

ISO 7626-1:2011-07 (E)

Mechanical vibration and shock - Experimental determination of mechanical mobility - Part 1: Basic terms and definitions, and transducer specifications

Contents	Page
Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms, definitions, and symbols	2
3.1 Terms and definitions	2
3.2 Symbols	8
4 Fundamentals and general relationships	8
5 Basic requirements for force and motion measurement transducers	9
5.1 General	9
5.2 Requirements for motion measurement transducers	9
5.3 Requirements for force measurement transducers	10
5.4 Requirements for impedance heads and attachments to the structure under test	10
6 Calibration	11
6.1 General	11
6.2 Operational calibrations	11
6.3 Basic and supplementary transducer calibrations	11
7 Basic piezoelectric transducer calibrations	12
7.1 General	12
7.2 Sensitivity	12
7.3 Frequency response	14
7.4 Accelerometer transverse sensitivity	15
7.5 Mass	15
7.6 Dimensions	15
7.7 Electrical impedance	15
7.8 Polarity	16
8 Supplementary calibrations	16
8.1 General	16
8.2 Linearity	16
8.3 Effective end mass of force transducers and impedance heads	17
8.4 Compliance of impedance heads	17
8.5 Supplementary calibrations necessitated by environmental and secondary effects	17
9 Presentation of data	19
9.1 General	19
9.2 Logarithmic plotting	19
9.3 Alternative plotting methods	19
Annex A (informative) Relationship between mechanical impedance, mobility and modal analysis ..	23
Annex B (informative) Mobility as a frequency-response function	26
Annex C (informative) Determination of impedance head attachment compliance and damping	28
Bibliography	30