ISO 22762-1 :2005-07 (E)

Elastomeric seismic-protection isolators_- Part_1: Test methods

Contents

Page

Foreword ... iv

Introduction ... v

1 Scope ... 1

2 Normative references ... 1

3 Terms and definitions ... 2

4 Symbols and abbreviated terms ... 4

5 Rubber material tests ... 10
5.1 Test items ... 10
5.2 Test conditions and test pieces ... 10
5.3 Tensile properties ... 10
5.4 Ageing test ... 11
5.5 Hardness ... 11
5.6 Adhesion ... 11
5.7 Compression set ... 11
5.8 Dynamic shear properties ... 11
5.9 Fracture properties ... 14
5.10 Brittleness point ... 14
5.11 Ozone resistance ... 14
5.12 Low temperature crystallization ... 14

6 Isolator tests ... 15
6.1 General ... 15
6.2 Compression and shear stiffness tests ... 15
6.3 Various dependence tests ... 26
6.4 Ultimate shear properties ... 39
6.5 Tensile testing ... 41
6.6 Durability testing ... 44
6.7 Reaction force due to low-rate deformation ... 51

Annex A (normative) **Determination of accelerated ageing conditions equivalent to expected life at 23 °C** ... 54

Annex B (normative) **Inertia force correction** ... 57

Annex C (normative) **Friction force correction** ... 59

Annex D (normative) **Determination of coefficient of linear thermal expansion** ... 62

Annex E (informative) **Confirmation list** ... 64

Annex F (informative) **Alternative methods of determining shear properties** ... 66

Annex G (informative) **Creep test** ... 68

Annex H (informative) **Determination of reaction force due to low-rate deformation** ... 70

Annex I (informative) **Durability investigation of elastomeric isolators used for 10 years in a bridge** ... 72

Annex J (informative) **Durability investigation of elastomeric isolators used for 7 years in a building** ... 74

Bibliography ... 78