



## GLOSSARY

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**700.** Throughout these rules various words and terms are used with meanings specifically applicable to lumber. In the use of these rules a full understanding of the words and terms in this Glossary is essential. An index to the Glossary follows:

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### DEFINITIONS

**702. BURL** - A distortion of grain, usually caused by abnormal growth due to injury of the tree. The effect of burls is assessed in relation to knots.

**704. CHECKS** - A separation of the wood normally occurring across or through the rings of annual growth and usually as a result of seasoning.

**a) A Surface check** occurs on a face of a piece.

**b) A Through check** extends from one surface of a piece to the opposite or adjoining surface.

**c) Small checks** are not over  $\frac{1}{32}$ " wide or 4" long.

**d) Medium checks** are not over  $\frac{1}{32}$ " wide or 10" long.

**e) Large checks** are more than  $\frac{1}{32}$ " wide or longer than 10" or both.

**f) A roller check** is a crack in the wood structure caused by a piece of cupped lumber being flattened in passing between the machine rollers.

**A light roller check** is a perceptible opening not over 2' long.

**A medium roller check** is a perceptible opening over 2' long but not exceeding 4' in length.

**A heavy roller check** is over 4' in length.

**706. COMPRESSION WOOD** - Abnormal wood that forms on the under side of leaning and crooked coniferous trees. It is characterized, aside from its distinguishing color, by being hard and brittle and by its relatively lifeless appearance. Compression wood shall be limited in effect to other appearance or strength reducing characteristics permitted in the grade.

**708. DECAY (UN SOUND WOOD)** - A disintegration of the wood substance due to action of wood-destroying fungi, and is also known as dote or rot. Some examples are as follows:

**a) "Heart centre decay"** - is a localized decay developing along the pith in some species and is detected by visual inspection. The limitation for heart centre decay applies to Southern Pine. Heart centre decay develops in the living tree and does not progress further after the tree is cut. (Not found in Canadian species.)

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b) **"Honeycomb"** is similar to white speck but the pockets are larger. Where permitted in the rules it is so limited that it has no more effect on the intended use of the piece than other characteristics permitted in the same grade. Pieces containing honeycomb are no more subject to decay than pieces which do not contain it.

**Note:** *"Firm" in relation to honeycomb infers that it will not crumble readily under thumb pressure and cannot be easily picked out.*

c) **"Incipient decay"** is an early stage of decay in which disintegration of the wood fibres has not proceeded far enough to soften or otherwise change the hardness of the wood perceptibly. It is usually accompanied by a slight discoloration or bleaching of the wood.

d) **"Peck"** is channeled or pitted areas or pockets found in Cedar and Cypress. Wood tissue between pecky areas remains unaffected in appearance and strength. All further growth of the fungus causing peckiness ceases after the trees are felled.

e) **"White specks"** are small white or brown pits or spots in wood caused by the fungus **"Fomes pini"**. It develops in the living tree and does not develop further in wood in service. Where permitted in these rules it is so limited that it has no more effect on the intended use of the pieces than other characteristics permitted in the same grade. Pieces containing white speck are no more subject to decay than pieces which do not contain it.

**Note:** *"Firm" in relation to white speck infers that it will not crumble readily under thumb pressure and cannot be easily picked out.*

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**710. EDGE** - There are three meanings for edge:

- 1) The narrow face of rectangular-shaped pieces;
- 2) The corner of a piece at the intersection of two longitudinal faces;
- 3) In stress grades that part of the wide face nearest the corner of the piece.

a) **"Eased edges"** means slightly rounded surfacing on pieces of lumber to remove sharp corners. The standard radius for 1", 2", 3" and 4" nominal thickness lumber shall not exceed  $\frac{1}{16}$ ",  $\frac{1}{8}$ ",  $\frac{3}{16}$ " &  $\frac{1}{4}$ " respectively.

**Note:** *Lumber 4" or less in thickness is frequently shipped with eased edges unless otherwise specified.*





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- b) **"Square edged"** means free from wane and without eased edges.
- c) **"Free of wane"** means without wane but has either eased or square edges. (See Wane definition)
- d) **Square corners** means without eased edges but has an allowance for wane in certain grades.
- e) To **"destroy the nailing edge"** shall mean:
  - 1) the decay occupies more of the narrow face than the allowable maximum wane in thickness when in streak form; or
  - 2) the decay occupies more than twice the length of the allowable knot hole when a spot occurs completely through the narrow face.

**711. FULL SAWN** - When specified to be full sawn, lumber may be manufactured to the oversize tolerance, but may not be undersize at the time of manufacture.

**712. GRAIN** - The fibres in wood and their direction, size, arrangement, appearance or quality.

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- a) For requirements and method of measuring medium grain, close grain and dense material, see Para. 350.
  - b) **"Slope of grain"** is the deviation of the line of fibres from a straight line parallel to the sides of the piece. For method of measurement, see Para. 360.
  - c) **"Summerwood"** is the portion of the annual growth ring formed during the latter part of the yearly growth ring. It is darker in color, more dense, and stronger mechanically than springwood.
  - d) **"Springwood"** is the portion of the annual growth ring formed during the early part of the yearly growth period. It is lighter in color, less dense, and not as strong mechanically as summerwood.
  - e) **"Vertical grain" (VG) (Edge grain EG) (Rift grain)** lumber is a piece or pieces sawn at approximately right angles to the annual growth rings so that the rings form an angle of 45 degrees or more with the surface of the piece.
  - f) **"Flat grain" (FG) (Slash grain -SG)** lumber is a piece or pieces sawn approximately parallel to the annual growth rings so that all or some of the rings form an angle of less than 45 degrees with the surface of the piece.
  - g) **"Mixed grain" (MG)** lumber includes either or both vertical and flat grained pieces.



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- h) **"Spiral grain"** is a deviation in the slope of grain caused when the fibres in a tree take a spiral course around the trunk of the tree, instead of the normal vertical course.
- i) **"Diagonal grain"** is a deviation in the slope of grain caused by sawing at an angle with the bark of the tree. See slope of grain.
- j) **"Dark grain"** is a grain which is darker than the others and should not be confused with pitch streak.

**714. HEART (Heartwood)** - Inner core of the tree trunk comprising the annual rings containing non-living elements. In some species, heartwood has a prominent colour different from sapwood.

- a) **"Boxed heart"** means with the pith enclosed in the piece.
- b) **"Heart centre"** is the pith or centre core of the log.
- c) **"Free of heart centres" (FOHC)** means without pith (side cut). An occasional piece (see Para. 726) when showing pith for not more than 1/4 the length on the surface shall be accepted.
- d) **"Firm red heart"** is a stage of incipient decay characterized by a reddish color in the heartwood, which does not render the wood unfit for the majority of yard purposes.
- e) **"Heartwood and Sapwood"** of equivalent character are of equal strength. No requirement of heartwood is made when strength alone is the governing factor.
- f) **"Heartwood"** is more durable than sapwood. When wood is to be exposed to decay-producing conditions without preservative treatment, it shall be permitted to specify the minimum percentage of heartwood to be present in all pieces in a shipment.
- g) **"Sapwood"** takes preservative treatment more readily than heartwood.

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**715. HEAT-TREATED (HT)** - lumber or other wood products that has been heated in a closed chamber, with or without moisture content reduction, until it achieves a minimum core temperature of 56°C for a minimum of 30 minutes.

**716. HOLES** - Holes either extend partially or wholly through the piece. An alternate designation for holes which extend only partially through the piece is surface pits. Unless otherwise specified, holes are measured the same as knots. Holes are classified by size as follows:





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- a) A **"pin hole"** is not over  $\frac{1}{16}$ " in diameter;
- b) A **"medium (small) hole"** is not over  $\frac{1}{4}$ " in diameter;
- c) A **"large hole"** is not over 1" in diameter;
- d) A **"very large hole"** is over 1" in diameter;
- e) A **"slough knot"** is a corner knot hole running from one wide face into the adjoining narrow face and measured by taking the average of its measurements on the wide face.

**717. KILN DRIED** - means dried in a closed chamber in which the required moisture content is obtained by artificial heat and/or humidity control.

**718. KNOTS** - A portion of a branch or limb that has become incorporated in a piece of lumber. In lumber, knots are classified as to form, size, quality and occurrence. A red knot is one that results from a live branch growth in the tree and is intergrown with the surrounding wood. A black knot is one that results from a dead branch which the wood growth of the tree has surrounded.

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- a) A **"round"** knot is produced when the limb is cut at approximately a right angle to its long axis;
  - b) An **"oval"** knot is produced when the limb is cut at slightly more than a right angle to the long axis;
  - c) A **"spike"** knot is produced when the limb is cut either lengthwise or diagonally;
  - d) A **"pin"** knot is not over  $\frac{1}{2}$ ";
  - e) A **"small"** knot is not over  $\frac{3}{4}$ ";
  - f) A **"medium"** knot is not over  $1\frac{1}{2}$ ";
  - g) A **"large"** knot is over  $1\frac{1}{2}$ ";
  - h) A **"sound"** knot contains no decay;
  - i) A **"pith"** knot is sound in all respects except it contains a pith hole not over  $\frac{1}{4}$ " in diameter;
  - j) A **"hollow"** knot is a sound knot containing a hole greater than  $\frac{1}{4}$ " in diameter. Through opening of a hollow knot is limited to the size of other holes permitted;
  - k) An **"unsound"** knot contains decay;
  - l) A **"firm"** knot is solid across its face but contains incipient decay;
  - m) A **"tight"** knot is so fixed by growth, shape, or position that it retains its place in the piece;
  - n) An **"intergrown"** knot is one whose growth rings are partially or completely intergrown on one or more faces with the growth rings of the surrounding wood;

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- o) A "**watertight**" knot has its annual rings completely intergrown with those of the surrounding wood on one surface of the piece and it is sound on that surface;
- p) An "**encased**" knot is one which is not intergrown with the growth rings of the surrounding wood;
- q) A "**loose**" or "**not firmly fixed**" knot is one not held tightly in place by growth, shape or position;
- r) A "**fixed**" knot will retain its place in dry lumber under ordinary conditions but is movable under pressure though not easily pushed out;
- s) A "**knot cluster**" is two or more knots grouped together as a unit with the fibres of the wood deflected around the entire unit. A group of single knots is not a knot cluster.
- t) A "**star-checked**" knot has radial checks;
- u) "**Well-scattered**" knots are not in clusters and each knot is separated from any other by a distance at least equal to the diameter of the smaller of the two;
- v) "**Well-spaced**" knots means that the sum of the sizes of all knots in any 6" of length of a piece must not exceed twice the size of the largest knot permitted. More than one knot of maximum permissible size must not be in same 6" of length and the combination of knots must not be serious.



**720. MANUFACTURING IMPERFECTIONS**- Means all imperfections or blemishes which are the result of surfacing, such as the following:

- a) "**Chipped grain**" is a barely perceptible irregularity in the surface of a piece caused when particles of wood are chipped or broken below the line of cut. It is too small to be classed as torn grain and is not considered unless in excess of 25% of the surface involved.
- b) "**Torn grain**" is an irregularity in the surface of a piece where wood has been torn or broken out by surfacing. Torn grain is described as follows:
  - "**Very light**" torn grain is not over  $\frac{1}{64}$ " deep;
  - "**Light**" torn grain is not over  $\frac{1}{32}$ " deep;
  - "**Medium**" torn grain is not over  $\frac{1}{16}$ " deep;
  - "**Heavy**" torn grain is not over  $\frac{1}{8}$ " deep;
  - "**Very heavy**" torn grain is over  $\frac{1}{8}$ " deep.



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- c) **"Raised grain"** is a roughened condition of the surface of dressed lumber in which the hard summerwood is raised above the softer springwood, but not torn loose from it.
- "Very light" raised grain** is not over  $\frac{1}{64}$ ";
  - "Light" raised grain** is not over  $\frac{1}{32}$ ";
  - "Medium" raised grain** is not over  $\frac{1}{16}$ ";
  - "Heavy" raised grain** is not over  $\frac{1}{8}$ ";
- d) **"Loosened grain"** is a grain separation or loosening between springwood and summerwood without displacement.
- "Very light" loosened grain** is not over  $\frac{1}{64}$ " separation;
  - "Light" loosened grain** is not over  $\frac{1}{32}$ " separation;
  - "Medium" loosened grain** is not over  $\frac{1}{16}$ " separation;
  - "Heavy" loosened grain** is not over  $\frac{1}{8}$ " separation;
  - "Very heavy" loosened grain** is over  $\frac{1}{8}$ " separation.
- e) **"Skips"** are areas on a piece that failed to surface clean. Skips are described as follows:
- "Very light" skip** on face or edge is not over  $\frac{1}{64}$ " in depth  
\*(may be approximately 6" in length);
  - "Light" skip** on **face** is not over  $\frac{1}{32}$ " in depth  
\*(may be 12" in length);
  - "Light" skip** on **edge** is not over  $\frac{1}{32}$ " in depth  
\*(may be 2' in length);
  - "Medium" skip** on **face** is not over  $\frac{1}{16}$ " in depth  
\*(may be 12" in length);
  - "Medium" skip** on **edge** is not over  $\frac{1}{16}$ " in depth  
\*(may be 2' in length);
  - "Heavy" skip** on **face &/or edge** is not over  $\frac{1}{8}$ " in depth.
- Note:** *The asterisked bracketed (\*) portions for the definitions of skips noted above are not included in National Grading Rule (NGR) definitions.*
- f) **"Hit and miss" skip** is a series of skips not over  $\frac{1}{16}$ " deep with surfaced areas between \*(may be 4' in length);
- g) **"Hit or miss" skip** means completely or partly surfaced or entirely rough. Scantness may be  $\frac{1}{16}$ ";
- h) **"Mismatch"** is an uneven fit in worked lumber when adjoining pieces do not meet tightly at all points of contact or when the surface of adjoining pieces are not in the same plane. Mismatch levels are described as follows:
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- "Slight" mismatch** is a barely evident trace of mismatch.
- "Very light" mismatch** is not over  $\frac{1}{64}$ ";
- "Light" mismatch** is not over  $\frac{1}{32}$ ";
- "Medium" mismatch** is not over  $\frac{1}{16}$ ";
- "Heavy" mismatch** is not over  $\frac{1}{8}$ ".
- i) **"Machine burn"** is a darkening of the wood due to overheating by machine knives or rolls when pieces are stopped in machine.
- j) **"Machine bite"** is a depressed cut of the machine knives at the end of the piece.
- "Very light" machine bite** is not over  $\frac{1}{64}$ " deep;
- "Light" machine bite** is not over  $\frac{1}{32}$ " deep;
- "Medium" machine bite** is not over  $\frac{1}{16}$ " deep;
- "Heavy" machine bite** is not over  $\frac{1}{8}$ " deep;
- "Very heavy" machine bite** is over  $\frac{1}{8}$ " deep.
- k) **"Machine gouge"** is a groove cut by the machine below the desired line.
- "Very light" machine gouge** is not over  $\frac{1}{64}$ " deep.
- "Light" machine gouge** is not over  $\frac{1}{32}$ " deep.
- "Medium" machine gouge** is not over  $\frac{1}{16}$ " deep.
- "Heavy" machine gouge** is not over  $\frac{1}{8}$ " deep.
- "Very heavy" machine gouge** is over  $\frac{1}{8}$ " deep.
- l) **"Machine offset"** is an abrupt dressing variation in the edge surface which usually occurs near the end of the piece and without reducing the width or without changing the plane of the wide surface.
- "Very light" machine offset** is a variation not over  $\frac{1}{64}$ ".
- "Light" machine offset** is a variation not over  $\frac{1}{32}$ ".
- "Medium" machine offset** is a variation not over  $\frac{1}{16}$ ".
- "Heavy" machine offset** is a variation not over  $\frac{1}{8}$ ".
- "Very heavy" machine offset** is a variation over  $\frac{1}{8}$ ".
- m) **"Chip marks"** are shallow depressions or indentations on or in the surface of dressed lumber caused by shavings or chips getting embedded in the surface during dressing.
- "Very light" chip marks** are not over  $\frac{1}{64}$ " deep.
- "Light" chip marks** are not over  $\frac{1}{32}$ " deep.
- "Medium" chip marks** are not over  $\frac{1}{16}$ " deep.
- "Heavy" chip marks** are not over  $\frac{1}{8}$ " deep.



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- n) **"Knife marks"** are the imprints or markings of the machine knives on the surface of dressed lumber.
- "Very slight" knife marks** are visible only from a favourable angle and are perfectly smooth to the touch.
- "Slight" knife marks** are readily visible but evidence no unevenness to the touch.
- o) **"Wavy dressing"** involves more uneven dressing than knife marks.
- "Very light" wavy dressing** is not over  $\frac{1}{64}$ " deep.
- "Light" wavy dressing** is not over  $\frac{1}{32}$ " deep.
- "Medium" wavy dressing** is not over  $\frac{1}{16}$ " deep.
- "Heavy" wavy dressing** is not over  $\frac{1}{8}$ " deep.
- "Very heavy" wavy dressing** is over  $\frac{1}{8}$ " deep.

### 722. CLASSIFICATION OF MANUFACTURING IMPERFECTIONS

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- a) **Standard "A" Manufacture** admits: very light torn grain; occasional very light chip marks; very light knife marks.
- b) **Standard "B" Manufacture** admits: very light torn grain; very light raised grain; very light loosened grain; very light chip marks; average of one very light chip mark per lineal foot but not more than two in any lineal foot; very slight knife marks; slight mismatch.
- c) **Standard "C" Manufacture** admits: medium torn grain; light raised grain; light loosened grain; very light machine bite; very light machine gouge; very light machine offset; light chip marks if well scattered; occasional medium chip marks; very slight knife marks; slight mismatch.
- d) **Standard "D" Manufacture** admits: heavy torn grain; medium raised grain; very heavy loosened grain; light machine bite; light machine gouge; light machine offset; medium chip marks; slight knife marks; very light mismatch.
- e) **Standard "E" Manufacture** admits: very heavy torn grain; raised grain; very heavy loosened grain; medium machine bite; machine gouge; medium machine offset; chip marks; knife marks; light wavy dressing; light mismatch.
- f) **Standard "F" Manufacture** admits: very heavy torn grain; raised grain; very heavy loosened grain; heavy machine bite; machine gouge; heavy machine offset; chip marks; knife marks; medium wavy dressing; medium mismatch.



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**724. MOISTURE CONTENT** - The weight of the water in wood expressed in percentage of the weight of the oven-dry wood.

**726. OCCASIONAL PIECES** - Means not more than 10% of the pieces in a parcel or shipment.

**728. PITCH** - is an accumulation of resinous material.

- a) **"Light" pitch** is the light but evident presence of pitch.
- b) **"Medium" pitch** is a somewhat more evident presence of pitch than is the light.
- c) **"Heavy" pitch** is a very evident accumulation of pitch showing by its color and consistency.
- d) **"Massed" pitch** is a clearly defined accumulation of solid pitch in a body by itself.

**730. PITCH STREAK** - is a well-defined accumulation of pitch in the wood cells in a streak. Pitch streaks are described as follows, with equivalent areas being permissible:

- a) A **"Very small" pitch streak** is  $\frac{3}{8}$ " in width and 15" in length.
- b) A **"Small" pitch streak** is  $\frac{1}{12}$  the width and  $\frac{1}{6}$  the length of the piece.
- c) A **"medium" pitch streak** is  $\frac{1}{6}$  the width and  $\frac{1}{3}$  the length of the piece.
- d) A **"large" pitch streak** is not over  $\frac{1}{4}$  the width by  $\frac{1}{2}$  the length of the surface.
- e) A **"very large" pitch streak** is over  $\frac{1}{4}$  the width by  $\frac{1}{2}$  the length of the surface.
- f) A **"pitch seam"** is a shake or check which contains pitch.

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**732. PITH** - Pith is the small soft core in the structural centre of a log.

- a) **"Very small" pith** is not over  $\frac{1}{8}$ " wide and occupies on face surface not over  $\frac{1}{4}$  square inch ( $\frac{1}{8}$ " wide by 2" long, or  $\frac{1}{16}$ " by 4").
- b) **"Small" pith** occupies not over  $\frac{3}{4}$  square inch ( $\frac{1}{4}$ " by 3",  $\frac{3}{16}$ " by 4",  $\frac{1}{8}$ " by 6", or  $\frac{1}{16}$ " by 12").
- c) **"Free of pith"** means that pith on or within the body of the piece is prohibited.




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**734. POCKET** - A well-defined opening between the rings of annual growth which develops during the growth of the tree. It usually contains pitch or bark.

Pockets are described as follows with equivalent areas being permissible:

- a) A **"Very small" pocket** -  $\frac{1}{16}$ " in width and 3" in length, or  $\frac{1}{8}$ " in width and 2" in length.
- b) A **"Small" pocket** -  $\frac{1}{16}$ " in width and 6" in length, or  $\frac{1}{8}$ " in width and 4" in length, or  $\frac{1}{4}$ " in width and 2" in length.
- c) A **"Medium" pocket** -  $\frac{1}{16}$ " in width and 12" in length, or  $\frac{1}{8}$ " in width and 8" in length, or  $\frac{3}{8}$ " in width and 4" in length.
- d) A **"large" pocket** is not over 4 square inches in area.
- e) A **"very large" pocket** is over 4 square inches in area.
- f) A **"closed" pocket** has an opening on one surface only.
- g) A **"through" or "open" pocket** has an opening on opposite surfaces, and the through opening is considered the same as a through hole of equal size.



**736. PLUGS AND FILLERS** - Wood plugs and fillers are inserted into pieces of lumber to improve their appearance and usefulness. Lumber containing plugs and fillers shall only be shipped when the order, acknowledgement and invoice carry reference to the inserts. Quality of the inserts and workmanship must be in keeping with the quality of the grade. In dimension and other lumber graded for strength, inserts are limited to the same size and location as knots.



**737a. RESAWN**

Lumber which has been further manufactured by cutting through the thickness from edge to edge, resulting in two or more pieces retaining the original width but each piece being less (thinner) in thickness than the original thickness.

**737b. RIPPED**

Lumber which has been further manufactured by cutting through the thickness from face to face, resulting in two or more pieces retaining the original thickness, but each piece being of a narrower width than the original width.




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**738. SAPWOOD** - Outer layers of growth between the bark and the heartwood which contain the sap.


- a) **"Bright sapwood"** shows no stain and is not limited in any grade unless specifically stated in the grade description.
- b) **"Sapwood restrictions waived"** means that any restrictions in a rule on the amount of sapwood permitted in pieces graded under that rule are not to apply.
- c) **"Bright sapwood no defect" (BSND)** means that bright sapwood is permitted in each piece in any amount.
- d) **"Bright Sap"**, unless specifically restricted, is not limited in any grade. It is not limited if treated with anti-stain solution, kiln dried or air dried.

**739a. SAW-SIZED** - Lumber uniformly sawn to the standard surface size but permitting in 20% of the pieces a manufacturing tolerance of  $\frac{1}{32}$ " under. In addition an oversize tolerance of  $\frac{1}{8}$ " is permitted.

**739b. SIZED DIMENSION** - Sized Dimension lumber is uniformly manufactured to the net surfaced sizes and maybe rough, surfaced or partially surfaced on one or more faces.



When opposing faces are rough a variation over size of  $\frac{1}{32}$ " is permitted in No.2 & Btr and Stand & Btr and in addition, a variation of  $\frac{1}{32}$ " undersize in 20% of the pieces is permitted. In Stud, Utility and No.3 a variation of  $\frac{1}{16}$ " over or under is acceptable in 20% of the pieces. When opposing faces are rough, grade stamps on Sized Dimension lumber must be identified with Sized (**SZD**).



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**740. SHAKE** - A lengthwise separation of the wood which occurs between or through the rings of annual growth.

- a) A **"light" shake** is not over  $\frac{1}{32}$ " wide.
- b) A **"medium" shake** is not over  $\frac{1}{8}$ " wide.
- c) A **"surface" shake** occurs on only one surface of a piece.
- d) A **"through" shake** extends from one surface of a piece to the opposite or to an adjoining surface.
- e) A **"Pith" shake** (or **"Heart" shake** or **"Heart" check**) extends through the growth rings from or through the pith towards the surface of a piece, and is distinguished from a seasoning check by the fact that its greatest width is nearest the pith whereas the greatest width of a season check in a pith-centred piece is farthest from the pith.



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- f) A **"ring shake"** occurs between the growth rings to partially or wholly encircle the pith.
- g) **Longitudinal resinous** or **bark seams** should not be confused with shake unless showing a separation.

**742. SPLITS** - A separation of the wood through the piece to the opposite surface or to an adjoining surface due to the tearing apart of the wood cells.

- a) A **"very short" split** is equal in length to 1/2 the width of the piece.
- b) A **"short" split** is equal in length to the width of the piece and in no case exceeds 1/6 the length.
- c) A **"medium" split** is equal in length to twice the width of the piece and in no case exceeds 1/6 the length.
- d) A **"long" split** is longer than a medium split.

### 744. STAINED WOOD

- a) **"Stained Heartwood" or "Firm Red Heart"** is a marked variation from the natural colour. (**Note:** *It ranges from pink to brown.*) It is not to be confused with natural red heart. Natural color is usually uniformly distributed through certain annual rings, whereas stains are usually in irregular patches. In grades where it is permitted, it has no more effect on the intended use of the piece than other characteristics permitted in the grade.
  - b) **"Stained Sapwood"** similarly has no effect on the intended use of the pieces in which it is permitted but affects appearance in varying degrees:
    - 1) **"Light" stained sapwood** is so slightly discolored that it does not affect natural finishes.
    - 2) **"Medium" stained sapwood** has a pronounced difference in coloring. **Note:** *Sometimes the usefulness for natural finishes but not for paint finishes is affected.*
    - 3) **"Heavy" stained sapwood** has so pronounced a difference in color as to obscure the grain of the wood but the lumber containing it is acceptable for paint finishes.
  - c) Discoloration through exposure to the elements is admitted in all grades of framing and sheathing lumber.
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## GLOSSARY

**746. STRESS GRADES** - Lumber grades having assigned working stress and modulus of elasticity values in accordance with accepted basic principles of strength grading, and the provisions of Sections 6.3.2.1 and 6.3.2.2 of Voluntary Product Standard PS 20.

In Canada and countries other than the United States, specified strength values may be used in place of working stress values.

**747. TOLERANCE IN SAWING** - In the normal manufacturing process of sawing rough lumber, some deviation from the intended line of cut may occur. Unless otherwise specified, occasional pieces may have some deviation from the intended line of cut not to exceed the full tolerance in sawing, which at the time of manufacture, is as follows:

Under 2"	-	$\frac{1}{16}$ " under	$\frac{1}{8}$ " over
2" & larger not including 5"	-	$\frac{1}{8}$ " under	$\frac{1}{4}$ " over
5" & larger not including 8"	-	$\frac{3}{16}$ " under	$\frac{3}{8}$ " over
8" & larger	-	$\frac{1}{4}$ " under	$\frac{1}{2}$ " over

**Note:** When ordered "**STANDARD SAWN**", Para. 820d. shall apply.

### 748. TRIM

a) Trimming of lumber is the act of cross-cutting a piece to a given length. (See Para. 36)

b) "**Double end trimmed (DET)**" It is intended that DET lumber be trimmed square on both ends.

**Note:** The out-of-square tolerance is limited to  $\frac{1}{16}$ " for each nominal 1" of thickness or width.

c) "**Precision end trimmed (PET)**" lumber is trimmed square on both ends to uniform lengths with a manufacturing tolerance of  $\frac{1}{16}$ " over or under in length in 20% of the pieces.

d) "**Square end trimmed (SET)**" lumber is trimmed square having a manufacturing tolerance of  $\frac{1}{64}$ " for each nominal 2" of thickness or width.

**749.** When orders for "Decking" specify "**Square-end-trim**", pieces are trimmed square with a tolerance of  $\frac{1}{64}$ " permitted, based on 6" widths, measured on the face side.




## GLOSSARY

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**750. WANE** - Bark or lack of wood from any cause, except eased edges, on the edge or corner of a piece of lumber.

Wane away from ends extending partially or completely across any face is permitted for one foot if no more serious than skips in dressing allowed or across a narrow face if no more damaging than the knot hole allowed (not to exceed in length twice the diameter of the maximum knot hole allowed in the grade) and is limited to one occurrence in each piece. These variations shall not be allowed in more than 5% of the pieces.

**Note:** *This provision applies only to the National Grading Rule for Dimension Lumber.*



**752. WARP** - Any deviation from a true or plane surface, including "**Bow, Crook, Cup and Twist**" or any combination thereof. Warp restrictions are based on the average form of warp as it occurs normally, and any variation from this average form, such as short kinks, shall be appraised according to its equivalent effect. Pieces containing two or more forms shall be appraised according to the combined effect in determining the amount permissible. In these rules warp is classified as very light, light, medium and heavy, and applied to each width and length as set forth in the various grades in accordance with the following provisions and tables:



- a) "**Bow**" is a deviation flatwise from a straight line drawn from end to end of a piece. It is measured at the point of greatest distance from the straight line. The maximum amount of bow allowed in a grade is as follows:
- i) If under 2" thick, three times as much as crook for 2" faces;
  - ii) If 2" thick and under 3" thick, twice as much as crook for 2" faces;
  - iii) If 3" thick and over, the same as the amount of crook for that thickness.
- b) "**Crook**" is a deviation edgewise from a straight line drawn from end to end of a piece. It is measured at the point of greatest distance from the straight line. The maximum amount of crook allowed shall be that shown in Paras. 810a, b and c.
- c) "**Cup**" is a deviation in the face of a piece from a straight line drawn from edge to edge of a piece. It is measured at the point of greatest distance from the straight line. The maximum amount of cup allowed shall be that shown in the cup table.



## GLOSSARY

### CUP TABLE FACE WIDTH

	2" & 3"	4"	5" & 6"	8"
Very light	$\frac{1}{32}$ "	$\frac{1}{32}$ "	$\frac{1}{32}$ "	$\frac{1}{16}$ "
Light	$\frac{1}{32}$ "	$\frac{1}{32}$ "	$\frac{1}{16}$ "	$\frac{1}{8}$ "
Medium	$\frac{1}{32}$ "	$\frac{1}{16}$ "	$\frac{1}{8}$ "	$\frac{3}{16}$ "
Heavy	$\frac{1}{16}$ "	$\frac{1}{8}$ "	$\frac{3}{16}$ "	$\frac{1}{4}$ "

	10"	12"	14" & wider
Very Light	$\frac{3}{32}$ "	$\frac{1}{8}$ "	Proportionately
Light	$\frac{3}{16}$ "	$\frac{1}{4}$ "	more
Medium	$\frac{1}{4}$ "	$\frac{3}{8}$ "	"
Heavy	$\frac{3}{8}$ "	$\frac{1}{2}$ "	"

d) **"Twist"** is a deviation flatwise, or a combination of flatwise and edgewise, in the form of a curl or spiral, and the amount is the distance an edge of a piece at one end is raised above a flat surface against which both edges at the opposite end are resting snugly. The maximum amount of twist allowed shall be that shown in Para. 810d.

**754. COMBINATION GRADES** - U.S. Product Standard - PS 20 permits grouping the highest two grades in a grade category, and grade marking the combination as an **"& Better"** or **"& Btr"** grade. The combined grade is assigned the allowable property values of the lower grade unless allowable property values have been assigned to the combination.

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In the case of **"NO. 1 & Btr"**, data was collected for Douglas Fir-Larch (N) and Hem-Fir (N) during the ingrade testing program to permit the development of allowable property values specific to this combination grade. When the "NO. 1 & Btr" grade combination is assigned specific allowable properties, such as for D Fir-L (N), and Hem-Fir (N), the material is required to be stamped with a "NO. 1 & Btr" grade stamp. If the lumber is grade stamped as "Select Structural" and "NO. 1" rather than "NO. 1 & Btr", the values assigned to the individual grades apply. When "NO. 1 & Btr" grade stamps are applied, it is **not** permissible to simultaneously use the grade stamp of any grade with a higher design value (such as Select Structural) on that item.



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