definitions apply to this specification.

This specification uses the amount and unit specified in GB/T 3102.7.

3.1 underwater noise source A device that generates random continuous or impulsive noise underwater.

3.2 [Underwater] noise band sound pressure level [underwater]
noisebandsoundpressurelevel the sound pressure level of underwater noise within a certain frequency band.

[GB/T 5265-2009, definition 3.4] Note.

1. The unit is decibel (dB).

2. The reference sound pressure is 1 μPa .

3. The frequency bandwidth is generally 1/3, 1/1 octave bandwidth, or determined according to user requirements.

3.3 [Underwater] noise band Sound pressure level [underwater]
noisebandsourcesoundpressurelevel the [submerged] noise band sound pressure level
within a certain frequency band, equivalent to 1m.

Note:

1. The unit is decibel (dB).