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

Laboratory measurements of airborne sound insulation of building elements

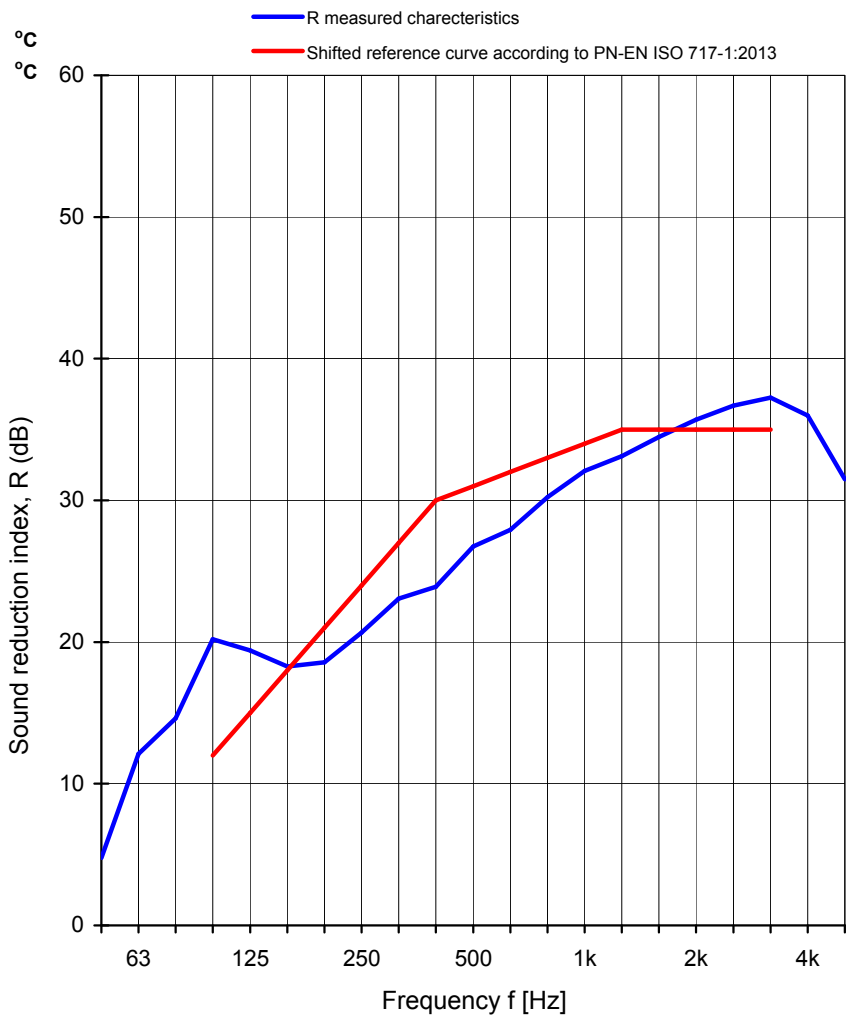
Client: **O.H. Industri A/S** Measurement date: **16.04.2015**
Address: **Smedevej 17, DK-7430 Ikast**

Test specimen: **Acoustic panel FF1216-24**
HDF 4.0 / XPS / HDF 4.0
Description of the test facility, test specimen and test arrangement
Dimensions of panel 1230 x 1480 mm, thickness 24 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: **62%**
Air temperature in receiving room: **16,5 °C**
Air temperature in source room: **16,2 °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	4,8	3,8
63	12,1	2,9
80	14,6	3,7
100	20,2	3,3
125	19,4	2,5
160	18,3	2,4
200	18,6	2,3
250	20,7	2,2
315	23,1	2,1
400	23,9	1,9
500	26,7	2,0
630	27,9	2,0
800	30,2	2,0
1000	32,1	2,0
1250	33,1	1,9
1600	34,5	1,9
2000	35,7	1,9
2500	36,7	2,0
3150	37,3	1,9
4000	36,0	2,0
5000	31,5	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})= 31 (-1; -4) dB

$C_{50\text{-}3150}$= **-2** dB $C_{50\text{-}5000}$= **-1** dB $C_{100\text{-}5000}$= **-1** 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