

Measurement of sound absorption in reverberation rooms

Contractor :
deBAKOM GmbH
Bergstraße 36
51519 Odenthal

Client :
NoiCon Akustikdesign UG
Bruchstr. 79
50259 Pulheim

Date: 28.05.2018
Inspection Date: 24.05.2018
Report: 2018050002-1_S_2553

Description of Test Object & Type of Construction

Material: Synthetic fleece (NoiRed)
Dimensions (WxDxH): 120 cm x 60 cm x 8 cm
Construction: Type A according to Annex B without edge cover
Comment: 3 Pieces without fabric cover

Location in the room:

Description of the Reverberation Room

Volume: 191 m³
No. of Diffusers: 10 Nos.
Size Diffusers: 150 cm x 105 cm
Microphone positions: 6 Locations.
Sound Sources: 2 Nos.

Dimensions:

Measuring Technology

Gauge: Nti Audio, XL2-TA (B)
Sound Source: Norsonic dodecahedron Nor 276

Meteorology

Temperature: 22°C (T1) 22°C (T2)
Humidity: 61 % (T1) 61 % (T2)

Results

F [Hz]	T ₁ [s]	T ₂ [s]	A _{obj} [m ²]	A _{obj,qm} [m ²]
100	10.5	8.5	0.2	0.3
125	11.6	8.8	0.3	0.4
160	9.8	6.8	0.5	0.6
200	6.8	4.5	0.8	1.1
250	6.0	3.7	1.1	1.5
315	5.4	3.2	1.3	1.8
400	5.4	3.0	1.5	2.1
500	5.2	2.9	1.5	2.1
630	6.1	3.3	1.4	2.0
800	6.3	3.3	1.5	2.1
1000	6.3	3.4	1.4	2.0
1250	5.9	3.4	1.3	1.8
1600	5.3	3.2	1.2	1.7
2000	4.9	3.2	1.1	1.6
2500	4.2	2.8	1.2	1.6
3150	3.6	2.6	1.2	1.6
4000	2.9	2.2	1.2	1.6
5000	2.4	1.9	1.1	1.5
6300	2.0	1.6	1.2	1.6
8000	1.5	1.2	1.2	1.6
10000	1.1	1.0	1.3	1.9

F Frequency
T₁ Reverberation time of the empty reverberation room
T₂ Reverberation time of the reverberation chamber after insertion of the test object
A_{obj} Equivalent sound absorption area per object
A_{obj,qm} Equivalent sound absorption area per 1m² (additional information)

