

ISO 10813-2:2019 (E)

Vibration-generating machines — Guidance for selection — Part 2: Equipment for dynamic structural testing

Contents

	Foreword
	Introduction
1	Scope
2	Normative references
3	Terms and definitions
4	Dynamic structural testing
4.1	General
4.2	Excitation types
5	Vibration generators
5.1	Main types of equipment
5.2	Principal characteristics of vibration generators
5.3	Features of different vibration generators
5.3.1	Electrodynamical generator
5.3.2	Electromagnetic vibration generator
5.3.3	Piezoelectric vibration generator
5.3.4	Magnetostrictive vibration generator
5.3.5	Hydraulic vibration generator
5.3.6	Mechanical vibration generator
5.3.7	Impactor
6	Selection procedure
6.1	General
6.2	Procedure
Annex A	(informative) Prognosis of mechanical impedance for some types of structures
A.1	General
A.2	Isolators
A.3	Machinery
A.3.1	General
A.3.2	Single machines
A.3.2.1	Excitation through the shell
A.3.2.2	Excitation through a foot
A.3.3	Coupled machines
A.3.3.1	Force applied to a machine
A.3.3.2	Force applied to the common base plate
A.4	Damped frames mounted on isolators
A.5	Machine's base plate
Annex B	(informative) Examples of equipment selection
B.1	Example 1 — Test of a framed structure
B.1.1	General
B.1.2	Features of the test structure
B.1.3	Selection of the vibration generator
B.1.3.1	Frequency range
B.1.3.2	Connection to the test structure
B.1.3.3	Displacement requirements
B.1.3.4	Force requirements

B.1.3.5	Conclusion
B.2	Example 2 — Test of a metal-rubber mounting
B.2.1	General
B.2.2	Features of the test structure
B.2.3	Selection of the vibration generator
B.2.3.1	Frequency range
B.2.3.2	Limit factors
B.2.3.3	Excitation force
B.2.3.4	Conclusion

Page count: 22