

**MRTS87**

**Supply of Timber Bridge  
Materials and Components**

**Appendix A**



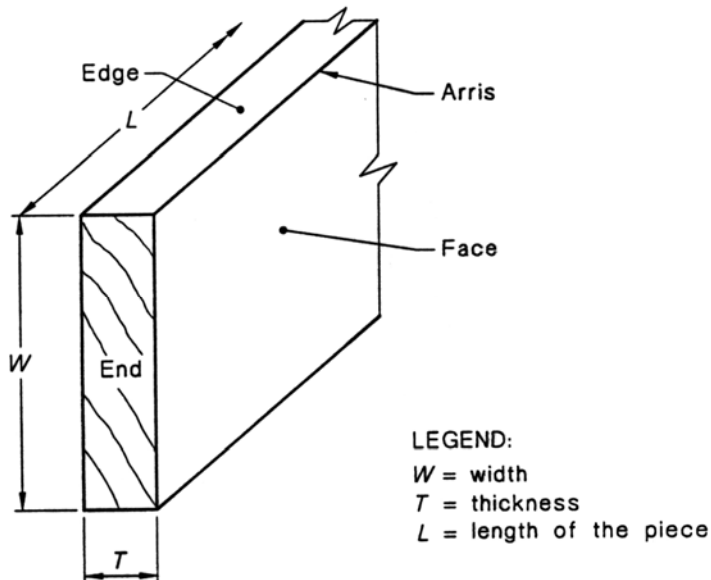
## APPENDIX A

### LIST OF DEFINITIONS

#### EXTRACT FROM AS 3818.1

**Arris** – the sharp intersection of two surfaces, e.g. the face and edge of a piece of timber (see Figure 1).

**Figure 1 – Surfaces and Arris**



**Back** (applied to decking) – the surface which is remote from the heart and which is to be laid upward.

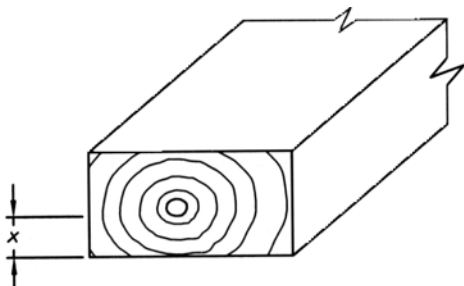
**Backsawn** – timber which has been sawn or cut so that the average inclination of the growth rings to the wide faces is less than 45 degrees.

**Batch** – a quantity of material from which a sample is to be drawn and inspected for compliance with acceptability criteria. Each batch consists of material of a single type, grade, class and composition manufactured under essentially the same conditions at essentially the same time.

**Bow** – a deviation in the longitudinal direction of the piece causing the face to curve away from its intended flat plane.

**Boxed heart** – the pith and adjacent wood contained within the four surfaces of a piece of sawn timber anywhere in its length (see Figure 2).

**Figure 2 – Boxed Heart**



X = minimum distance of heart material to any surface at any point in the piece.

The heart or pith may be a pipe or solid.

**Brashness** – a condition that causes wood to be relatively low in shock resistance (brittle). When stressed, brashy wood fails abruptly at comparatively small deflections, with little or no splintering.

**Brittle heart** – wood characterized by abnormal brittleness caused by growth stresses or fungal attack in the fibres. It is usually located in the heart but may occur elsewhere in the stem.

**Butt** – the larger or lower end of a post or log. The larger end of a pile.

**Charge** – the quantity of timber actually processed in one complete cycle of the treating process in a wood preservation plant.

**Check** – separation of fibres radially across growth rings and along the grain, forming a fissure but not extending from one surface to another. Types include the following –

- a) Barrel check – a check occurring away from the ends of the timber in the round form;
- b) End check – a check occurring at the end of a piece;
- c) Heart check – a check extending from the pith outwards in any direction but not reaching the surface of the piece; and
- d) Surface check – a check confined mainly to the surface of the piece but of no appreciable depth, ie depth not exceeding 10 percent of the thickness of the piece.

**Crook** – a localized deviation of a piece from straightness in a curve of small radius away from and returning to the overall alignment of the piece.

**Dead timber** – timber produced from dead standing trees.

**Decay** – decomposition of wood by fungi. Sometimes referred to as doze.

**Dry-side** – a strip of exposed deadwood which may be bordered by callus and is formed following injury to the living tree.

**Exceptionally low density material** – pieces abnormally low in density for the particular species, ie below 75 percent of the average density for that species at 12 percent moisture content or  $360 \text{ kg/m}^3$ , whichever is the greater.

**Fabrication** – any boring, machining, shaping or other operation specified by the purchaser, resulting in the removal of wood from a member.

**Fracture, cross** – a fracture not in the direction of the fibres and resembling a breakage of the fibre.

**Gum pocket** – a cavity which contains or has contained gum or kino.

**Gum ring** – a deposition of gum or kino concentric with the growth rings, extending round a considerable proportion of the circumference of a ring.

**Gum vein** – a ribbon of gum or kino between growth rings which may be bridged radially at short intervals by wood tissue.

**Gum vein, loose** – a gum vein associated with extensive discontinuity of wood tissue.

**Gum vein, tight** – a gum vein which is bridged radially at close intervals with woody tissue and not associated with extensive discontinuity of wood tissue.

**Heart** – the portion of a log that includes the pith, if applicable, and the associated wood of reduced strength.

**Heart, faulty** – heart that is not tight and sound.

**Heartwood** – wood in which the living tree had ceased to contain living cells and in which the reserve materials (eg. starch) had been removed or changed into more durable substances.

**Hole** – a hole extending partially or entirely through the piece and attributable to any cause as follows –

- a) Borer hole – a small hole in timber caused by the larval or adult stage of a wood boring insect, eg Lyctic, Anobid, Bostrychid, Platypodid or Lymexyloid;
- b) Grub hole – a hole or excavation usually larger than a borer hole, made by the larval or adult stage of an insect, eg Cerambycid, Buprestid or Lepidoptera;
- c) Pinhole – usually stained, made by a pinhole borer, ie Platypodid or Lymexyloid;
- d) Plugged hole – a hole filled by inserting a matching piece of wood; and
- e) Termite hole – see Termite Gallery.

**Kink** – an abrupt offset occurring in a length of log. Applied to piles, means a deviation from straightness whereby one straight section of a pile is offset from another straight section.

**Knot** – a section of a branch which is embedded in the wood of a tree trunk or of a larger branch. Knots are defined with respect to their position on a cross-section of a piece or by their appearance on a surface –

- a) Defective knot – a loose or unsound knot;
- b) Loose knot – a knot which is not held firmly in place by growth and which cannot be relied upon to remain in place in the piece;
- c) Sound knot – a knot solid across its face, as hard as the surrounding tissue and free from decay; and
- d) Unsound knot – a knot more or less decayed and softer than the surrounding tissue; not solid across the face; checked or split.

**Pile** – a round timber member which is sunk into the ground to support axial or lateral loads.

**Pipe** – a longitudinal cavity along the growth centre of round timber.

**Plug sample** – a cylindrical sample taken by coring to at least the full depth of any sapwood.

**Quartersawn** – timber which has been sawn or cut so that the average inclination of the growth rings to the wide faces is more than 45 degrees.

**Refractory** – resistant to penetration by wood preservatives.

**Rot, primary** – heart rot or a pocket of rot occurring in the living tree before felling.

**Sapwood** – the outer layers of the wood of a tree which, when the tree was living, contained tissue in which water and food materials were conveyed and stored; generally lighter in colour than the heartwood.

**Shake** – a partial or complete dislocation, breakage or longitudinal separation of wood fibres due to causes other than drying and usually originating either in the standing tree or in the log during felling or conversion as in the following –

- a) Heart shake – a shake extending from the pith of a tree;
- b) Ring shake – a shake following a growth ring. Also referred to as a shell shake or cup shake and the timber may be described as 'shelly'; and
- c) Star shake – a number of adjoining heart shakes in the form of a star.

**Shell-off** – missing material resulting from a ring shake.

**Sole plate** – a horizontal timber pad normally of square surface dimension laid in or on the ground to support a post or prop in order to distribute the load.

**Spall** – a localized separation of fibres near the surface, usually resulting from an axe cut.

**Split** – a longitudinal separation of wood fibres which extends through a piece from one surface to another in sawn timber or through round timber.

**Split, end** – a split at the end of a log or piece.

**Spiral grain** – where the wood fibres take a helical course about the bole of the tree, instead of the more common vertical course. The spiral grain may extend right handed or left handed around the trunk.

**Spring** – a deviation in the longitudinal direction of the piece, causing the edge to curve away from its intended flat plane.

**Sweep** – the deviation of the piece from straightness, in a curve of large radius, which occurs in –

- a) one direction in one plane (single sweep); or
- b) two directions in any plane (multiple sweep).

**Termite gallery** – an irregularly shaped passage or burrow excavated by termites in the bark or wood. An enclosed termite gallery is one which is not completely open to visual inspection throughout its entire length.

**Thickness (T)** – the smaller dimension of the cross-section of a piece of timber (see Figure 1).

**Top** – small end of a post.

**Toe** – small end of a pile.

**Twist** – a spiral distortion along the length of a piece of timber.

**Wane** – the presence of the original underbark surface with or without bark, on any face or edge of a piece of timber.

**Want** – the absence of wood, other than wane, from the corner or surface of a piece of timber.

**Warp** – a distortion which is generally regular, part or all of the surface having become curved.

**Width (W)** – the larger dimension in the cross-section of a piece (see Figure 1).

**Zone, penetrated** – that part of the member required to be penetrated with preservative.