

Measurement of Water Appliance Noises in the Laboratory

according to DIN EN ISO 3822-1, 07.2009

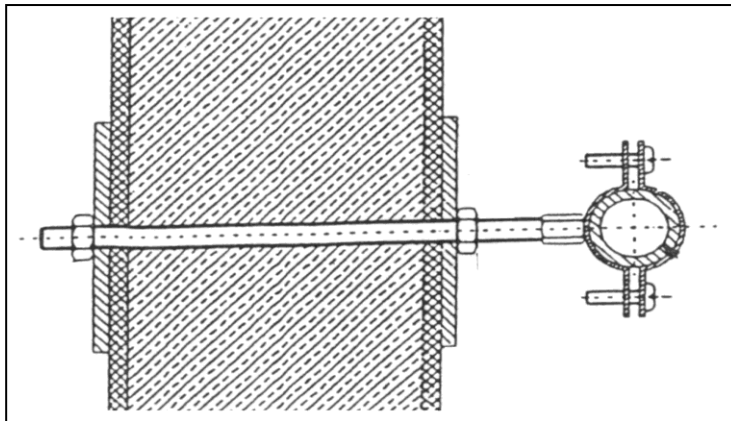
Enclosure 14

Client: Pentair Engineered Electrical & Fastening Solutions, Jules Verneweg 75, 5015 BG Tilburg, The Netherlands
 Test object: Spiral pipe DN 80, outer dia d = 80 mm, fastened with Pipe clamp CADDY® MACRO V (Article Number 582340), ISO 80, M8/M10
 Operation: Stimulation with tapping-machine type Missel

Evaluation:

Measurement of the noise transmission at octave centre frequencies $f = 125$ to 4000 Hz and calculation of the difference between "rigid" and "decoupled" fastening. **Measurement 8** on 30.09.2015, air temperature in test stand: $20,1$ °C, relative humidity: $53,8$ %

Schematic diagram for build-up of test object:

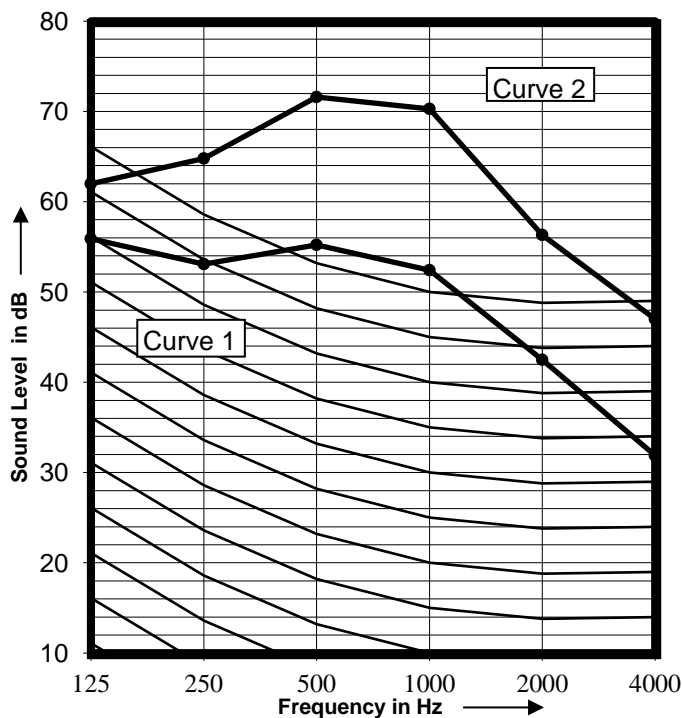


Test Criteria:

Volume test room: $V = 74,3$ m³
 Aver. reverb. time: $\bar{T}_N = 1,38$ s
 Area measuring wall: $F = 8,20$ m²
 Area density: $g_F = 232$ kg/m²
 Length measuring pipe: $L = 3,00$ m
 Outer diameter: $D = 80,0$ mm

Decoupling insert: **profiled rubber**

Measuring diagram:



Evaluation:

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

$L_{IN} = 29$ 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]	6,1	11,7	16,4	17,9	13,8	15,1

A-Evaluation $L_{IN} = 16$ dB(A)

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