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

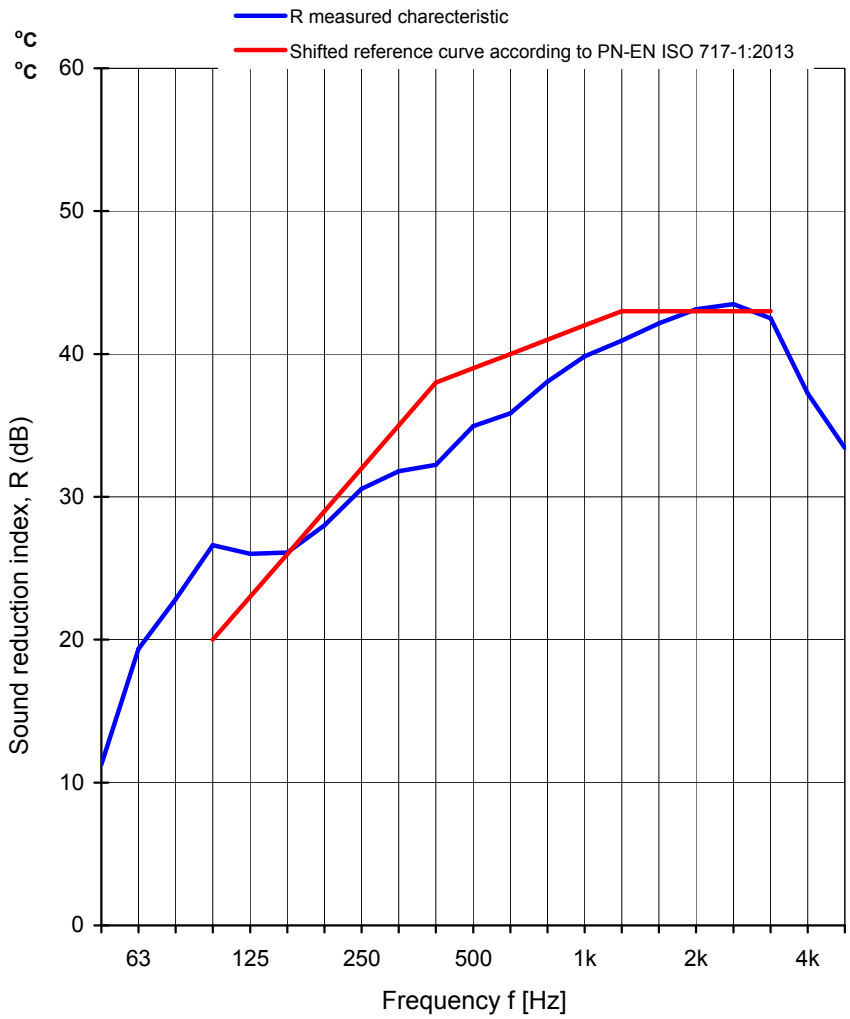
Laboratory measurements of airborne sound insulation of building elements

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

Test specimen:Acoustic panel **AF 2016-30.5**
Alu 1.5 / XPS 8.0 / 9.0 Bitumen / XPS 8.0 / 4.0 HDF
Description of the test facility, test specimen and test arrangement
Dimensions of panel 123x148 cm, thickness 30.5 mm
Test specimen mounted by Gryfitlab
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: **59%**
Air temperature in receiving room: **16,2 °C**
Air temperature in source room: **16,1 °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	11,3	3,3
63	19,4	2,9
80	22,8	3,5
100	26,6	2,9
125	26,0	2,4
160	26,1	2,3
200	28,0	2,4
250	30,6	2,1
315	31,8	2,0
400	32,2	2,0
500	35,0	2,0
630	35,8	2,0
800	38,1	1,9
1000	39,8	2,0
1250	40,9	1,9
1600	42,1	1,9
2000	43,1	1,9
2500	43,5	2,0
3150	42,5	2,0
4000	37,2	2,0
5000	33,4	2,2

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 $C_{50\text{-}5000}$= **-2** dB $C_{100\text{-}5000}$= **-2** dB
$C_{tr,\ 50\text{-}3150}$= **-7** dB $C_{tr,\ 50\text{-}5000}$= **-7** 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