

ISO 20145:2019-10 (E)

Pneumatic fluid power - Test methods for measuring acoustic emission pressure levels of exhaust silencers

Contents		Page
Foreword		iv
Introduction		v
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Symbols and abbreviated terms	3
5	Test set-up	3
5.1	Test bench	3
5.2	Pneumatic pressure measurement	3
5.3	Flow measurement	3
5.4	Sound pressure measurement	3
5.4.1	Measurement at one position	3
5.4.2	Measurement at three positions	4
5.5	Acoustic instrumentation	5
6	Test procedure	5
6.1	Characterization and validation of the test facilities	5
6.2	Quantities to be measured	5
6.2.1	Basic quantities to be measured	5
6.2.2	Acquisition parameters of basic quantities -- Steady-state mode	6
6.2.3	Acquisition parameters of basic quantities -- Discharge mode	6
6.3	Measurements	6
6.3.1	Generalities	6
6.3.2	Specimens tested	7
6.3.3	Specific cases	7
6.3.4	Ambient conditions during measurement	7
6.4	The acoustic quantity to be determined	7
6.5	Calculation of background noise correction K1A	8
6.5.1	Case of measurement in steady-state model	8
6.5.2	Case of measurement in discharge mode	8
6.6	Uncertainty on measurement	9
7	Presentation of test results	9
7.1	Information to be written in the test report	9
7.2	Information to be declared	10
8	Identification statement	10
Annex A (normative) Calculation of environmental correction K2A		11
Annex B (informative) Example of the acoustic correction of industrial facilities		13
Annex C (informative) Examples of reports		17
Annex D (informative) Uncertainties		19
Bibliography		21