

Accredited field (see www.latak.lv)

FACADE SOUND INSULATION MEASUREMENTS ON SITE (in situ)

STANDARD LVS EN ISO 140-5:2000:

Acoustics. Measurement of sound insulation in buildings and of building elements. Field measurements of household noise insulation of facades and facade elements.

Measured parameters :

- R'_{45° – the actual (loudspeaker) sound attenuation index for facade in $\frac{1}{3}$ octave bands
- $R'_{tr,s}$ – the actual transportation noise attenuation index for facade in $\frac{1}{3}$ octave bands
- $R'_{rt,s}$ – the actual railroad noise attenuation index for facade in $\frac{1}{3}$ octave bands
- $R'_{at,s}$ – the actual aircraft noise attenuation index for facade in $\frac{1}{3}$ octave bands
- $D_n ; D_{nT}$ – normalized and standardised level differences (for the 4 given noise sources)

Calculable parameters (in accordance with standard LVS EN ISO 717-1) :

$R'_{45^\circ,w}$; $R'_{tr,s,w}$; $R'_{rt,s,w}$; $R'_{at,s,w}$ – the actual facade sound insulation indexes for noise sources

Construction standard LBN 016-11 “Building acoustics” limits $R'_{tr,s,w}$ threshold values for outer enclosing structures – facades, windows, showcases etc. and provides recommendations for calculating this parameter. Whereas measured values of $R'_{tr,s,w}$ allow to evaluate building facade construction conformity with LBN 016-11 requirements for different building classes depending from level of environmental noise.

Measurement situation example



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Measurement result example (given in measurement report with LATAK logo)

PIELIKUMS 1

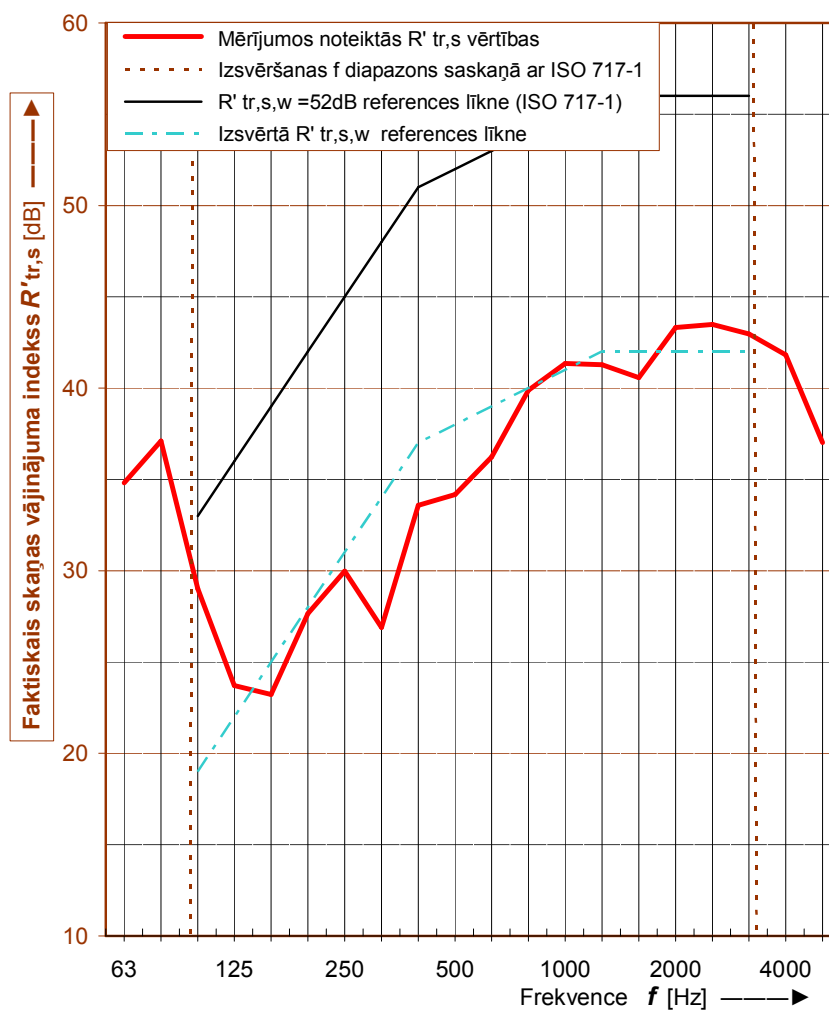
The actual sound attenuation index $R'_{tr,s}$, for car transportation noise, in accordance with LVS EN ISO 140-5
Field measurements of facade and facade element household noise insulation (in situ).

Klients: SIA „Baltic Construction Company (BCC) Mērijumu datums: 2009.g. 23. Maijs

Mērāmā objekta identifikācija un apraksts: Fasādes (stiklotas) paraugs Nr. 413-1 (biroja telpai nr.141)

Saskarvirsmas laukums 12.0 m²
Uztvērēja telpas tilpums 52 m³

Frekvence f [Hz]	$R'_{tr,s}$ 1/3 oktāvās [dB]
50	31.2
63	34.8
80	37.1
100	29.0
125	23.7
160	23.2
200	27.7
250	30.0
315	26.9
400	33.6
500	34.2
630	36.2
800	39.9
1000	41.3
1250	41.3
1600	40.6
2000	43.3
2500	43.5
3150	43.0
4000	41.8
5000	37.0
6300	34.0
8000	32.6
10000	33.5



Autotransporta trokšņa faktiskais skaņas izolācijas indekss, $R'_{tr,s,w}(C;C_{tr})$, kas izvērts atbilstoši LVS ISO 717-1 prasībām :

$R'_{tr,s,w}(C;C_{tr}) = 38 (-1; -4) \text{ dB}$ $C_{50-3150} = -1 \text{ dB}$ $C_{50-5000} = -1 \text{ dB}$ $C_{100-5000} = -1 \text{ dB}$

Novērtēts pamatojoties uz inženiermetodes $C_{tr 50-3150} = -4 \text{ dB}$ $C_{tr 50-5000} = -4 \text{ dB}$ $C_{tr 100-5000} = -4 \text{ dB}$
mērijumu rezultātiem ekspluatācijas apstākļos (in situ)

SIA "R&D Akustika" Akustikas laboratorija T-282

Datums: 2009.06.03.

Operātorā paraksts :