



THE OBJECT UNDER TEST: Hotel (see. Tab. 1):

Table 1.

Sample Registration Nr.	Construction notes	Primary room (source)	Secondary room (receiver)
1	<i>3. floor, facade's window of room No. 313</i>	<i>Outdoors, transport noise</i>	<i>Room No. 313</i>
2	<i>5. floor, facade's window of room No. 502</i>	<i>Outdoors, transport noise</i>	<i>Room No. 502</i>
3	<i>7. floor, facade's window of room No. 714</i>	<i>Outdoors, transport noise</i>	<i>Room No. 714</i>
4	<i>Facade's window of room No. 321</i>	<i>Outdoors, measuring noise signal from loudspeaker</i>	<i>Room No. 321</i>

MEASUREMENT TIME, PLACE AND CONDITIONS:

Table 2

1.	October 25, 14.00 to 18.00	Air temperate. °C: Relative Humidity: Wind: Atm. pressure:	Start Measur.	End Measur.
			Indoors/Outdoors	Indoors/Outdoors
			0/+19±0,5° C	0/+19±0,5° C
			79/58 ±4 % RH	79/58 ±4 % RH
			2 NW/ - , m/s,	2 NW/ - m/s
			762±0,5 mmHg	762±0,5 mmHg
2.	November 2, 14.00 to 17.00	Air temperate. °C: Relative Humidity: Wind: Atm. pressure:	Start Measur.	End Measur.
			Indoors/Outdoors	Indoors/Outdoors
			9/+20±0,5° C	9/+20±0,5° C
			53/40 ±4 % RH	53/40 ±4 % RH
			3 S/ - , m/s,	3 S/ - , m/s,
			766±0,5 mmHg	766±0,5 mmHg
3.	November 4, 20.00 to November 5, 04.00	Air temperate. °C: Relative Humidity: Wind: Atm. pressure:	Start Measur.	End Measur.
			Indoors/Outdoors	Indoors/Outdoors
			9/+22±0,5° C	9/+22±0,5° C
			65/45 ±4 % RH	65/45 ±4 % RH
			3 NW/ - , m/s,	3 NW/ - , m/s,
			766±0,5 mmHg	766±0,5 mmHg

TEST AIMED AT: To obtain sound insulation parameters for beforehand listed samples. From measuring results calculate standardized level difference index ($D_{nT,w}$) and facades sound insulation parameters $D_{tr,2m,nT,w}$ (noise source: vehicles traffic stream on street), $D_{Is,2m,nT,w}$ (source: omni directional loudspeaker).

TEST METHOD: For $D_{tr,2m,nT}$; $D_{Is,2m,nT}$ in accordance with LVS EN ISO 140-5:2000 (facade), for D_{nT} in accordance with LVS EN ISO 140-4:2000 (wall, floor) and for $D_{tr,2m,nT,w}$ $D_{Is,2m,nT,w}$ $D_{nT,w}$ weighting in accordance with LVS EN ISO 717-1:2000.

MEASUREMENT EQUIPMENT:

Pistonphone, Barometer, Hygrometer, Ruler, Thermometer, Hand-held, Analyzer, Microphone, Intelligent Thermometer, Anemometer, Probe, Sine / Noise Generator, LF Filter, LF Amplifier, Omnidirectional Loudspeaker, Façades' Loudspeaker, Room Acoustics Software, Soundcard, (ADC), Laptop.

DESCRIPTION OF TESTING ENVIRONMENT:

To measure facades standardized level difference $D_{tr,2m,nT}$ at street side used transport (traffic stream) noise emission (see picture on front page) and to measure facades standardized level difference $D_{Is,2m,nT}$ at backyard side is used omni directional loudspeaker source supplied by measuring signal.

To measure standardized level difference D_{nT} for indoors constructions in source (primary) rooms is placed omni directional sound source (dodecahedron loudspeaker see Fig.1) and measuring signal has been supplied to it (situations schemes see in Appendix 5 and Tab. 1).

All rooms are finished partly with furniture or curtains.

All doors to rooms are accomplished.



Fig.1. Measurement situation in source (primary) room.

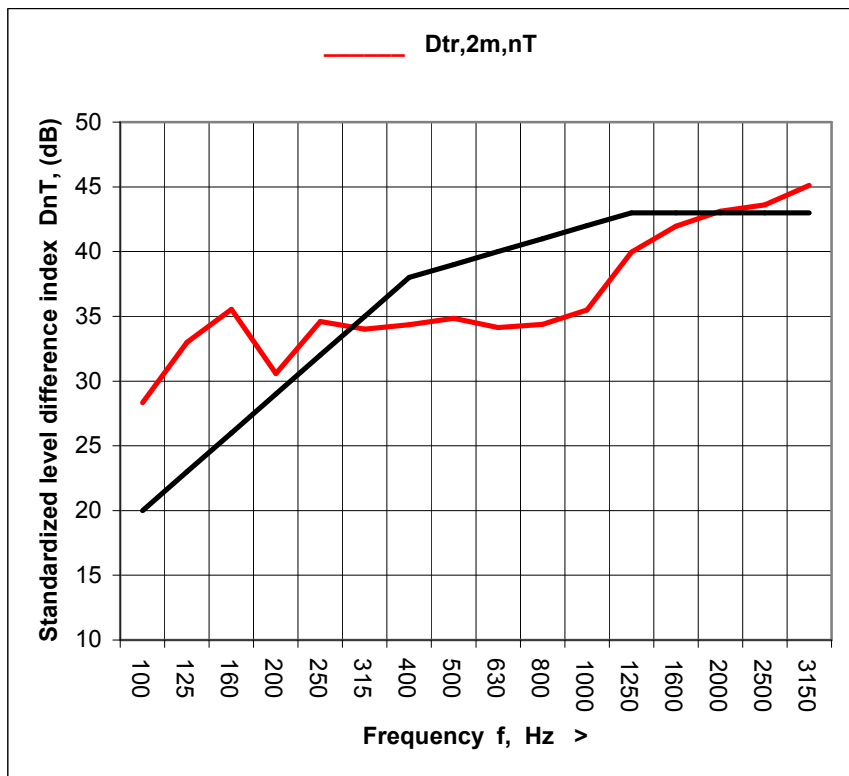
MEASUREMENT RESULTS:

Above mentioned sample measurements results are showed in appendixes from 1 to 4.

Source room volume	-	m ³
Receiving room volume	39,3	m ³

— curve of reference values (LVS ISO 717-1:2000)
 — Dtr,2m,nT values

Freq. f, Hz	D, tr, 2m, nT (1/3 okt. j.), dB
50	31,83
63	28,93
80	29,63
100	28,34
125	33,00
160	35,53
200	30,58
250	34,61
315	34,01
400	34,35
500	34,85
630	34,14
800	34,38
1000	35,49
1250	39,95
1600	41,95
2000	43,12
2500	43,60
3150	45,10
4000	44,70
5000	41,55
6300	-
8000	-
10000	-



Rating according to LVS ISO 717-1:2000

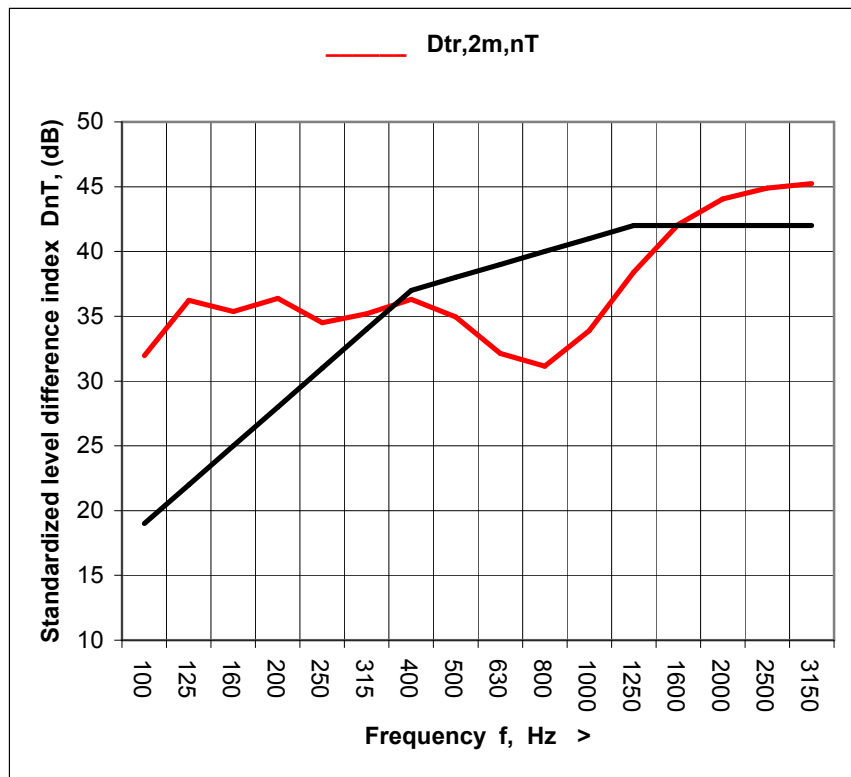
C Ctr
 D, tr, 2m, nT, w 39 -1 -3 dB C 50-3150 -1 dB C 50-5000 -1 dB C 100-5000 -1 dB
 S/N - Insufficient signal noise ratio Ctr 50-3150 -3 dB Ctr 50-5000 -3 dB Ctr 100-5000 -3 dB

Evaluation based on field measurement results obtained by an engineering method.

Source room volume	-	m ³
Receiving room volume	39,3	m ³

— curve of reference values (LVS ISO 717-1:2000)
 — Dtr,2m,nT values

Freq. f, Hz	D,tr,2m,nT(1/3 okt. j.), dB
50	34,15
63	31,25
80	32,63
100	31,96
125	36,22
160	35,36
200	36,37
250	34,50
315	35,21
400	36,29
500	34,94
630	32,13
800	31,16
1000	33,89
1250	38,39
1600	42,07
2000	44,04
2500	44,90
3150	45,23
4000	43,28
5000	39,12
6300	-
8000	-
10000	-



Rating according to LVS ISO 717-1:2000

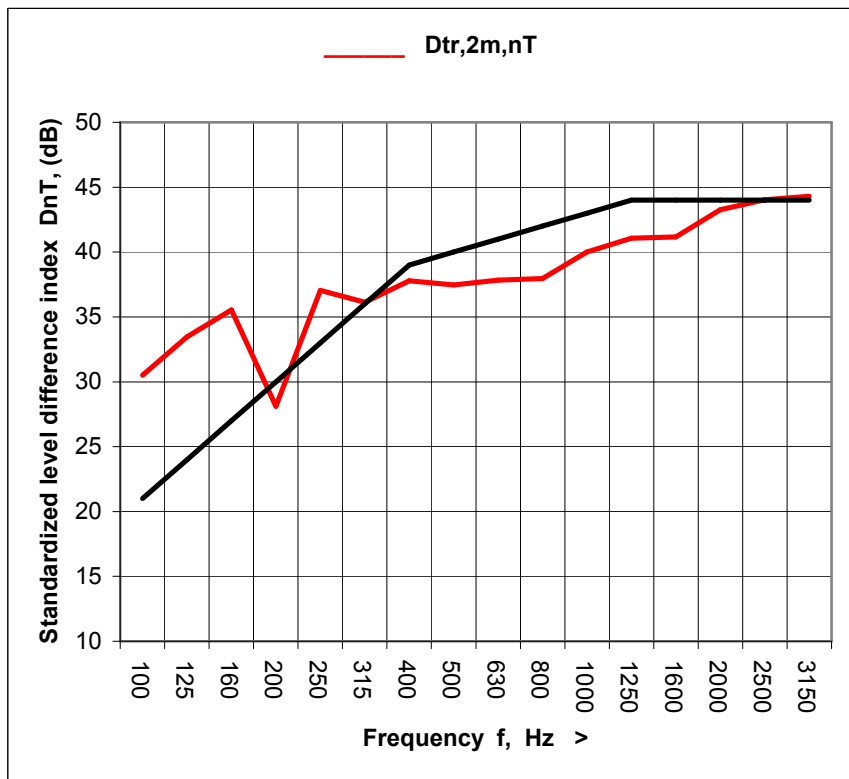
		C	Ctr							
D,tr,2m,nT, w	38	-1	-3	dB	C 50-3150	-1	dB	C 50-5000	-1	dB
S/N	-	Insufficient signal noise ratio			Ctr 50-3150	-3	dB	Ctr 50-5000	-3	dB
					Ctr 100-5000			Ctr 100-5000		-3

Evaluation based on field measurement results obtained by an engineering method.

Source room volume	-	m ³
Receiving room volume	39,3	m ³

— curve of reference values (LVS ISO 717-1:2000)
 — Dtr,2m,nT values

Freq. f, Hz	D, tr, 2m, nT (1/3 okt. j.), dB
50	40,01
63	37,22
80	31,43
100	30,50
125	33,47
160	35,53
200	28,12
250	37,04
315	36,14
400	37,80
500	37,47
630	37,84
800	37,96
1000	39,99
1250	41,07
1600	41,16
2000	43,27
2500	44,03
3150	44,30
4000	42,22
5000	38,33
6300	-
8000	-
10000	-



Rating according to LVS ISO 717-1:2000

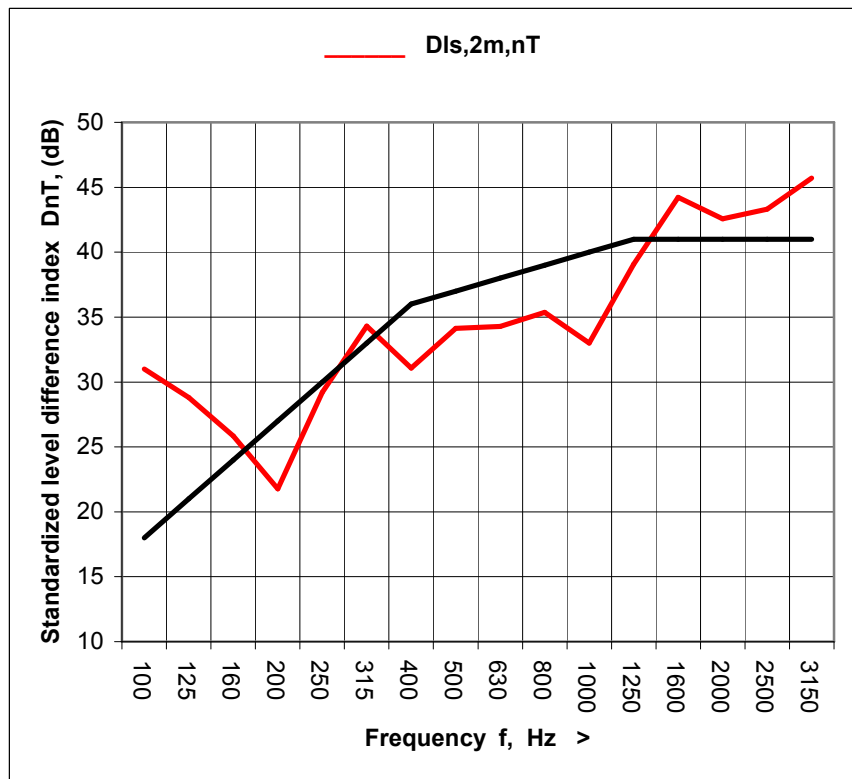
		C	Ctr										
D, tr, 2m, nT, w	40	0	-2	dB	C 50-3150	0	dB	C 50-5000	0	dB	C 100-5000	0	dB
S/N	- Insufficient signal noise ratio				Ctr 50-3150	-2	dB	Ctr 50-5000	-2	dB	Ctr 100-5000	-2	dB

Evaluation based on field measurement results obtained by an engineering method.

Source room volume	-	m ³
Receiving room volume	39,3	m ³

— curve of reference values (LVS ISO 717-1:2000)
 — Dls,2m,nT values

Freq. f, Hz	D,tr,2m,nT(1/3 okt. j.), dB
50	20,46
63	25,78
80	26,10
100	31,01
125	28,81
160	25,85
200	21,78
250	29,21
315	34,29
400	31,08
500	34,13
630	34,28
800	35,35
1000	32,99
1250	39,08
1600	44,23
2000	42,56
2500	43,32
3150	45,70
4000	47,37
5000	49,80
6300	-
8000	-
10000	-



Rating according to LVS ISO 717-1:2000

		C	Ctr										
D _{ls,2m,nT,w}	37	-1	-4	dB	C 50-3150	-1	dB	C 50-5000	0	dB	C 100-5000	0	dB
S/N	- Insufficient signal noise ratio				Ctr 50-3150	-5	dB	Ctr 50-5000	-5	dB	Ctr 100-5000	-4	dB

Evaluation based on field measurement results obtained by an engineering method.

Typical measurement samples location.

