

# Appendix D

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Calibration Certificate for  
Construction Noise Monitoring  
Equipment

## CALIBRATION CERTIFICATE OF SOUND LEVEL METER

### Client Supplied Information

Client : Fugro Technical Services Ltd.  
 Project : Calibration Services

### Details of Unit Under Test, UUT

Description : Sound Level Meter  
 Manufacturer : Casella

	Meter	Microphone	Preamplifier
Model No.	CEL-63X	CE-251	CEL-495
Serial No.	0873599	02374	003916

Equipment ID : N/A

Next Calibration Date : 13-Jul-2023  
 Specification Limit : EN 61672-1: 2003 Class 1

### Laboratory Information

#### Details of Reference Equipment -

Description : B & K Acoustic Multifunction Calibrator 4226 (Traditional free field setting)  
 Equipment ID. : R-108-1

Date Receipt of UUT : 13-Jul-2022

Date of Calibration : 14-Jul-2022

Calibration Location : Calibration Laboratory of FTS      Ambient Temperature : 20±2 °C

Method Used : By direct comparison      Relative Humidity : <80% R.H.

As Received : Functional / Within specs

As Returned : Complies with the specification limits (EN61672-1:2003 Class 1)

### Calibration Results :

Parameters		Mean Value (dB)	Specification Limit(dB)
A-weighting frequency response	4000Hz	1.6	2.6 to -0.6
	2000Hz	1.3	2.8 to -0.4
	1000Hz	0.0	1.1 to -1.1
	500Hz	-3.3	-1.8 to -4.6
	250Hz	-8.8	-7.2 to -10.0
	125Hz	-16.2	-14.6 to -17.6
	63Hz	-26.2	-24.7 to -27.7
Differential level linearity	94dB-104dB	0.0	± 0.6
	104dB-114dB	0.0	± 0.6

### Remarks :

1. The equipment used in this calibration is traceable to recognized National Standards.
2. For calibration: Reference SPL are 94, 104 & 114dB, range setting is 20-140dB & time weighting is fast
3. The mean value is the average of four measurements.
4. A general inspection of the item has been carried out and found the item is in good working conditions.
5. The result reported on this certificate apply only to the unit under test as received. Fugro has not been responsible for the sampling stage

Checked by : SLA      Date : 14-7-2022      Certified by : R.J. Leung      Date : 15-7-2022  
 CA-R-297 (22/07/2009)      Leung Kwok Tai (Assistant Manager)

**\*\* End of Report \*\***



## CALIBRATION CERTIFICATE OF SOUND CALIBRATOR

Client : Fugro Technical Services Ltd.

Project : Calibration Services

### Client Supplied Information

#### Details of Unit Under Test, UUT

Description : Acoustic Calibrator  
 Manufacturer : Casella (Model CEL-120/1)  
 Serial No. : 5230758  
 Equipment ID : N/A  
 Next Calibration Date : 27-Jul-2023  
 Specification Limit : EN 60942: 2003 Class 1

### Laboratory Information

#### Details of Calibration Equipment

Description : Reference Sound level meter  
 Equipment ID. : R-119-2  
 Date of UUT receipt : 25-Jul-2022  
 Date of Calibration : 28-Jul-2022  
 Calibration Location : Calibration Laboratory of FTS      Ambient Temperature : 20±2 °C  
 Method Used : By direct comparison      Relative Humidity : <80% R.H.

#### Calibration Results :

Parameters (Setting of UUT)	Mean Value (error of measurement)	Specification Limit(dB)
94dB	-0.2 dB	±0.4dB
114dB	0.2 dB	

#### Remarks :

1. The equipment used in this calibration is traceable to recognized National Standards.
2. The mean value is the average of four measurements.
3. A general inspection of the item has been carried out and found the item is in good working conditions.  
 The values given in this Calibration Certificate only relate to the unit-under-test and the values measured at the time of the test. Any uncertainties will not include allowances for the environmental changes, variation and shock during transportation, or the capability of any other laboratory to repeat the

Checked by : SLA  
 CA-R-297 (22/07/2009)

Date : 1-8-2022

Certified by : Leung Kwok Tai  
 Leung Kwok Tai (Assistant Manager)

Date : 2-8-2022

\*\* End of Report \*\*



## CALIBRATION CERTIFICATE OF SOUND CALIBRATOR

### Client Supplied Information

Client : Fugro Technical Services Ltd.

Project : Calibration Services

Details of Unit Under Test, UUT -

Description : Sound Calibrator

Manufacturer : Casella (Model CEL-120/1)

Serial No. : 5230950

Equipment ID : N/A

Next Calibration Date : 26-Sep-2023

Specification Limit : EN 60942: 2003 Class 1

### Laboratory Information

Details of Calibration Equipment

Description : Reference Sound level meter

Equipment ID. : R-119-2

Date of Receipt UUT : 23-Sep-2022

Date of Calibration : 27-Sep-2022

Calibration Location : Calibration Laboratory of FTS      Ambient Temperature : 20±2 °C

Method Used : By direct comparison      Relative Humidity : &lt;80% R.H.

### Calibration Results :

Parameters (Setting of UUT)	Mean Value (error of measurement)	Specification Limit(dB)
94dB	-0.3 dB	±0.4dB
114dB	-0.4 dB	

### Remarks :

1. The equipment used in this calibration is traceable to recognized National Standards.
2. The mean value is the average of four measurements.
3. The equipment under test does comply with the specification limit.
4. The values given in this Calibration Certificate only relate to the unit-under-test and the values measured at the time of the test. Any uncertainties quoted will not include allowances for the environmental changes, variation and shock during transportation, or the capability of any other laboratory to repeat the measurement.
5. The decision rule is based on binary statement for simple acceptance rule ( w = 0 ).

 Checked by :  Date : 29-9-2022 Certified by : K.T. Leung Date : 29-9-2022  
 CA-R-297 (22/07/2009)      Leung Kwok Tai (Assistant Manager)

\*\* End of Report \*\*