

ISO 18437-5:2011-04 (E)

Mechanical vibration and shock - Characterization of the dynamic mechanical properties of visco-elastic materials - Part 5: Poisson ratio based on comparison between measurements and finite element analysis

Contents		Page
Foreword		iv
Introduction		v
1	Scope	1
2	Normative references	2
3	Terms and definitions	2
4	Background and measurement principles	3
5	Single-sample measurement method[8]	4
5.1	Introduction	4
5.2	Basic theory	4
5.3	Specimen geometry and frequency range	4
5.4	Stiffness measurement	7
5.5	Data acquisition	7
6	Two-sample measurement method[5]	8
6.1	Introduction	8
6.2	Basic theory	8
6.3	Determining Poisson ratio	9
6.4	Specimen geometry and frequency range	9
6.4.1	General	9
6.4.2	Data acquisition	10
7	Test equipment	10
8	Sample preparation and mounting	11
9	Sample conditioning	11
10	Main sources of uncertainty	11
11	Time-temperature superposition	11
Annex A (informative) Linearity of resilient materials		12
Bibliography		13