Beetzendorf, Sieben Linden, Guest house:
Brief documentation
of the results of the building acoustics measurements of 05.03.2021

Original title in German:
Beetzendorf, Sieben Linden, Gästehaus:
Kurzdokumentation
der Ergebnisse der bauakustischen Messungen vom 05.03.2021

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supported by the Interreg programme of the European Union

UP STRAW

Interreg North-West Europe
UP STRAW
European Regional Development Fund

Beetzendorf, Sieben Linden, guest house:

Brief documentation of the results of the building acoustics measurements (sound reduction index ceilings and guest room wall; standard flank level difference outer wall) of 05.03.2021

Date:	30.03.2021
Project number:	166357-BA
Scope:	15 pages DIN A4 (thereof 5 pages DIN A4 test reports)
Client:	Benediktinerabtei Plankstetten Klosterplatz 1, D-92334 Berching
Execution:	AMT Ingenieurgesellschaft mbH Steller Staße 4 30916 Isernhagen

Task

Sound insulation values are to be determined for the following building components in the completed building:

- Airborne sound insulation R'_w and impact sound insulation $L'_{n,w}$ of two wooden beam ceilings
    - o wooden joist ceiling with coconut impact sound insulation
    - o Wood joist ceiling with mineral fibre impact sound insulation
- Airborne sound insulation R'_w of a guest room partition wall in sand-lime brick construction

Furthermore, the standard flank level difference $D_{n,f,w}$ of the flanking exterior wall is to be estimated within the scope of the measurement evaluation.

Requirements

According to the architectural specifications, the minimum sound insulation requirements according to DIN 4109-1:2016, which was introduced by building law in Saxony-Anhalt at the time of the start of construction, are to be implemented. In the following table, the corresponding characteristic values for airborne and impact sound insulation are listed in excerpts and highlighted in colour. For information purposes, the characteristic values for "increased sound insulation" according to DIN 4109:1989, Supplement 2 and DIN 4109-5 are also given.

Table 1: Characteristic values for airborne and impact sound insulation in hotels and lodging establishments (excerpt)

Airborne and impact sound insulation	Classification	DIN 4109-1:2016	DIN 4109:1989, Supplement 2	DIN 4109-5:2020
Ceilings, including ceilings under corridors	required R'_w	≥ 54 dB	≥ 55 dB	≥ 57 dB
	required $L'_{n,w}$	≤ 50 dB	≤ 46 dB	≤ 45 dB
Walls between overnight accommodation rooms and between corridors and overnight accommodation rooms	required R'_w	≥ 47 dB	≥ 52 dB	≥ 52 dB

Performance of the measurements

The measurements as well as the evaluations were carried out on the basis of the following standards and guidelines, whereby the currently valid standard was used in each case:

- DIN EN ISO 16283-1, Acoustics - Field measurement of sound insulation in buildings and of building elements - Part 1: Airborne sound insulation
- DIN EN ISO 717-1, Acoustics - Rating of sound insulation in buildings and of building elements - Part 1: Airborne sound insulation
- DIN EN ISO 16283-2, Acoustics - Field measurement of sound insulation in buildings and of building elements - Part 2: Impact sound insulation
- DIN EN ISO 717-2, Acoustics - Rating of sound insulation in buildings and of building elements - Part 2: Impact sound insulation
- DIN 4109-4, Sound insulation in buildings - Part 4: Testing of acoustics in buildings

Examined building components

The investigated building components and room situations are described in the following figures and tables.

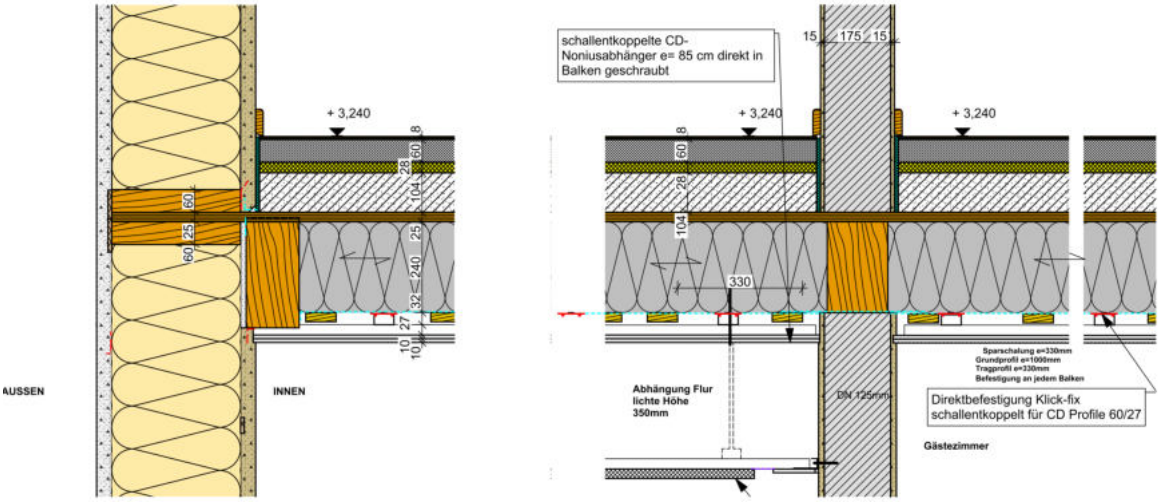


Figure 1: Component structure of the examined partition ceilings with connections to the inner and outer wall

Source: Vertical details V DE-AW and V DE-IW, plan no. AP5.1. layout, *Dipl. Ing. Architekt Dirk Scharmer*, as of 26.03.2021

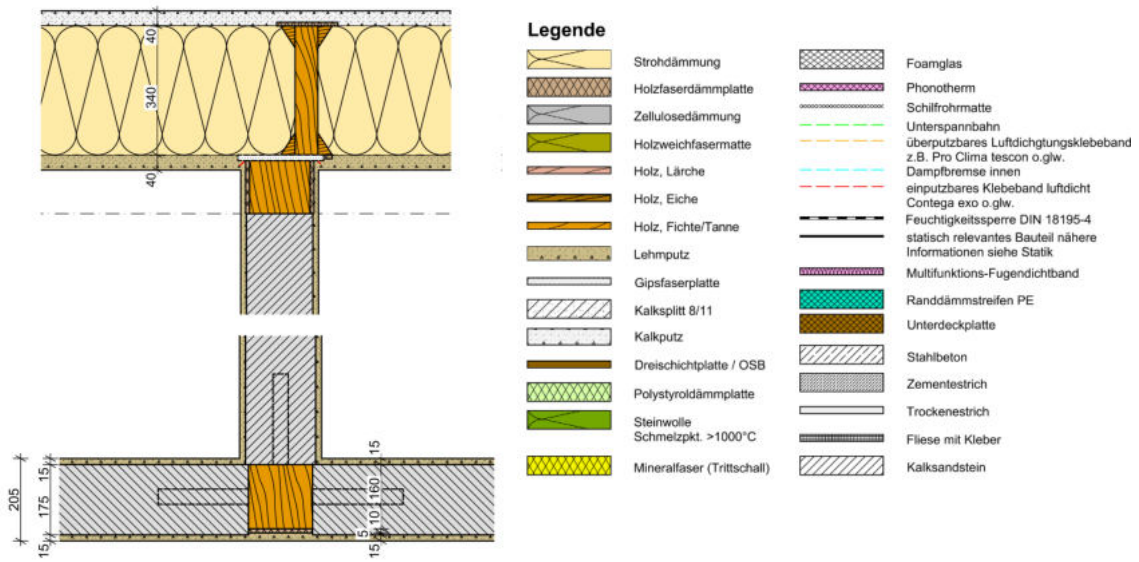


Figure 2: Component structure of the examined guest room wall with connection to exterior wall (top), joint between corridor and guest room wall (bottom)

Source: Horizontal details H AW-IW and H IW-IW, plan no. AP5.1. layout, *Dipl. Ing. Architekt Dirk Scharmer*, as of 26.03.2021.

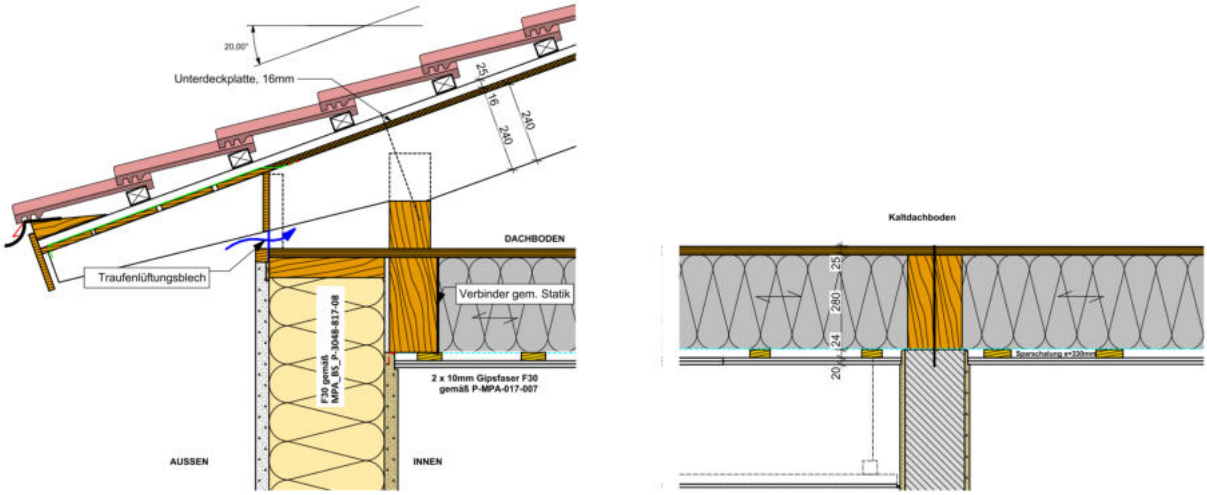


Figure 3: Joint of exterior wall to attic (left) and joint of interior wall/corridor partition to cold attic (right)

Source: Vertical details V DADE-AW and V DADE-IW, plan no. AP5.1. layout, *Dipl. Ing. Architekt Dirk Scharmer*, as at 26.03.2021

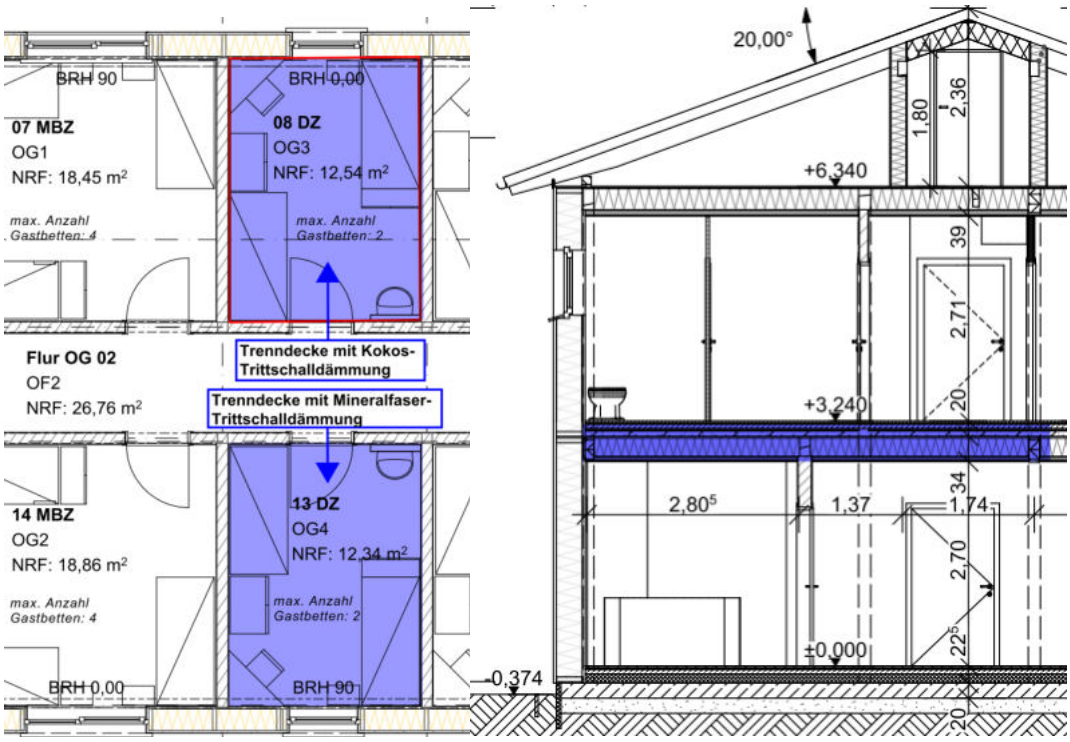


Figure 4: Location of the examined separating ceilings

Source: Floor plan and sections, plan no. AP.3 and AP.5, *Dipl. Ing. Architekt Dirk Scharmer*, as of 22.02.2021

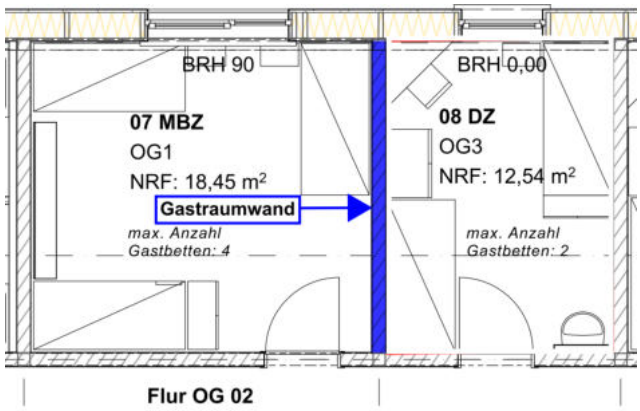


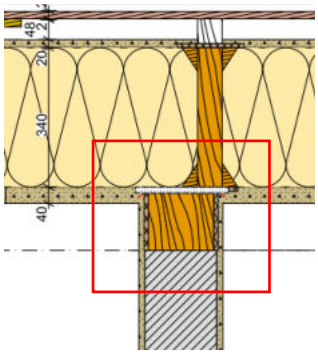
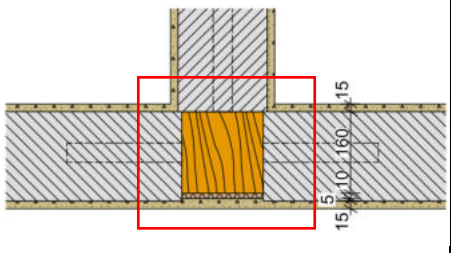
Figure 5: Location of the examined guest room wall

Source: Floor plan and sections, plan no. AP.3 and AP.5, Dipl. Ing. Architekt Dirk Scharmer, as of 22.02.2021

Table 2: Component structure of the examined partition ceilings

Area	Structure	
Floor	Parquet	
Floating floor	60 mm cement screed • raw density 2.000 kg/m³	
	Impact sound insulation Variant 1: Mineral fibre Impact sound insulation	***Impact sound insulation Variant 2: Coir***
	30 mm mineral fibre impact sound insulation • raw density 95 kg/m³ • dynamic stiffness 11 MN/m³	28 mm coir impact sound insulation • raw density 70 to 80 kg/m³ • dynamic stiffness 13 MN/m³
Raw ceiling weighting	100 mm lime chippings, raw density 1,500 kg/m³	
Timber ceiling	240 mm wooden beam 10/24 cm • 750 mm • raw density 420 kg/m³ Inside: 240 mm cellulose insulation, • raw density 45 kg/m³ • length-related flow resistance r = 6.1 kPa s/m²	
Suspended ceiling	20 mm economy boarding 2/8 cm • centre distance 330 mm • raw density 420 kg/m³ Base profile CD 60/27 mm • centre distance 330 mm Support profile CD 60/27 mm • centre distance 330 mm 2x10 mm gypsum fibre board • area-related mass m' = 11.8 kg/m² per board	

Table 3: Component structure of the examined guest room wall

<table>
<tr><th>Area</th><th colspan="2">Structure</th></tr>
<tr><td rowspan="2">Structural element + plaster</td><td colspan="2">175 mm sand-lime brickwork
• raw density class 2.0
• thin-bed mortar</td></tr>
<tr><td colspan="2">15 mm clay plaster per wall side
• raw density 1,500 kg/m³</td></tr>
<tr><td rowspan="2">Connections to flanking building components</td><td>External wall</td><td>Corridor partition wall</td></tr>
<tr><td>90 mm spruce wood
• raw density 420 kg/m³
2x 10 mm wood fibre board
15 mm clay plaster on each side of the wall
• raw density 1,500 kg/m³
  </td><td>160 mm spruce wood
• raw density 420 kg/m³
10 mm wood fibre board
20 mm clay plaster on each side of the corridor
• raw density 1,500 kg/m³
  </td></tr>
<tr><td rowspan="2">Flanking components</td><td>External wall</td><td>Corridor partition wall</td></tr>
<tr><td>40 m clay plaster
• raw density 1,500 kg/m³
340 mm cavity
• 340 mm straw insulation
○ raw density 110 kg/m³
• 330 mm wooden studs
○ raw density 420 kg/m³
○ center distance 940 mm
20 mm clay plaster
• raw density 1,500 kg/m³
Air layer and wooden boarding
30 mm lime plaster
• raw density 800 kg/m³</td><td>Construction identical with partition wall guest room</td></tr>
</table>

Measurement results and evaluation

The measurement results of the tested partition elements are listed in Table 4. Details on the measurement results can be found in the test certificates in the appendix. An evaluation of the measurement results based on the different sound insulation standards (cf. Table 1) is given in Table 5.

In summary, the tested building components achieve "increased sound insulation" according to DIN 4109:1989, Supplement 2 and DIN 4109-5. A direct comparison shows that the impact sound insulation of the wood joist ceiling with mineral fibre impact sound insulation is more effective than that of the wood joist ceiling with coconut fibre. In both cases, however, the achieved standard impact sound levels are significantly better than the recommendation. In absolute terms, very good impact sound insulation values can be achieved with both insulation materials.

Table 4: Measurement results from 05.03.2021

Test report	Component	Transmitting room	Receiving room	Measurement result
166357-BA-Decke1-LS	Ceiling (impact sound insulation: coir)	Guest room 08 DZ OG3	Guest room 02 DZ EG3	**R'_w = 67,0dB**
166357-BA-Decke1-TS				**$L'_{n,w}$ =42,5 dB**
166357-BA-Decke2-LS	Ceiling (impact sound insulation: mineral fibre)	Guest room 13 DZ OG4	Guest room 05 DZ EG4	**R'_w = 67,3 dB**
166357-BA-Decke2-TS				**$L'_{n,w}$ = 35,5 dB**
166357-BA-Trennwand-LS	dividing wall guest room	Guest room 07 MBZ OG1	Guest room 08 DZ OG3	**R'_w = 54,1 dB**

Table 5: Evaluation of the measurement results from 05.03.2021

Test report	Component	Measurement result	Sound insulation requirement fulfilled?		
			Minimum sound insulation	„"increased sound insulation“	
			DIN 4109-1:2016	DIN 4109:1989, Supplement 2	DIN 4109-5:2020
166357-BA-Decke1-LS	Ceiling (impact sound insulation: coir)	**R'_w = 67,0dB**	**Requirement fulfilled**	**Requirement fulfilled**	**Requirement fulfilled**
166357-BA-Decke1-TS		**$L'_{n,w}$ =42,5 dB**	**Requirement fulfilled**	**Requirement fulfilled**	**Requirement fulfilled**
166357-BA-Decke2-LS	Ceiling (impact sound insulation: mineral fibre)	**R'_w = 67,3 dB**	**Requirement fulfilled**	**Requirement fulfilled**	**Requirement fulfilled**
166357-BA-Decke2-TS	Ceiling (impact sound insulation: mineral fibre)	**$L'_{n,w}$ = 35,5 dB**	**Requirement fulfilled**	**Requirement fulfilled**	**Requirement fulfilled**
166357-BA-Trennwand-LS	dividing wall guest room	**R'_w = 54,1 dB**	**Requirement fulfilled**	**Requirement fulfilled**	**Requirement fulfilled**

Evaluation of the longitudinal sound transmission via the outer wall

The external wall construction consists of straw-insulated timber frame elements, the longitudinal sound insulation of which is not yet known. Therefore, the horizontal standard flank level difference (sound transmission via the exterior wall within the first floor) is to be estimated from the measurement data obtained.

The measurement of the building sound insulation value R'_w of the examined guest room wall is used to estimate the horizontal standard flank level difference of the external façade (see Figure 5). In addition to the direct sound transmission (via the guest room wall), this measurement also includes the flanking sound transmissions (via the ceiling, the corridor partition, the floor and the external wall). Here, the acoustic properties of the investigated partition and all flanks are known, with the exception of the outer wall. Based on the measurement result for the building sound reduction index R'_w and the normative literature values for the sound insulation of the components involved in the sound transmission, the unknown standard flank level difference $D_{n,f,w}$ of the exterior wall construction can be estimated with the calculation method of DIN 4109. This results in a standard flank level difference of approx. $D_{n,f,w}$ = 60 dB for the exterior wall to be examined.

Notes:

- We recommend determining the horizontal standard flank level difference of the exterior wall in a flank or façade test stand. The sound measurements on the building carried out here serve to determine the weighted sound insulation values R'_w of building components and are not suitable for the standard-compliant determination of component-related longitudinal sound insulation values. The indirectly determined standard flank level difference given here is therefore expressly to be understood only as an estimated value and should not be used for sound engineering calculations.
- The vertical standard flank level difference (sound transmission via the external wall from the upper floor to the ground floor) cannot be estimated on the basis of the determined weighted sound insulation values R'_w of the examined wooden beam ceilings, since the weighted direct sound insulation values $R_{Dd,w}$ must be known for the calculation. In contrast to the sand-lime brick solid wall, these cannot be determined with a normative calculation method, so that reference must be made to literature values. The latter cannot be narrowed down precisely enough for the existing ceiling structures, so that the calculation results are subject to high uncertainties. We therefore recommend a building acoustics investigation of the vertical standard flank level difference over the outer wall in a flank test stand.

Summary
On 05.03.2021, building acoustics measurements were carried out in the *guest house Sieben Linden* in *38489 Beetzendorf* and sound parameters were determined for the following building components:

- Airborne sound insulation R'_w and impact sound insulation $L'_{n,w}$ of two wooden beam ceilings
    - Wooden joist ceiling with coir impact sound insulation
    - Wood joist ceiling with mineral fibre impact sound insulation
- Airborne sound insulation R'_w of a guest room partition wall in sand-lime brick construction

All investigated building components fulfil the legally binding minimum sound insulation according to DIN 4109:2016 and additionally achieve the "increased sound insulation" according to DIN 4109:1989, Supplement 2 and DIN 4109-5:2020.

Furthermore, the horizontal standard flank level difference $D_{n,f,w}$ of the flanking exterior wall was estimated with a value of $D_{n,f,w}$ = 60 dB. Since the standard flank level difference of the outer wall cannot be determined in a standard-compliant manner within the scope of a sound measurement on the building, this value is expressly only suitable for a rough classification of the longitudinal sound transmission of the outer wall construction. For a standard-compliant determination of the horizontal and vertical standard flank level difference, we recommend a laboratory test of the exterior wall construction in an acoustic test stand.

Appendix
5 pages DIN A4 test reports

AMT Ingenieurgesellschaft mbH Isernhagen, 13.04.21

Editing:

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M.Sc. J. Enders M.Sc. A. Severin-Schmidt

Translated with www.DeepL.com/Translator (free version)

Bau-Schalldämm-Maß nach ISO 16283-1

Messung der Luftschalldämmung zwischen Räumen in Gebäuden

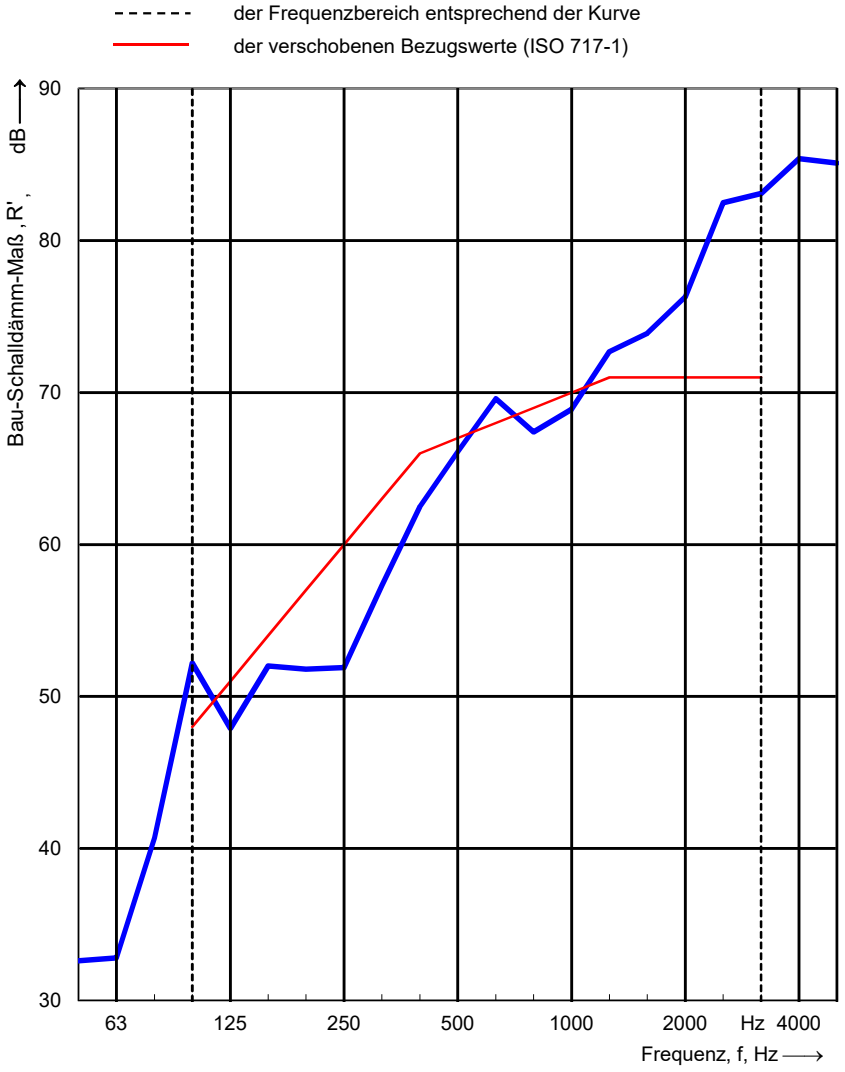
Auftraggeber:	Benediktinerabtei Plankstetten, Klosterverwaltung, Klosterplatz 1, 92334 Berching	Prüfdatum:	05.03.2021
Aufbau:	Holzbalkendecke mit Kokos-Trittschalldämmung: Parkett, 60 mm Zementestrich (ρ = 2.000 kg/m³), 28 mm Kokos-Trittschalldämmung (ρ = 70…80 kg/m³, s‘ =13 MN/m³), 100 mm Kalksplitt (ρ = 1.500 kg/m³), 240 mm Holzbalken 10/24 cm (ρ = 420 kg/m³, Achsabstand 750 mm) mit 240 mm Zellulosed ämmung (ρ = 45 kg/m³, r = 6,1 kPa s/m²), Unterdecke an CD-Profil 60/27 mm (Achsabstand 330 mm), 2x10 mm Gipsfaserplatte (m‘ = 11,8 kg/m²)		
Objekt:	Gästehaus Sieben Linden Sieben Linden, 38489 Beetzendorf		

Senderaum:		Empfangsraum:	
Zustand:	unmöbliert	Zustand:	unmöbliert
Art:	08 DZ OG3	Art:	02 DZ EG3
Lage:	1OG	Lage:	EG

Fläche des Trennbauteils: 12,29 m²
Senderaum Volumen:
Empfangsraum Volumen: 33 m³

Frequenz f [Hz]	R' Terz [dB]
50	32,6
63	32,8
80	40,7
100	52,2
125	47,9
160	52,0
200	51,8
250	51,9
315	57,3
400	62,5
500	66,1
630	69,6
800	67,4
1000	68,9
1250	72,7
1600	73,9
2000	76,3
2500	≥ 82,5
3150	≥ 83,1
4000	≥ 85,4
5000	≥ 85,1

Messgrenze



Bewertung nach ISO 717-1

R'_w $(C;C_{tr})$ = 67,0 (-2,2 ; -6,4) dB

Die Ermittlung basiert auf Gebäude-Messungen, die in Terzbändern gewonnen wurden.

$C_{50\text{-}3150}$ = -4,5 dB $C_{50\text{-}5000}$ = -3,5 dB $C_{100\text{-}5000}$ = -1,2 dB

$C_{tr,50\text{-}3150}$ = -14,7 dB $C_{tr,50\text{-}5000}$ = -14,7 dB $C_{tr,100\text{-}5000}$ = -6,4 dB

Name des Prüfinstituts: AMT Ingenieurgesellschaft mbH, Stellerstr. 4, 30916 Isernhagen

Nr. des Prüfberichtes: 166357-BA-Decke1-LS

Datum: 05.03.2021 Unterschrift: (M.Sc. J. Enders)

Norm-Trittschallpegel nach ISO 16283-2

Messung der Trittschalldämmung von Decken in Gebäuden

Auftraggeber:	Benediktinerabtei Plankstetten, Klosterverwaltung, Klosterplatz 1, 92334 Berching	Prüfdatum:	05.03.2021
Aufbau:	Holzbalkendecke mit Kokos-Trittschalldämmung: Parkett, 60 mm Zementestrich (ρ = 2.000 kg/m³), 28 mm Kokos-Trittschalldämmung (ρ = 70…80 kg/m³, s‘ =13 MN/m³), 100 mm Kalksplitt (ρ = 1.500 kg/m³), 240 mm Holzbalken 10/24 cm (ρ = 420 kg/m³, Achsabstand 750 mm) mit 240 mm Zellulosed ämmung (ρ = 45 kg/m³, r = 6,1 kPa s/m²), Unterdecke an CD-Profil 60/27 mm (Achsabstand 330 mm), 2x10 mm Gipsfaserplatte (m‘ = 11,8 kg/m²)		
Objekt:	Gästehaus Sieben Linden Sieben Linden, 38489 Beetzendorf		

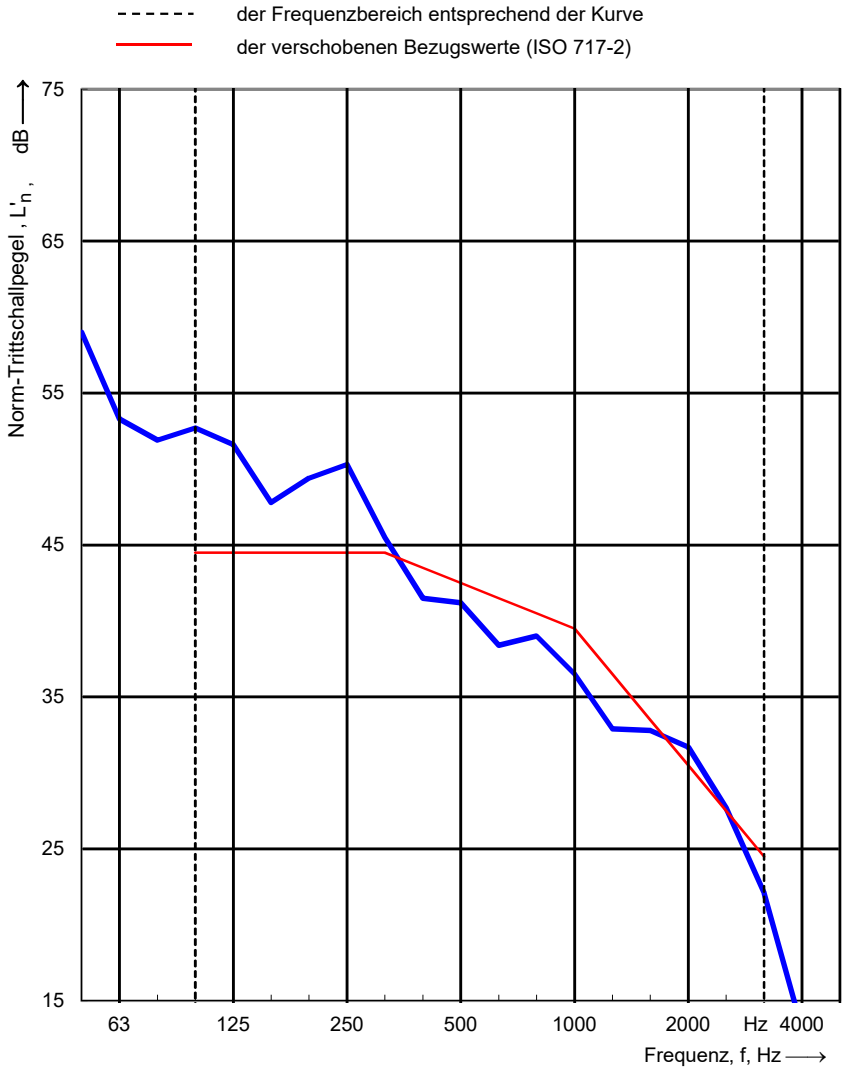
Senderaum:		Empfangsraum:	
Zustand:	unmöbliert	Zustand:	unmöbliert
Art:	08 DZ OG3	Art:	02 DZ EG3
Lage:	1OG	Lage:	EG

Senderaum Volumen:

Empfangsraum Volumen: 33 m³

Frequenz f [Hz]	L'n Terz [dB]
50	59,0
63	53,3
80	51,9
100	52,7
125	51,6
160	47,8
200	49,4
250	50,3
315	45,5
400	41,5
500	41,2
630	38,4
800	39,0
1000	36,5
1250	32,9
1600	32,8
2000	31,7
2500	27,7
3150	22,1
4000	≤ 13,2
5000	≤ 8,8

Messgrenze



Bewertung nach ISO 717-2

$L'_{n,w}$ (C_I) = 42,5 (0,8) dB $C_{I,50\text{-}2500}$ = 5,1 dB

Die Ermittlung basiert auf Gebäude-Messungen, die in Terzbändern gewonnen wurden.

Name des Prüfinstitut: AMT Ingenieurgesellschaft mbH, Stellerstr. 4, 30916 Isernhagen

Nr. des Prüfberichtes: 166357-BA-Decke1-TS

Datum: 05.03.2021 Unterschrift: (M.Sc. J. Enders)

Bau-Schalldämm-Maß nach ISO 16283-1

Messung der Luftschalldämmung zwischen Räumen in Gebäuden

Auftraggeber:	Benediktinerabtei Plankstetten, Klosterverwaltung, Klosterplatz 1, 92334 Berching	Prüfdatum:	05.03.2021
Aufbau:	Holzbalkendecke mit Mineralfaser-Trittschalldämmung: Parkett, 60 mm Zementestrich (ρ = 2.000 kg/m³), 30 mm Mineralfaser-Trittschalldämmung (ρ = 95 kg/m³, s‘ =11 MN/m³), 100 mm Kalksplitt (ρ = 1.500 kg/m³), 240 mm Holzbalken 10/24 cm (ρ = 420 kg/m³, Achsabstand 750 mm) mit 240 mm Zellulosed ämmung (ρ = 45 kg/m³, r = 6,1 kPa s/m²), Unterdecke an CD-Profil 60/27 mm (Achsabstand 330 mm), 2x10 mm Gipsfaserplatte (m‘ = 11,8 kg/m²)		
Objekt:	Gästehaus Sieben Linden Sieben Linden, 38489 Beetzendorf		

Senderaum:		Empfangsraum:	
Zustand:	unmöbliert	Zustand:	unmöbliert
Art:	13 DZ OG4	Art:	05 DZ EG4
Lage:	1OG	Lage:	EG

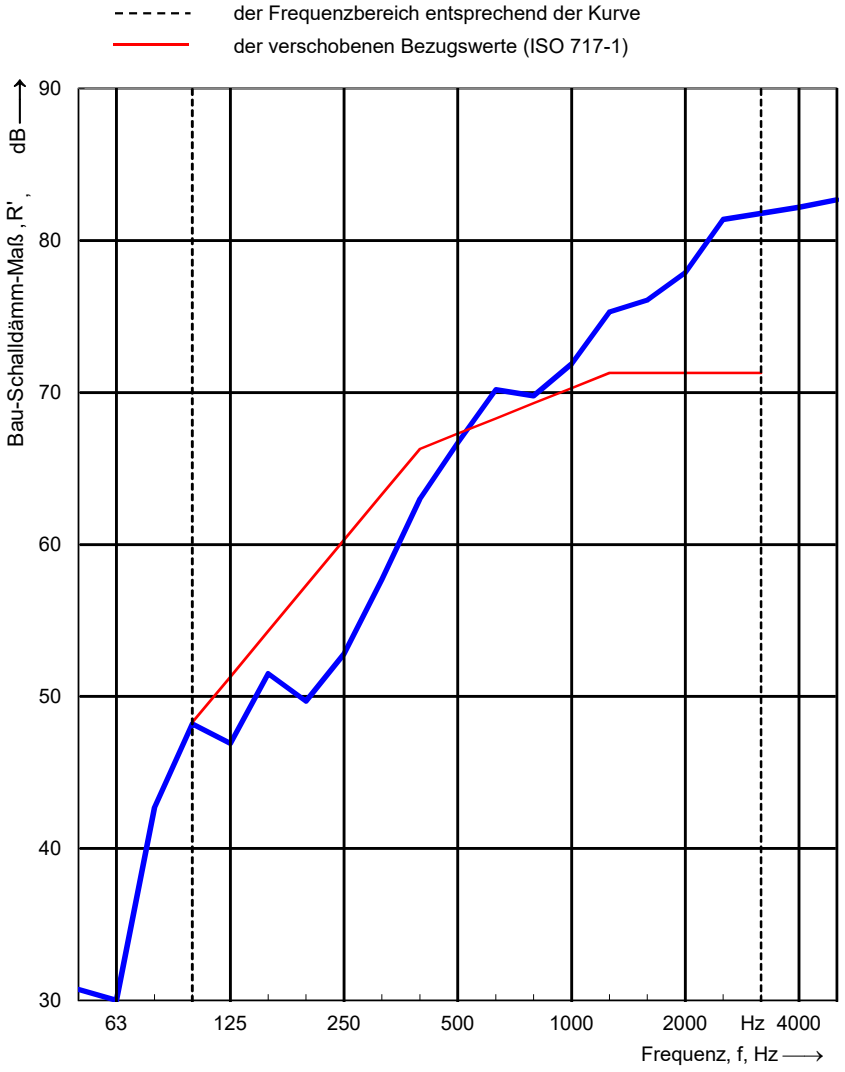
Fläche des Trennbauteils: 12,29 m²

Senderaum Volumen:

Empfangsraum Volumen: 33 m³

Frequenz f [Hz]	R' Terz [dB]
50	30,7
63	30,0
80	42,7
100	48,2
125	46,9
160	51,5
200	49,7
250	52,8
315	57,7
400	63,0
500	66,7
630	70,2
800	69,8
1000	71,9
1250	75,3
1600	76,1
2000	77,9
2500	81,4
3150	81,8
4000	82,2
5000	≥ 82,7

Messgrenze



Bewertung nach ISO 717-1

R'_w $(C;C_{tr})$ = 67,3 (-2,7 ; -7,5) dB

Die Ermittlung basiert auf Gebäude-Messungen, die in Terzbändern gewonnen wurden.

$C_{50\text{-}3150}$ = -5,8 dB $C_{50\text{-}5000}$ = -4,8 dB $C_{100\text{-}5000}$ = -1,7 dB

$C_{tr,50\text{-}3150}$ = -16,9 dB $C_{tr,50\text{-}5000}$ = -16,9 dB $C_{tr,100\text{-}5000}$ = -7,5 dB

Name des Prüfinstituts: AMT Ingenieurgesellschaft mbH, Stellerstr. 4, 30916 Isernhagen

Nr. des Prüfberichtes: 166357-BA-Decke2-LS

Datum: 05.03.2021 Unterschrift: (M.Sc. J. Enders)

Norm-Trittschallpegel nach ISO 16283-2

Messung der Trittschalldämmung von Decken in Gebäuden

Auftraggeber:	Benediktinerabtei Plankstetten, Klosterverwaltung, Klosterplatz 1, 92334 Berching	Prüfdatum:	05.03.2021
Aufbau:	Holzbalkendecke mit Mineralfaser-Trittschalldämmung: Parkett, 60 mm Zementestrich (ρ = 2.000 kg/m³), 30 mm Mineralfaser-Trittschalldämmung (ρ = 95 kg/m³, s‘ =11 MN/m³), 100 mm Kalksplitt (ρ = 1.500 kg/m³), 240 mm Holzbalken 10/24 cm (ρ = 420 kg/m³, Achsabstand 750 mm) mit 240 mm Zellulosed ämmung (ρ = 45 kg/m³, r = 6,1 kPa s/m²), Unterdecke an CD-Profil 60/27 mm (Achsabstand 330 mm), 2x10 mm Gipsfaserplatte (m‘ = 11,8 kg/m²)		
Objekt:	Gästehaus Sieben Linden Sieben Linden, 38489 Beetzendorf		

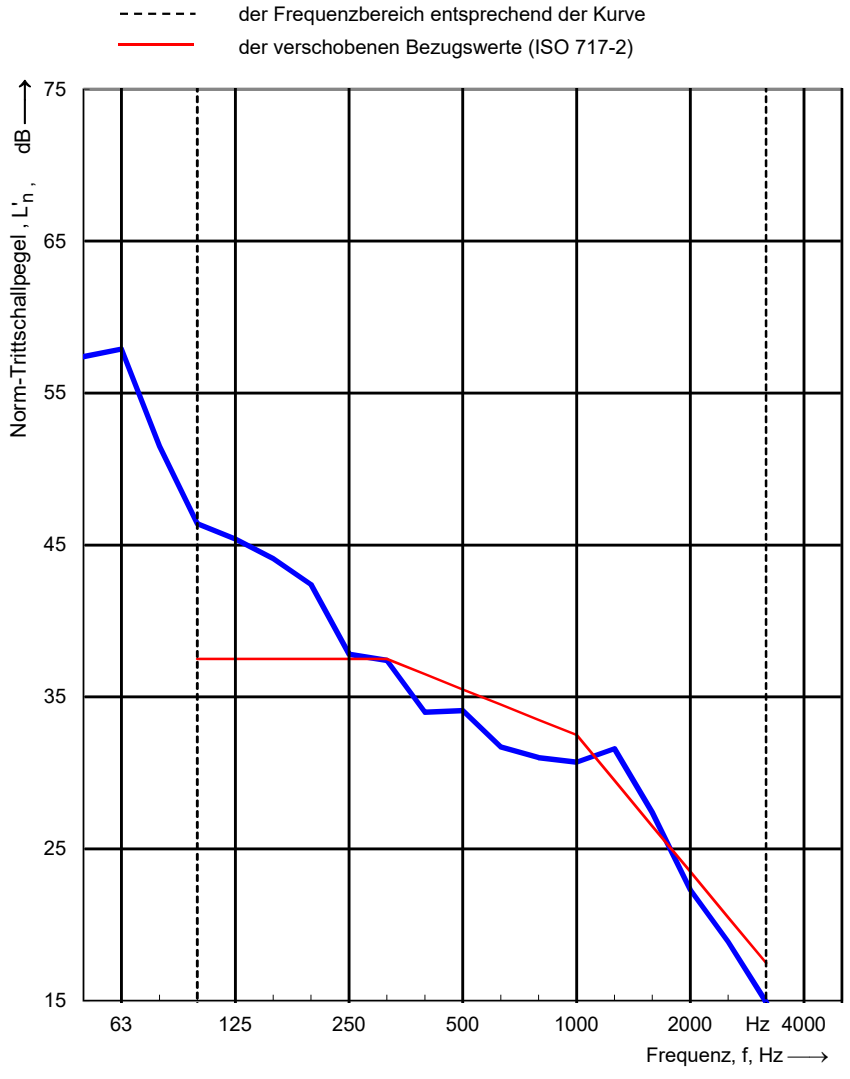
Senderaum:		Empfangsraum:	
Zustand:	unmöbliert	Zustand:	unmöbliert
Art:	13 DZ OG4	Art:	05 DZ EG4
Lage:	1OG	Lage:	EG

Senderaum Volumen:

Empfangsraum Volumen: 33 m³

Frequenz f [Hz]	L'n Terz [dB]
50	57,4
63	57,9
80	51,5
100	46,4
125	45,4
160	44,1
200	42,4
250	37,8
315	37,4
400	34,0
500	34,1
630	31,7
800	31,0
1000	30,7
1250	31,6
1600	27,4
2000	22,3
2500	18,9
3150	14,9
4000	≤ 9,1
5000	≤ 6,9

Messgrenze



Bewertung nach ISO 717-2

$L'_{n,w}$ (C_I) = 35,5 (1,1) dB $C_{I,50\text{-}2500}$ = 11,1 dB

Die Ermittlung basiert auf Gebäude-Messungen, die in Terzbändern gewonnen wurden.

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Bau-Schalldämm-Maß nach ISO 16283-1

Messung der Luftschalldämmung zwischen Räumen in Gebäuden

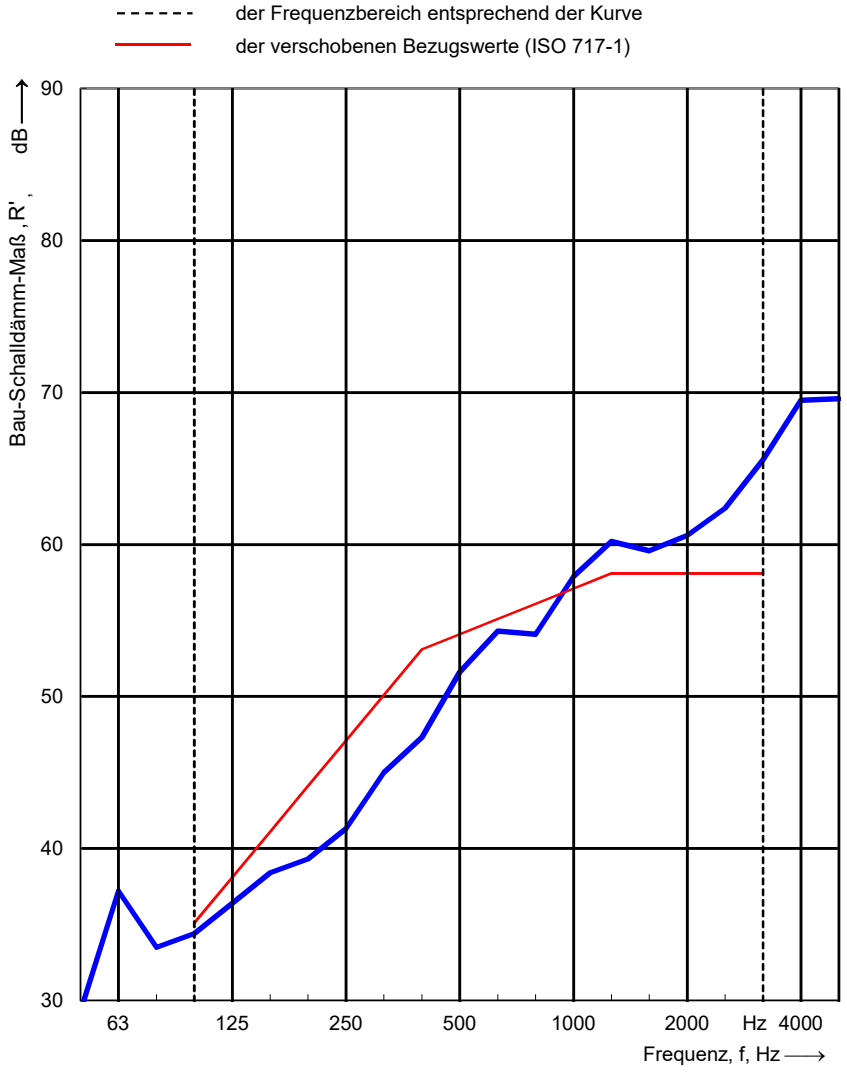
Auftraggeber:	Benediktinerabtei Plankstetten, Klosterverwaltung, Klosterplatz 1, 92334 Berching	Prüfdatum:	05.03.2021
Aufbau:	Kalksandsteinwand 17,5 cm (Rohdichteklasse 2.0) mit beidseitig 15 mm Lehmputz (Rohdichte 1.500 kg/m³)		
Objekt:	Gästehaus Sieben Linden Sieben Linden, 38489 Beetzendorf		

Senderaum:		Empfangsraum:	
Zustand:	unmöbliert	Zustand:	unmöbliert
Art:	07 MBZ OG1	Art:	08 DZ OG3
Lage:	1OG	Lage:	1OG

Fläche des Trennbauteils: 11,32 m²
Senderaum Volumen:
Empfangsraum Volumen: 34 m³

Frequenz f [Hz]	R' Terz [dB]
50	29,3
63	37,2
80	33,5
100	34,4
125	36,4
160	38,4
200	39,3
250	41,3
315	45,0
400	47,3
500	51,6
630	54,3
800	54,1
1000	57,9
1250	60,2
1600	59,6
2000	60,6
2500	62,4
3150	65,6
4000	69,5
5000	69,6

Messgrenze



Bewertung nach ISO 717-1

R'_w $(C;C_{tr})$ = 54,1 (-2,1 ; -6,5) dB

Die Ermittlung basiert auf Gebäude-Messungen, die in Terzbändern gewonnen wurden.

$C_{50\text{-}3150}$ = -2,4 dB $C_{50\text{-}5000}$ = -1,4 dB $C_{100\text{-}5000}$ = -1,2 dB

$C_{tr,50\text{-}3150}$ = -8,2 dB $C_{tr,50\text{-}5000}$ = -8,2 dB $C_{tr,100\text{-}5000}$ = -6,5 dB

Name des Prüfinstituts: AMT Ingenieurgesellschaft mbH, Stellerstr. 4, 30916 Isernhagen

Nr. des Prüfberichtes: 166357-BA-Trennwand-LS

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