

ISO 9613-2:2024-01 (E)

Acoustics - Attenuation of sound during propagation outdoors - Part 2: Engineering method for the prediction of sound pressure levels outdoors

Contents		Page
Foreword		iv
Introduction		vi
1	Scope	1
2	Normative references	2
3	Terms, definitions, symbols and units	2
3.1	Terms and definitions	2
3.2	Symbols and units	3
4	Source description	4
5	Meteorological conditions	6
6	Basic formulae	7
7	Calculation of the attenuation terms	8
7.1	Geometric divergence, A_{div}	8
7.2	Atmospheric absorption, A_{atm}	9
7.3	Ground attenuation, A_{gr}	9
7.3.1	General method of calculation	9
7.3.2	Simplified method of calculation for A-weighted sound pressure levels	12
7.4	Screening, A_{bar}	13
7.4.1	General method of calculation	13
7.4.2	Alternative method to calculate the path length difference z with one edge or with more parallel edges	17
7.4.3	Lateral diffraction around vertical edges	19
7.4.4	Combining vertical and lateral diffractions and limitations	20
7.5	Reflections	20
7.5.1	General	20
7.5.2	Single reflection at a flat surface – conditions and calculation	20
7.5.3	Multi-reflection up to higher orders	21
7.5.4	Reflections at cylindrical surfaces	22
8	Meteorological correction, C_{met}	23
9	Accuracy and limitations of the method	25
Annex A (informative)	Additional types of attenuation, A_{misc}	27
Annex B (informative)	Directivity correction, D_c , for chimney stacks	34
Annex C (informative)	Meteorological correction due to the dependency of C_0 from the angular wind distribution	38
Annex D (informative)	Calculation of sound pressure levels caused by wind turbines	42
Bibliography		45