ISO 24323:2023-12 (E)

Timber structures - Design method for vibrational serviceability of timber floors

Contents

Page

Foreword ..... **iv**

Introduction ..... **v**

1 Scope **1**

2 Normative references **1**

3 Terms and definitions **1**

4 Baseline timber floor vibrational serviceability design criterion **1**

5 General models for calculating f and $d_{1\,kN}$ **2**

6 Simplified calculation procedures for light-frame timber joisted floors **4**

6.1 Floor construction 4

6.2 Calculation of first natural frequency and static deflection under a 1 kN load at floor centre 4

6.3 Effective composite bending stiffness, D_{ef} 5

6.4 Transverse system stiffness factor, K_t 6

7 Simplified calculation procedures for mass timber floors **7**

7.1 Floor construction 7

7.2 Calculation of first natural frequency and static deflection under a 1 kN load at floor centre 7

8 Design values of floor components **8**

Annex A (informative) **Coupled criteria for timber floor vibrational serviceability design** **9**

Annex B (informative) **Decoupled criteria for timber floor vibrational serviceability design** **12**

Annex C (informative) **Explanatory notes** **14**

Bibliography **15**