STANDARD 10112

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Damping materials — Graphical presentation of the complex modulus

Matériaux amortissants — Représentation graphique du module complexe

Reference number
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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies) The work of preparing International Standards is normally carried out through ISO technical committees Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 10112 was prepared by Technical Committee ISO/TC 108, *Mechanical vibration and shock*

Annex A of this International Standard is for information only

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Introduction

Damping is one potential approach to reducing vibration levels in a structural system. Damping is the dissipation of vibratory energy by converting it into heat, as distinguished from transporting it to another part of the system. When the damping is due to internal energy dissipation within a material which is part of the structural system, and when the damping is of engineering significance, the material is called a vibration damping material. The energy dissipation is due to molecular or crystal-lattice interactions and can be measured in terms of the stress/strain hysteresis loop of the vibration damping material Other possible sources of damping, such as plastic deformations in the joints, relative slip at joints, air pumping in the joints, acoustic radiation of energy, eddy current losses, etc , are not covered in this International Standard

The mechanical properties of most damping materials depend on frequency, temperature and strain amplitude at large strains; since this International Standard is restricted to linear behaviour, it does not cover the strain amplitude effect.