
Certificate of Calibration

Certificate number: TC-1762-3

Applicant Name: **AV-Consulting Raadgevende Ingenieurs**
 Address : **Benedenberg 100/A**
 2861 LH Bergambacht

Amplifier Manufacturer : **AuroVibe**
 Model: **AuroVibe**
 Serial number: **1** **Direction: Z**
 Description **Vibrations measuring system**
 Customer ID nr.: -

Calibration method:

An electrical signal has been used to calibrate de filter curve. The input signal was connected through a ICP simulator . The procedure used is QP_Calibration Amplifiers

Uncertainties:

The reported uncertainty is based on a standard uncertainty multiplied by a coverage factor $k=2$, which provides a confidence level of approximately 95%. The standard uncertainty has been determined in accordance with EA 04/2.

Traceability:

The measurements have been executed using standards traceable to (inter)national standards. Supporting documentation relative to traceability is on file and is available on request.

Environmental conditions:

Air pressure 1021 hPa
Temperature 23 °C
Relative humidity 57 %

Date of Receipt: 31 October 2014
Date of Calibration : 31 October 2014
Date of Certificate : 31 October 2014

Authorized Signatory : F. Salama

1. Inspection

| | | |
|---------|---------------|----|
| Results | Accelerometer | NA |
| | Connector | NA |
| | Cable | NA |

2. Sensitivity Z Axis

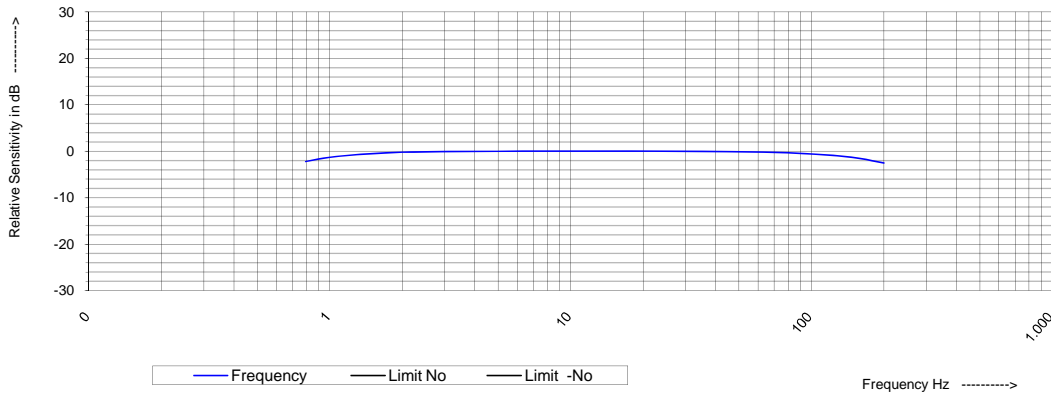
| | | |
|----------|---------------------|----------|
| Expected | Unit | Measured |
| 1,00 | mV/m/s ² | 1,00 |
| 9,81 | mV/g | 9,81 |

With $g = 9,80665 \text{ m/s}^2$
 Measurement uncertainty: 2%
 Frequency 15,85 Hz

Mounting

Constant Current Excitation: 4 mA
 Mounting: Oil +Stud
 Orientation: vertical
 Vibration level for all frequency: 2 m/s²
 Bias voltage: 9,76 Volt

3. Frequency response Z Axis



Measurement uncertainty : 20 Hz to 5 kHz is 3 %

4. Sensitivity Z Axis reference 15,85 Hz

| Input Frequency Hz | Dev dB DUT | Dev %. | Input Frequency Hz | Dev dB DUT | Dev %. |
|--------------------|------------|--------|--------------------|------------|--------|
| 0,79 | -2,2 | -22,59 | 79,4 | -0,4 | -4,1 |
| 1,00 | -1,3 | -13,88 | 100,0 | -0,6 | -6,6 |
| 1,26 | -0,8 | -8,41 | 125,9 | -1,0 | -10,4 |
| 1,58 | -0,5 | -5,19 | 159,2 | -1,6 | -16,5 |
| 2,00 | -0,2 | -2,25 | 199,5 | -2,5 | -25,3 |
| 2,51 | -0,2 | -1,91 | | | |
| 3,16 | -0,1 | -0,88 | | | |
| 3,98 | 0,0 | -0,49 | | | |
| 5,01 | 0,0 | -0,25 | | | |
| 6,31 | 0,0 | -0,18 | | | |
| 7,94 | 0,0 | -0,02 | | | |
| 10,00 | 0,0 | 0,03 | | | |
| 12,59 | 0,0 | 0,02 | | | |
| 15,8 | 0,0 | 0,00 | | | |
| 20,0 | 0,0 | -0,14 | | | |
| 25,12 | 0,0 | -0,23 | | | |
| 31,6 | 0,0 | -0,50 | | | |
| 39,8 | -0,1 | -0,87 | | | |
| 50,1 | -0,1 | -1,52 | | | |
| 63,1 | -0,2 | -2,54 | | | |

Test equipment

| Description | Due date | Traceable to |
|-------------|----------|--------------|
| DMM | feb-15 | RvA |
| DMM | feb-15 | RvA |