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 Electrodynamic 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