

ISO/TS 7849-1:2009-03 (E)

Acoustics - Determination of airborne sound power levels emitted by machinery using vibration measurement - Part 1: Survey method using a fixed radiation factor

Contents		Page
Foreword		iv
Introduction		v
1	Scope	1
2	Normative references	1
3	Terms and definitions	2
4	Principle	4
5	Measuring instrumentation	5
5.1	General	5
5.2	Vibration transducer	5
5.3	Non-contacting transducers	5
5.4	Amplifier	6
5.5	Integrator	6
5.6	Calibration	6
6	Installation and operation of source under test	6
6.1	General	6
6.2	Description of the machine	7
6.3	Installation	7
6.4	Operating conditions	7
7	Determination of the vibratory velocity on the vibrating measurement surface	7
7.1	General	7
7.2	Vibrating measurement surface	7
7.3	Number of measurement positions	8
7.4	Environmental conditions	8
7.5	Measurement procedure	9
7.6	Mounting of the vibration transducer	9
8	Calculations	9
8.1	Correction for extraneous vibratory velocity	9
8.2	Determination of the mean A-weighted vibratory velocity level on the vibrating measurement surface	10
8.3	Calculation of the upper limit of the A-weighted airborne sound power level caused by radiation of structure vibration generated sound	11
9	Measurement uncertainty	11
10	Information to be recorded	13
10.1	Machine under test	13
10.2	Measurement conditions	13
10.3	Measuring instrumentation	13
10.4	Acoustical data	13
Annex A (informative) Use of the vibration transducer		14
Annex B (informative) Guidance on the development of information on measurement uncertainty ..		16
Bibliography		19