



DESIGNING OF MOTORWAY EQUIPMENT AND AND TESTING (in situ) OF ACOUSTIC PARAMETERS.

STANDARDS:

- 1) LVS EN 1793-1:1997 A, LVS EN 1793-1:2002 L „Road traffic noise reducing devices – Test method for determining the acoustic performance. Part 1: Intrinsic characteristics of sound absorption”.
- 2) LVS EN 1793-2:1997 A, LVS EN 1793-2:2002 L “Road traffic noise reducing devices – test method for determining the acoustic performance. Part 2: Intrinsic characteristics of airborne sound insulation.”
- 3) LVS EN 1793-3:1997 A, LVS EN 1793-3:2002 L „Road traffic noise reducing devices – test method for determining the acoustic performance. Part 3: normalized traffic noise spectrum”.
- 4) LVS CEN/TS 1793-4:2004, „Road traffic noise reducing devices – test method for determining the acoustic performance. Part 4 – intrinsic characteristics – in situ values of sound diffraction”
- 5) LVS CEN/TS 1793-5:2003, „Road traffic reducing devices – test method for determining the acoustic performance. Part 5 – intrinsic characteristics – in situ values of sound reflection and airborne sound insulation.
- 6) LVS EN 1793-6:2018, „Road traffic noise reducing devices - Test method for determining the acoustic performance - Part 6: Intrinsic characteristics - In situ values of airborne sound insulation under direct sound field conditions

Measured parameters :

$E(t)$ – sound impulse time graph,

T_{30} – reverberation time in reverberation room in 1/3 octave bands

Measured parameters (in 1/3 octave bands):

α_s – sound absorption coefficient for [equivalent] plane in 1/3 octave bands

L_i – traffic noise sound pressure level, normalized in i-th 1/3 octave range in A-weighted mode, determined in standard **LVS EN 1793-3**, given in decibels [dBA].

DL_α – one digit nominal value of sound absorption functional efficiency, which is stated as difference between A-level mode sound pressure levels, in decibels, [dBA].

DL_R –one digit nominal value of sound absorption functional efficiency, which is stated as difference between A-level sound pressure levels, in decibels, [dBA].