Sound reduction index in accordance with PN - EN ISO 10140-2 (2011)

Laboratory measurements of airborne sound insulation of building elements

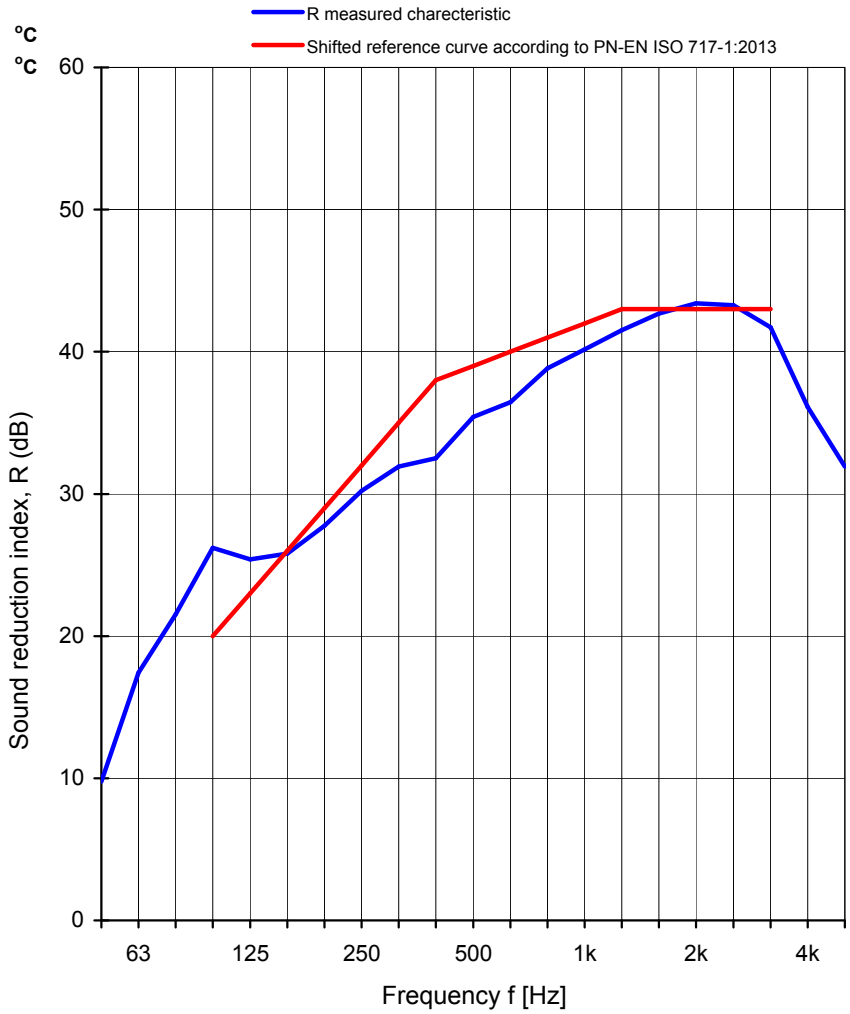
Client: **O.H. Industri A/S** Measurement date: **16.04.2015**
Address: **Smedevej 17, DK-7430 Ikast**

Test specimen: **Acoustic panel AF20AL-28**
Alu 1.5 / XPS 8.0 / 9.0 Bitumen / XPS 8.0 / Alu 1.5
Description of the test facility, test specimen and test arrangement
Dimensions of panel 123x148 cm, thickness 28 mm
Test specimen mounted by **Gryfitlab Sp. z o.o.**

Mass per unit area: kg/m^2
The surface area of test specimen: 1,88 m^2
Relative humidity in receiving room: **58%**
Relative humidity in source room: **61%**
Air temperature in receiving room: **16,8 °C**
Air temperature in source room: **16,9 °C**
Ambient pressure: **1012 hPa**
Volume of source room: 372 m^3
Volume of receiving room: 324 m^3

Frequency [Hz]	Test results with uncertainty R [dB]	U_{CR} [dB]
50	9,8	3,6
63	17,4	2,8
80	21,5	3,5
100	26,2	2,8
125	25,4	2,4
160	25,8	2,4
200	27,7	2,2
250	30,2	2,1
315	31,9	2,0
400	32,5	2,0
500	35,4	2,0
630	36,4	2,0
800	38,8	1,9
1000	40,2	2,0
1250	41,5	1,9
1600	42,7	1,9
2000	43,4	2,0
2500	43,3	2,0
3150	41,7	2,0
4000	36,1	2,0
5000	31,9	2,1

Measurement uncertainty of sound reduction U_{CR}
Confidence level 95% at coverage factor, k=2



Weighted sound reduction index in accordance with PN-EN ISO 717-1:2013

R_w (C; C_{tr})= 39 (-1; -4) dB

$C_{50\text{-}3150}$= **-2** dB $C_{50\text{-}5000}$= **-3** dB $C_{100\text{-}5000}$= **-2** dB
$C_{tr,\ 50\text{-}3150}$= **-8** dB $C_{tr,\ 50\text{-}5000}$= **-8** dB $C_{tr,\ 100\text{-}5000}$= **-4** dB

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

GRYFITLAB Sp. z o.o. Laboratory of Acoustics

Date: 16.04.2015 Signature: Robert Dybicz