Australian/New Zealand Standard™

Reconstituted wood-based panels—Methods of test

Method 1: Sampling, cutting, and conditioning of test pieces

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee TM-005, Reconstituted Timber Panel Products, to supersede the Interim Standard AS/NZS 4266.1(Int):2001, *Reconstituted wood-based panels—Methods of test*, Method 1: *Sampling and cutting for test pieces*.

This Standard is equivalent to the industrial Standard harmonized between the wood panel industries in Australia, Japan and New Zealand, known as JANS 5.

Statements expressed in mandatory terms in notes to figures are deemed to be requirements of this Standard.

METHOD

1 SCOPE

This Standard specifies methods for the sampling, cutting, and conditioning of test pieces of reconstituted wood-based panels.

This Standard does not cover the sampling and cutting of test pieces for the derivation of characteristic values for structural design. These tests have to be carried out on medium-sized test pieces.

2 REFERENCED DOCUMENTS

The following document is referred to in this Standard:

AS/NZS
4491 Timber—Glossary of terms in timber related Standards

3 DEFINITIONS

For the purpose of this Standard, the definitions in AS/NZS 4491 apply.

4 SAMPLING

4.1 Sampling of panels

The size of the sample (n) depends on the purpose of the determination of panel properties. The sample size may be specified in the relevant Australian, New Zealand, or ISO Standard.

STANDARDS AUSTRALIA
STANDARDS NEW ZEALAND

4.2 Sampling of test pieces

Due to the variability both within and between panels, it is necessary to test a certain number of panels (*n*) as well as a certain number of test pieces (*m*) cut from a single panel, in order to obtain reliable results.
The minimum number of test pieces (*m*) shall be as specified in the relevant Joint Australian/New Zealand Standard for the respective test method.

For the determination of those properties, which differ in the two principal directions of the plane of the panel, two groups of *m* test pieces shall be cut from each panel. One group shall have its longitudinal axis parallel to the direction of the production (or the length of the panel) the other shall have its longitudinal axis perpendicular to this direction.

5 TEST PIECES

5.1 Cutting

The test pieces shall be cut from the individual panels to the dimensions specified in the relevant Standards for the respective test methods, using a suitable method to ensure unbiased selection. At least one test piece of each group of test pieces shall be cut from the edge of the trimmed panel after any edge profiling and/or protective treatment has been removed.

NOTE: Test pieces of larger size may be used where there is difficulty in safely cutting small pieces. In such case, the correlation should be derived with the size specified in this Standard.

5.2 Example of cutting plan

An example of a cutting plan for test pieces is given in Figure 1. The minimum distance between two test pieces for the same test shall be 100 mm.

NOTE: This requirement may be waived if replacement test pieces are required.

The cutting plan shall be recorded. If required, a copy of the cutting plan should be included in the sampling report (see Clause 7(e)).

5.3 Marking

All test pieces cut from a panel shall be marked on the same surface with—

(a) the test panel identification number;

(b) the test piece serial number; and

(c) if possible, the original length direction and the original upper or lower surface of the panel.

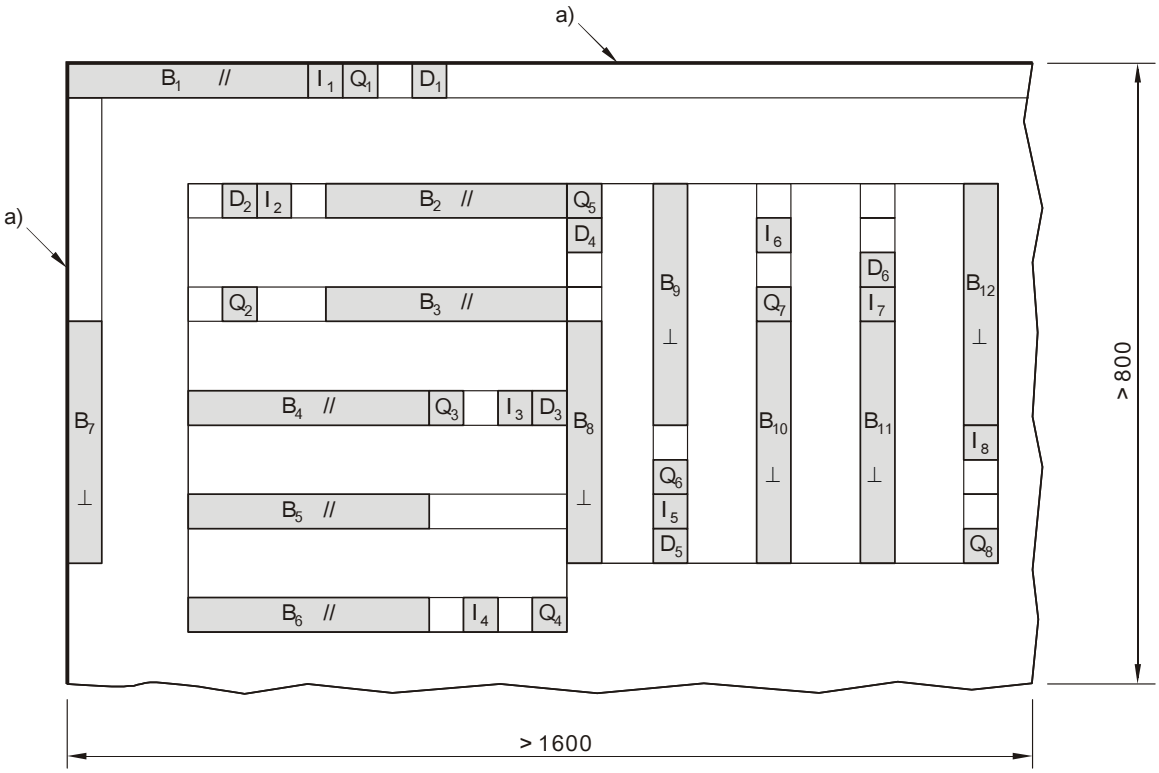
5.4 Asymmetric surfaces

For panels that are asymmetric about the centre of their thickness, so that the test result is influenced by which surface is uppermost when tested (e.g., bending strength), half of the total number of test pieces m (i.e., *m*/2) shall be tested in each surface orientation.

In all other cases where the orientation of the surface of the panel is of minor influence on the property tested, the position of the upper or lower surface during the test shall be chosen at random.

5.5 Other requirements

Cutting of test pieces shall be carried out in such a way that their edges are clean, without burns, and perpendicular to the plane of the panel.



DIMENSIONS IN MILLIMETRES

LEGEND:

// = Orientation of the longitudinal axis of the test piece parallel to the machine direction of the panel

⊥ = Orientation of the longitudinal axis of the test piece perpendicular to the machine direction of the panel

a) = Outer edge trimmed

Test	Test piece number
Density	D_1 to D_6
Bending	B_1 to B_{12}
Thickness swelling	Q_1 to Q_8
Internal bond	I_1 to I_8

NOTE: For properties, which are independent from orientation (e.g., D, I and Q), one test piece shall be taken from an outer edge of a trimmed panel where this can be identified.

FIGURE 1 EXAMPLE OF CUTTING PLAN FOR SMALL TEST PIECES FOR DETERMINATION OF CERTAIN PROPERTIES (THICKNESS OF THE PANEL ABOUT 20 mm)

6 CONDITIONING

The test pieces shall be conditioned to constant mass in a standard climate of 20 ±2°C and relative humidity of 65 ±5%.

Constant mass is considered having been reached when the results of two successive weighing operations, carried out at an interval of 24 h, do not differ by more than 0.1% of the mass of the test piece or block.

In some cases, for instance in a cyclic test in humid conditions, alternative conditioning procedures may be specified. In this case the appropriate Standard shall be consulted and followed.

NOTE: The tests should be carried out not later than 1 h after removal of the test pieces from the conditioning environment.