

ISO 24322:2024-01 (E)

Timber structures - Methods of test for evaluation of long-term performance - Part 1: Wood-based products in bending

Contents

Page

Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Symbols (and abbreviated terms)	2
5 Reference population	3
6 Sampling	4
6.1 Sampling method	4
6.2 Matched groups within a sample	4
6.3 Sample size	4
7 Sample conditioning prior to testing	5
8 Bending tests	5
8.1 Test method	5
8.1.1 General	5
8.1.2 Load location on specimens	5
8.1.3 Load configuration	5
8.1.4 Deformation measurements	6
8.1.5 Reporting failure results	6
8.2 Short-term tests	6
8.2.1 Loading rate	6
8.2.2 Reporting	6
8.2.3 Reference loads	7
8.3 Long-term tests	7
8.3.1 Loading levels	7
8.3.2 Initial loading rate	7
8.3.3 Deformation measurements	7
9 Evaluating new duration of load and creep factors	7
9.1 General	7
9.2 Sampling	8
9.2.1 Service class	8
9.2.2 Sample size	8
9.3 Specimen conditioning	8
9.4 Tests	8
9.4.1 General considerations for short-term tests	8
9.4.2 General considerations for the long-term tests	9
9.4.3 Long-term duration of load tests	9
9.4.4 Long-term creep tests	9
9.5 Evaluation of test results	10
9.5.1 Duration of load factor	10
9.5.2 Creep factor	11
10 Confirmation of duration of load and creep factors	12
10.1 General	12
10.2 Sampling	12

10.3	Tests required	13
10.3.1	Short-term bending tests	13
10.3.2	Long-duration bending tests	13
10.4	Acceptance criteria	14
10.4.1	Adequate strength	14
10.4.2	Decreasing creep rate	14
10.4.3	Fractional deflection, D_f	15
10.5	Retest option	15
10.6	Acceptance criteria for retest at lower stress level	15
10.6.1	Average fractional deflection	16
10.6.2	Average creep-recovery	16
10.6.3	Average residual strength and stiffness	16
10.7	Interpretation of retests	16
11	Test report	16
Annex A	(informative) Sampling for tests on duration of load and creep	18
Annex B	(informative) Testing for sensitivity of duration of load and creep factors to environment	19
Bibliography	20