

WORKSHOP

SOUND POWER LEVEL of the reference source



Sound power level of the reference source was calculated in three cases, when:

- a) the source is located on the floor
- b) the source is located next to the wall
- c) the source is located in the corner



The participants' tasks were determining measurement surface and choosing quantities and localization measurement points. The participants measured sound pressure level in every measurement point and then calculated sound power level for every cases. Not forgotten about measuring the background noise level. Next the results were comparised in each source's position.

CASE A – on the floor







CASE B – next to the wall







CASE C – in the corner







87.9

88.0

88.2

89,6



SUMMARY

The results in each positions are very similar to each other. Differences between measurements aren't more than 1 dB in cases A and B. In case C, this difference isn't more than 1,7 dB. These variations are due to quantity of measurement points and accuracy of measurement. Increase the numer of reflecting walls didn't influence significantly the final result. This is caused by the decreasing measurement surface.

The main conclusion is that the source's sound power level is always the same, despite changing the position and size of the measurement surface. Sound pressure level is dependent on reflecting walls and distance from the source.