

ISO/TR 17534-3:2015-01 (E)

Acoustics - Software for the calculation of sound outdoors - Part 3: Recommendations for quality assured implementation of ISO 9613-2 in software according to ISO 17534-1

Contents	Page
Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Identification of the official documentation	1
5 Additional recommendations	1
5.1 General	1
5.2 Screening	2
5.3 Limitation of the maximal possible attenuation by barriers	4
5.4 Calculation of the path-length difference, z	4
5.5 Diffraction with barrier on reflecting ground	4
5.6 No level increase caused by barriers due to lateral diffraction	4
5.7 No ground effect calculated with rays laterally diffracted	5
5.8 No lateral diffraction with elevated ground screening the direct ray	5
5.9 Multi-reflection	
the extension to reflections of higher orders	5
6 Test cases	6
6.1 General	6
6.2 Test cases with step by step results and final result interval	6
6.2.1 T01-T03	
Flat ground with homogeneous acoustic properties	6
6.2.2 T01	
Reflecting ground ($G = 0$)	7
6.2.3 T02	
Mixed ground ($G = 0,5$)	8
6.2.4 T03	
Porous ground ($G = 1$)	9
6.2.5 T04	
Flat ground with spatially varying acoustic properties	9
6.2.6 T05	
Identical to T04, but calculation with the alternative method according to ISO 9613-2:1996, 7.3.2	11
6.2.7 T06	
Ground with spatially varying heights and acoustic properties	12
6.2.8 T07	
Identical to T06, but calculation with the alternative method according to ISO 9613-2:1996, 7.3.2	15
6.2.9 T08	
Flat ground with spatially varying acoustic properties and long barrier	16
6.2.10 T09	
Flat ground with spatially varying acoustic properties and short barrier	19
6.2.11 T10	
Ground with spatially varying heights and acoustic properties and short barrier	22

6.2.12	T11	24
	Flat ground with homogeneous acoustic properties and cubic building	
	receiver at low height.....	
6.2.13	T12	28
	Flat ground with homogeneous acoustic properties and cubic building	
	receiver at large height.....	
6.2.14	T13	31
	Flat ground with homogeneous acoustic properties and polygonal	
	building	
	receiver at low height.....	
6.2.15	T14	34
	Ground with spatially varying heights and acoustic properties and	
	polygonal building.....	
6.2.16	T15	37
	Flat ground with homogeneous acoustic properties and polygonal	
	building	
	receiver at large height.....	
6.2.17	T16	39
	Flat ground with homogeneous acoustic properties and three buildings.....	
6.2.18	T17	43
	Flat ground with homogeneous acoustic properties and three buildings ...	
	alternative position of source and receiver.....	
6.2.19	T18	46
	Flat ground with homogeneous acoustic properties and complex building	
	with backyard.....	
6.2.20	T19	50
	Ground with spatially varying heights and acoustic properties and	
	reflecting barrier.....	
7	Declaration of conformity (DOC).....	52
	Bibliography.....	56