

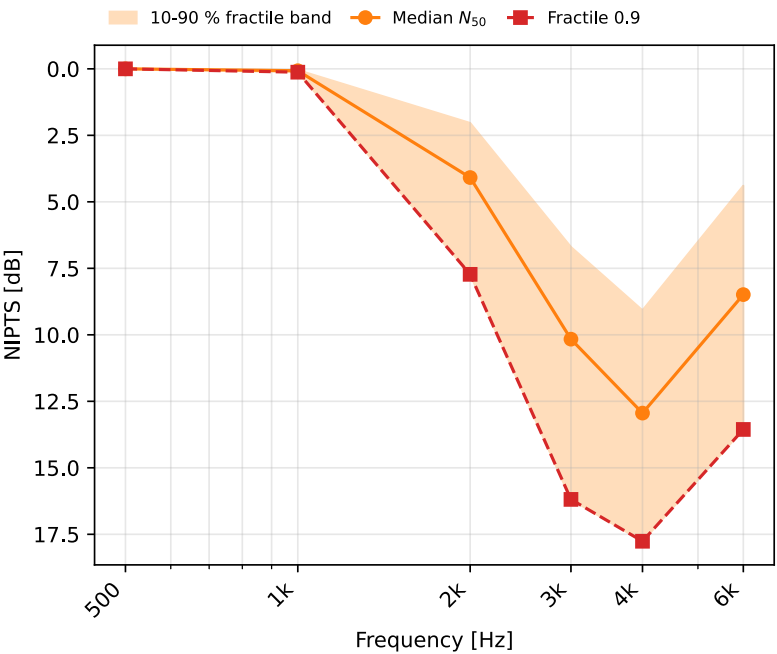
Noise-induced hearing loss prediction

Statistical prediction of the noise-induced permanent threshold shift of a noise-exposed population per ISO 1999:2013 (clause 6.3).

Company:	Example fabrication works	Worker(s) / group:	Welders (homogeneous exposure group, 4 workers)
Workplace:	Steel assembly hall, line 2	Date of assessment:	2026-07-20

Threshold shift by frequency

Frequency [Hz]	N ₅₀ [dB]	NIPTS [dB]
500	0.0	0.0
1000	0.1	0.1
2000	4.1	7.7
3000	10.2	16.2
4000	12.9	17.8
6000	8.5	13.6



Predicted NIPTS averaged over 2/3/4 kHz =
13.9 dB

Noise exposure $L_{EX,8h} = 90$ dB
Exposure duration = 20 years
Population fractile Q = 0.9

These values are a statistical prediction for a noise-exposed population (ISO 1999:2013), not a clinical diagnosis or a measured audiogram of any individual.

The population fractile Q is the fraction of the noise-exposed population predicted to show a smaller threshold shift, so a higher fractile is a more-susceptible individual (ISO 1999:2013, 6.3.2).

Laboratory: Phonometry reference example

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Date: 2026-07-20

Notes: Reproduces the ISO 1999:2013 Annex D (Table D.2) worked example.

Operator: phonometry Signature: _____

■ The results relate only to the tested specimen.

Generated by phonometry.