

ISO 16063-41:2011-08 (E)

Methods for the calibration of vibration and shock transducers - Part 41: Calibration of laser vibrometers

Contents		Page
Foreword		iv
1	Scope	1
2	Normative references	1
3	Classification of laser vibrometers and principles of test methods	2
4	Uncertainty of measurement	4
5	Requirements for apparatus and other conditions	5
6	Preferred amplitudes and frequencies	14
7	Common procedure for primary calibration (methods 1, 2 and 3)	15
8	Method using fringe counting (method 1)	15
9	Method using minimum-point detection (method 2)	16
10	Methods using sine approximation: method 3 (homodyne version) and method 3 (heterodyne version)	18
11	Method using comparison to a reference transducer (method 4)	20
12	Report of calibration results	21
Annex A (normative) Uncertainty components in the primary calibration by laser interferometry of vibration and shock transducers		31
Annex B (informative) Three versions of method 3 based on laser Doppler velocimetry		36
Annex C (informative) Example of calculation of measurement uncertainty in calibration of a laser vibrometer		40
Annex D (informative) Phase shift calibration of laser vibrometers		42
Bibliography		44