Measurement of Water Appliance Noises in the Laboratory

according to DIN EN ISO 3822-1, 07.2009

Enclosure 11

Client: Pentair Engineered Electrical & Fastening Solutions, Jules Verneweg 75, 5015 BG Tilburg, The Netherlands

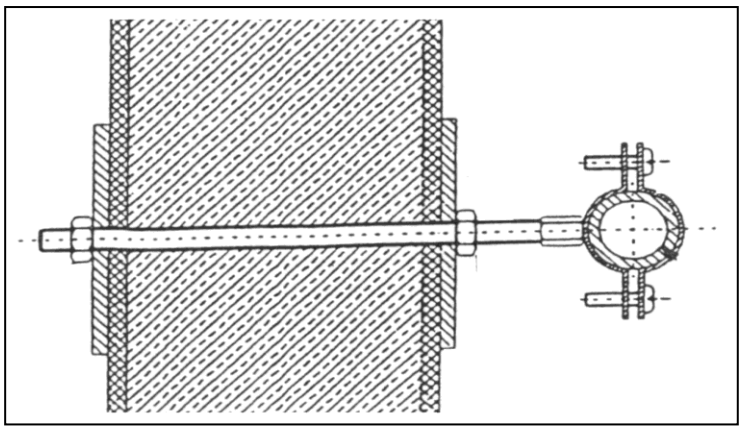
Test object: 1" steel pipe, outer dia d = 33,7 mm, fastened with Pipe clamp CADDY® HDPC (EPDM) (Article Number 577036), 29-33 mm, 1", M8/M10

Operation: Withdrawal with IGN according to DIN EN ISO 3822-1 at flow pressure of 0.3 Mpa (3 bar)

Evaluation:

Measurement of the noise transmission at octave centre frequencies f = 125 to 4000 Hz and calculation of the diffence between "rigid" and "decoupled" fastening, Evaluation using the normative IGN-reference values, conversion to the average expected noise transmission in the building. **Measurement 5** on 30.09.2015, air temperature in test stand: 20,1 °C, relative humidity: 53,8 %

Schematic diagram for build-up of test object:

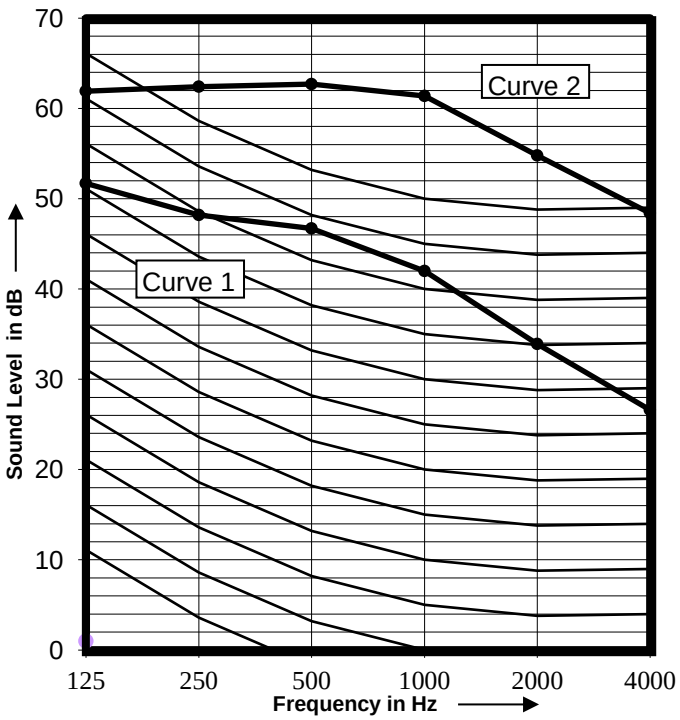


Test Criteria:

Volume test room:	V	= 74,3 m³
Aver. reverb. time:	$\overline{T}_N$	= 1,38 s
Area measuring wall:	F	= 8,20 m²
Area density:	g_F	= 232 kg/m²
Length measuring pipe:	L	= 3,20 m
Outer diameter:	D	= 33,7 mm
Flow pressure:	p	= 0,30 MPa
Throughput:	q	= 0,13 l/s

Decoupling insert: **profiled rubber**

Measuring diagram:



Evaluation:

Curve 1: Noise transmission with fastening with pipe clamp type see above

L_{IN} = 27 dB(A)

Curve 2: Noise transmission when using rigid fastening

L_{IN} = 45 dB(A)

Improvement:

Frequency f [Hz]	125	250	500	1000	2000	4000
VM L_{IN} [dB]	10,2	14,2	16,0	19,4	20,9	21,8

A-Evaluation L_{IN} = 18 dB(A)

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SG-Bauakustik

Institut für schalltechnische Produktoptimierung

Mainstrasse 15

45478 Mülheim an der Ruhr, 21.10.2015

Stefan Grüll