

- CONNECTOR, TIMBER:** Metal rings, plates or grids which are embedded in the wood of adjacent members, as at the bolted points of a truss, to increase the strength of the joint. (AITC)
- DOUBLE SHEAR:** Applies to fasteners such as nails. When gusset plates are placed on both sides of a framing member so that the nails penetrate both plates and are clinched (two places a nail might break), the nails act in double shear and can carry twice the load of nails in single shear. (APA)
- FASTENERS:** Any device, such as a nail, screw, clip or staple used to hold plywood securely in place of application (e.g., to structural framing). Nail size and type required is determined primarily by thickness and function of plywood. For an even stronger joint, use both glue and nails. (APA)
- NAIL COATINGS:** Surface treatment, such as galvanizing, to prevent nails from rusting upon exposure to weather, which prevents staining of the siding material. Coatings are also used to color match nails to panels with which they are used. (APA)
- NAIL SCHEDULES:** Refers to the size and spacing of nails that should be used with various thicknesses of plywood. (APA)
- NAIL STAINING:** Staining of a surface (e.g., siding) due to corrosion of the fastener or nail upon exposure to weather. (APA)
- NAIL VALUES:** Resistance of nail to load; varies with nail size, wood type and quality, and use. (APA)
- NAIL WITHDRAWAL:** Refers to the resistance of a nail to being pulled out of wood. Ring-shank or spiral-thread nails have much higher nail-holding power than regular smooth-shank nails or coated nails. (APA)
- SINGLE SHEAR:** Applies to fasteners such as nails. When a gusset plate is nailed to one side of a framing member the nails are said to act in single shear (one place the nail might break). (APA)
- STAPLE:** A fastener for applying plywood sheathing. (APA)
- TREENAIL:** A wooden pin, peg or spike used chiefly for fastening planking and ceiling to a framework. (AITC)

CLICK ANYWHERE in THIS PAGE to the
CONSTRUCTION DICTIONARY at InspectApedia.com



- A-C EXTERIOR:** A sanded exterior panel grade described by grades of face (A) and back (C) veneers with minimum C quality inner plies, bonded with exterior glue meeting all the requirements of Exterior type plywood. Used in siding, soffits, fences. Face is finish grade. Can be painted or stained. (APA)
- AFG-01:** A performance specification developed by the American Plywood Association for glues recommended for use in the APA Glued Floor System. AFG-01 requires that glue applied at the jobsite be strong under many moisture and temperature conditions; be able to fill gaps and be moisture and sunlight-resistant. (APA)
- AIR-DRIED:** Dried by exposure to air in a yard or shed, without artificial heat. (AITC)
- (1) Seasoned by exposure to the atmosphere until an approximate equilibrium has been attained between the moisture content of the wood and the relative humidity of the atmosphere, or (2) seasoned below some arbitrarily specified moisture content such as 20 or 18 percent by exposure to the atmosphere, or (3) seasoned until the seasoning checks are well developed and the color of the exposed wood in the checks as well as the general color on the surfaces, has become grayer or browner than that of freshly cut material. (AWPA)
- ALONG THE GRAIN:** In the same direction as the grain. In plywood, the same direction as the grain of the face ply, normally the long (8 foot) dimension. Plywood is stronger and stiffer along the grain (as is all wood) than it is across the grain. (APA)
- APPROVED AGENCY MARK:** Plywood that bears the mark of a qualified inspection and testing agency as specified by the plywood product standard. American Plywood Association is an approved inspection and testing agency for softwood plywood. (APA)
- BATTEN:** A thin narrow strip of plywood or lumber used to seal or reinforce a joint between adjoining pieces of lumber or plywood. (APA)
- B-B EXTERIOR:** A sanded panel grade described by face (B) and back (B) veneers, with minimum C quality inner plies and bonded with exterior glue meeting all the performance requirements of Exterior type plywood. An outdoor utility panel with solid paintable faces. (APA)
- B-C EXTERIOR:** An exterior panel grade described by grades of face (B) and back (C) veneers, with minimum C quality inner plies bonded with exterior glue meeting all the requirements of Exterior type plywood. It is used for utility uses such as farm buildings, some kinds of fences. (APA)
- BEAM:** A structural member supporting a load applied transversely to it. (AITC)
- BEAM, BOX:** A built-up beam with solid wood flanges and plywood or wood-base panel product webs. (AITC)
- BEAM, PLYWOOD BOX:** A beam built up from lumber and plywood in the form of a long hollow box, which will support more load across an opening than will its individual members alone. Lumber members form the top and bottom (flanges) of the beam, while the sides (webs) are plywood. (APA)
- BEVEL:** To cut plywood edges or ends at an angle to make smooth mating joints between panels. (APA)
- BLOCKING:** Light lumber strips nailed between major framing members to support edges of plywood panels where they meet. (APA)
- BOARD:** A piece of lumber before gluing for width or thickness. (WIC)
- BOARD FOOT:** A unit of measurement of lumber represented by a board 1 foot long, 12 inches wide, and 1 inch thick or its cubic equivalent. In practice, the board foot calculation for lumber 1 inch or more in thickness is based on its nominal thickness and width and the length. Lumber with a nominal thickness of less than 1 inch is calculated as 1 inch. (AITC)
- BRIDGING:** Short wood or metal braces or struts crosswise between joists to hold them in line. Bridging may be solid, or may be crossed struts. (APA)
- CANTILEVER:** A structural member, such as a beam or truss, which projects beyond a support. Also a bracket-shaped support for supporting a balcony or cornice. (APA)
- CAULK:** A sealing material to fill joints or seams to make them waterproof. Caulks are made in several forms, including puttys, ropes or compounds extruded from cartridges. (APA)
- C-C EXTERIOR:** Exterior unsanded panel grade described by grade of face (C) and back (C) veneers with minimum C quality inner plies bonded with exterior glue meeting all the requirements of Exterior plywood. The lowest grade of Exterior plywood, it is used for rough construction that is exposed to weather. (APA)
- C-C PLUGGED:** An exterior panel described by grade of face (C-Plugged) and back (C) veneers, with minimum C inner plies bonded with exterior glue meeting the requirements of Exterior type plywood. The face is plugged with open defects not larger than 1/4 inch x 1/2 inch. Used as UNDERLAYMENT, pallet bins, box-car and truck floors, and linings. Touch-sanded. Also called Exterior Underlayment. (APA)

- C-D INTERIOR:** An interior unsanded panel grade described by grade of face (C) and back (D) veneers, with minimum D quality inner plies bonded with interior or exterior glue. Used for sheathing and for structural uses such as subflooring. (APA)
- CDX:** C-D Interior sheathing grade plywood manufactured with exterior glue. Although called CDX in the trade, the term is not an official name. CDX is NOT an Exterior panel and should not be used for permanent outdoor applications. (APA)
- CLASS I, II:** Terms used to identify different species-group combinations of Plyform panels.
- Class I -** Faces of any Group 1 species, crossband of any Group 1 or Group 2 species, and centers of any Group 1, 2, 3 or 4 species.
- Class II -** Faces of any Group 1 or Group 2 species, and core and centers of any Group 1, 2, 3 or 4 species, or, faces of Group 3 species of 1/8 inch minimum thickness before sanding, crossband of any Group 1, 2 or 3 species and centers of any Group 1, 2, 3 or 4 species. (APA)
- CLEAR SPAN:** Distance between inside faces of supports. (APA)
- COMPONENT:** As applied to plywood, a term describing a glued or nailed structural assembly of plywood and lumber, such as a box beam or stressed-skin panel. Term also used to describe prefabricated building sections in panelized construction. (APA)
- CONTINUOUS BEAM:** A beam supported at three or more points over two or more spans. (APA)
- CORBEL:** A projection from the face of a wall or column supporting a weight. (AITC)
- CROOK:** The distortion of lumber in which there is a deviation, in a direction perpendicular to the edge, from a straight line from end-to-end of the piece. (AITC)
- CROSS PANEL STIFFNESS:** Stiffness in the direction perpendicular to (across) the grain of the face ply, normally stiffness in the 4-foot direction. (APA)
- CURVED PANEL:** Stressed-skin or sandwich panels that are curved to varying degrees. Used in roof construction. (APA)
- DIAPHRAGM:** Refers to the thin plywood skin of a building working in combination with the framing to withstand wind and earthquake loads imposed on the structure. (APA)
- DRY WALL:** Interior covering material, such as gypsum board, hardboard, or plywood, which is applied in large sheets or panels. (AITC)
- EAVES:** The edge of a roof that extends beyond or overhangs the wall. The underside of an eave may form an "open soffit." (APA)
- EDGE SUPPORT:** Support, such as Plyclips, or blocking, installed between framing members at plywood panel edges to transfer loads from one panel to the other across the joint. Plywood with tongue-and-grooved edges can be used in many applications without additional edge support. (APA)
- END GRAIN:** The end of a piece of wood (plywood or lumber) that is exposed when the wood fibers are cut across the grain. (APA)
- ENGINEERED 24" FRAMING SYSTEM:** A building system (formerly called Mod 24) using plywood over lumber framing spaced 24 inches on center in walls, floors and roof. The system uses a series of in-line frames - trusses, studs and joists - to provide for efficient less costly utilization of materials and simpler, faster construction. It is recognized by major model codes and the FHA. (APA)
- ENGINEERED GRADES:** General term for plywood panel grades designed for structural uses, as opposed to "appearance grades," which are usually sanded or textured. Grade-trademarks and uses of typical APA engineered grade plywood are shown below. (APA)
- EQUILIBRIUM MOISTURE CONTENT:** Any piece of wood will give off or take on moisture from the surrounding atmosphere until the moisture in the wood comes to equilibrium with that in the atmosphere. The moisture content of the wood at the point of balance is called the equilibrium moisture content and is expressed as a percentage of the oven-dry weight of the wood. (AITC)
- The moisture content at which wood will neither gain nor lose moisture when surrounded by air at a given relative humidity and temperature. (AWPA)
- EXTERIOR TYPE PLYWOOD:** Plywood manufactured for outdoor or marine use. This type of plywood is bonded with 100% waterproof adhesives. Veneers are all grade C or better. (APA)
- FACE GRAIN PARALLEL (OR PERPENDICULAR):** Direction of the grain of the outer ply (face) of a plywood panel in relation to the supports. Plywood's greatest strength is parallel to the face grain. Therefore, in construction, run the face grain across supports.
- FASCIA:** Wood or plywood trim used along the eave or the gable end of a structure. (APA)
- FIBERGLASS REINFORCED PLASTIC (FRP):** A product made up of glass fibers, used in combination with resins to create a rough, nonscuff coating over plywood. The resulting coated panel (composite) is used in truck and trailer bodies, containers, and concrete forms. Seamless panels 40 feet

long and longer can be produced as a sidewall or roof of a trailer without internal framing. (APA)

FIBER SATURATION POINT: The stage in the drying or wetting of wood at which the cell walls are saturated and the cell cavities free from water. It applies to an individual cell or group of cells, not to whole boards. It is usually taken as approximately 30 percent moisture content, based on oven-dry weight. (AITC)

Moisture content of wood at which the cell walls are saturated but no free water exists in the coarse capillary structure. For most woods about 30 percent. (HPMA)

FIELD GLUING: Procedure used in APA Glued Floor System, in which tough, specially developed glues are applied to the top edge of the floor joists, then the plywood is laid on and also nailed in place. Glue rather than nails carries the load, developing a stiffer floor construction that is virtually squeak-free. (APA)

FLANGE: Top and bottom longitudinal members of a beam. Plywood box beams are fabricated with lumber flanges (top and bottom) and plywood webs (sides). (APA)

FOAM CORE: Center of a plywood "sandwich". Liquid plastic is foamed into all spaces between the plywood panels and serves to insulate as well as support the component skins. Or plywood skins are pressure-glued to both sides of rigid plastic foam boards or billets. (APA)

FOUNDATION, WOOD: All Weather Wood Foundation (AWWF). A residential building foundation system in which pressure-preservative-treated plywood panels and wood framing are used in place of masonry walls. AWWF basements are warmer, tighter, drier and more leak-resistant than conventional basements. AWWF can be installed on a prepared site in less than half a day in any weather, speeding construction and reducing costs. AWWF is also applicable to crawl-space foundation construction. (APA)

FRAME CONSTRUCTION: A type of building in which the structural parts are wood or dependent on a wood framework for support. Commonly, lumber framing is sheathed with plywood for roofs, walls and floor. In building codes, the classification of frame construction remains the same even when masonry covering is applied on exterior walls. (APA)

FRAMING: Lumber used for the structural member of a building, such as studs and joists. (AITC)

FURRING: Process of leveling parts of a ceiling, wall or floor by means of wood strips called furring strips. (APA)

GIRDER: A large or principal beam of wood or steel used to support concentrated loads at isolated points along its length. (AITC)

A large horizontal beam used to support interior walls or joists. Most wood frame houses have a lengthwise center girder that supports the floor joists and plywood subflooring. (APA)

GLUE-NAILED (ALSO NAIL-GLUED): Combination of gluing and nailing plywood joints and connections for stiffest possible construction. For most effective fastening, pieces to be joined should contact at all points. Glue is applied to one or both surfaces according to manufacturer's directions. Then, surfaces are pressed together and nailed in place. For work such as cabinets or drawers, or whenever possible, joint should be clamped as well as nailed to maintain pressure until glue sets. (APA)

GOOD ONE SIDE: Obsolete term for plywood that has a higher grade veneer on the face than on the back, used in situations where only one side of the panel will be visible. Such panels are properly identified by referring to their face grades, as "A-D" for instance. (APA)

GRADE: The designation of the quality of a manufactured piece of wood or of logs. (AITC)

Designation of the quality of a piece of plywood. In plywood there are several veneer grades described by letter which call out the face and back veneers (B-C, etc.) or by intended end use of the grade, for example, UNDERLAYMENT. (APA)

GRADE-TRADEMARK (GTM): In the plywood industry, a mark stamped on the back or branded into the edge of a panel of plywood, which includes the type and grade of the panel in addition to an identifying symbol. (APA)

GROUP, SPECIES: Plywood is manufactured from over 70 different species of varying strength. These species have been grouped on the basis of strength and stiffness, and, for purposes of the manufacturing standard, PS 1, divided into five classifications: Group 1, Group 2, Group 3, Group 4 and Group 5. Strongest woods are found in Group 1. The group number of a particular panel is determined by the weakest (highest numbered) species used in face and back (except for some thin siding panels where strength parallel to face grain is not important). (APA)

HEADER: A cross member placed between studs or joists to support openings, such as for stairway, chimney or doors. (APA)

- HIGH DENSITY OVERLAY (HDO):** Exterior type plywood finished with a resin-impregnated fiber overlay to provide extremely smooth hard surfaces that need no additional finishing, and have high resistance to chemicals and abrasion. The overlay material is bonded to both sides of the plywood to become an integral part of the panel faces. Used for concrete forms, cabinets, highway signs, counter tops, and other hard-wear applications. (APA)
- HEMICELLULOSE:** A celluloselike material (in wood) that is easily decomposable as by dilute acid, yielding several different simple sugars. (AITC)
- HOLLOW-CORE CONSTRUCTION:** A panel construction with faces of plywood, hardboard, or similar material bonded to a framed-core assembly of wood lattice, paperboard rings or the like, which support the facing at spaced intervals. (AITC)
- HONEYCOMB CORE:** A sandwich core material constructed of thin sheet materials or ribbons formed to honeycomblike configurations. (AITC)
- HONEYCOMBING:** Checks, often not visible at the surface, that occur in the interior of a piece of wood, usually along the wood rays. (AITC)
- I-BEAM:** Beam whose cross-section resembles the letter I. Plywood box beams are constructed much as enclosed I-beams and are used extensively as structural supporting members. (APA)
- INT WITH EXTERIOR GLUE:** Interior type plywood manufactured with exterior glue for greater ability to withstand exposure to moisture. Not suitable for permanent exterior exposure. (APA)
- IDENTIFICATION INDEX:** A set of numbers (e.g., 24/0) used in marking sheathing grades of plywood. Numbers relate to species of the panel face and back veneers and to the panel thickness. They describe the panel's strength and stiffness properties. The Identification Index was developed primarily to identify maximum support spacing for plywood in conventional construction. Numbers on the left side of the slash (/) refer to the required spacing of roof framing members (good for 35 pounds per square foot uniform live load or better). Right-hand numbers refer to floor framing spacing requirements. (Maximum uniform live loads vary, but all are at least 160 pounds per square foot; also good for concentrated loads such as pianos, home freezers, water heaters, etc.) (APA)
- INTERIOR TYPE:** Term used to describe plywood intended for inside uses or for construction where plywood will be subjected to only occasional wetting. Interior type plywood is bonded with adhesives that are highly moisture resistant but not necessarily waterproof. (APA)
- JOIST:** One of a series of parallel beams used to support floor and ceiling loads and supported in turn by larger beams, girders or bearing walls. (AITC)
- Horizontal framing members of a floor or ceiling. (APA)
- JOIST SPACING:** Distances (specified by building codes) between joists. Usually specified as o.c. (on center), which is the distance from the center of one joist to the center of the next joist. (APA)
- KERF:** A slot made by a saw; the width of the saw cut. (APA)
- KILN:** A chamber having controlled air-flow, temperature and relative humidity, for drying lumber, veneer and other wood products. (AITC)
- KILN-DRIED:** Dried in a kiln with the use of artificial heat. (AITC)
- A term applied to wood that has been dried in ovens (kilns) by controlled heat and humidity to specified limits of moisture content. Plywood veneers are kiln-dried before lay-up. (APA)
- Lumber or other materials that have been dried in dry kilns to a moisture content usually below that obtained in air-drying by the application of artificially supplied controlled heat, humidity and air circulation. (AWPA)
- Lumber dried in a closed chamber in which the removal of moisture is controlled by artificial heat and usually by relative humidity. (WIC) (WIC/NWMA)
- LOADS:** The weight or pressure a structure carries or sustains, which must be considered in planning a building. **UNIFORM LOADS** are evenly distributed over a large area, usually the entire surface of a plywood panel. **CONCENTRATED LOADS** are loads applied over a very small area (for example, by a piano leg). **DEAD LOADS** are stationary, permanent loads; that is, the weight of all the material used on construction of the building (or section). **LIVE LOADS** are planned loads the structure must carry under normal conditions, such as people or furniture and equipment, that would be moved on the surface. (APA)
- LUMBER:** The product of the saw and planing mill not further manufactured than by sawing, resawing; passing lengthwise through a standard planing machine, crosscutting to length, and matching. (AITC)

MARINE GRADE: Panels manufactured with the same glueline durability requirements as other Exterior type panels but with more restrictive requirements on wood characteristics. The grade is particularly suitable for marine applications where bending is required, as in boat hulls. (APA)

MEDIUM DENSITY OVERLAID (MDO): Exterior type plywood finished with an opaque resin-treated fiber overlay to provide a smooth surface that is an ideal base for paint. Recommended for siding and other outdoor applications, and for built-ins, signs and displays. (APA)

MEDIUM DENSITY OVERLAY: The resin-treated facing on the finished product shall present a smooth, uniform surface intended for high-quality paint finishes. It shall consist of a cellulose-fiber sheet containing not less than 17% resin solids for a beater loaded sheet, or 22% for an impregnated sheet, both based on the volatile free weight of resin and fiber exclusive of glueline. The resin shall be a thermosetting phenol or melamine type. The resin-treated material shall weigh not less than 58 lbs. per 1,000 sq. ft. of single face including both resin and fiber but exclusive of glueline. After application, the material shall measure not less than 0.012 inch thick. Some evidence of the underlying grain may appear. The overlay face is produced in a natural color and certain other colors. (WIC)

METAL OVERLAID: Plywood that has a metal face permanently bonded to it. Panels may be metal overlaid on one or both sides. Surface finishes include pebble texture as well as assorted colors (baked-on enamel). (APA)

MOISTURE CONTENT: The amount of water contained in the wood, usually expressed as a percentage of the weight of the oven-dry wood. (AITC)

As applied to wood and plywood, the amount of water held by the wood. It is usually expressed as a percentage of the weight of the oven-dried wood (i.e., a one pound sample of oven-dried wood could absorb 25% of its weight in water and weigh 1-1/4 pounds at 25% moisture content). The plywood product standard limits the moisture content of plywood to a maximum of 18% of the oven-dry weight at the time of shipment from the mill. (APA)

As related to wood, the weight of water contained in wood, usually expressed as a percentage of the oven-dry weight of the wood. (AWPA)

The weight of the water in the wood expressed in percentage of the weight of the oven-dry wood. (WIC) (WIC/NWMA)

MOISTURE, FREE: Moisture that is held in the cell cavities of wood in contrast to that within the cell walls. (AWPA)

MOISTURE GRADIENT: A condition of graduated moisture content between successive layers of wood, due to loss or absorption of moisture. (AWPA)

MOISTURE, HYGROSCOPIC: Moisture within the cell walls of wood in contrast to free moisture in the cell cavities. Syn.: bound water. (AWPA)

NAIL POPPING: A problem in which nails used in applying the Underlayment sometimes appear to "pop" up so that nail head impressions are visible on the surface of the finished floor covering. The problem is caused by shrinkage of floor joists away from the nails after installation. (APA)

NOMINAL THICKNESS: Full "designated" thickness. For example, a nominal 2 inch x 4 inch stud may be 1-1/2 inch x 3-1/2 inch when dry. It is a commercial size designation, subject to acceptable tolerances. (APA)

NONCERTIFIED: Term that refers to plywood not included in the Product Standard PS 1 and which may bear the mark of the manufacturer rather than one of the recognized testing agencies, such as APA. (APA)

O.C.: On-center spacing, meaning the distance from the center of one structural member to the center of the adjacent member, as in the spacing of studs, joists, rafters, nails, etc. (APA)

OVERLAID PLYWOOD: Plywood panels with factory applied resin-treated fiber faces on one or both sides. Term may also be applied to metal overlaid plywood and other composites. (APA)

PSF: Pounds per square foot. Measure of loads distributed over a square foot of surface. Used in determining allowable spans for subfloor and roof sheathing and floor framing. (APA)

PSI: Pounds per square inch. Measure of loads distributed over a square inch of surface. (APA)

Pounds per square inch (psi). (AWPA)

P&TS: Plugged and touch-sanded face of a plywood panel. (APA)

PANEL GRADES: Appearance or structural grade of a plywood panel, determined by the veneer grades used for the face and back of the panel. (APA)

- PANEL SPACING:** The gap left between plywood panels when they are installed in a structure. A space should be left between panels in floor, wall or roof deck construction to allow for expansion due to changes in moisture conditions. Space conventional plywood subfloor 1/8 inch at edges and 1/16 inch at all end panel joints. Provide 1/32 inch space between underlayment butt joints over subfloor construction. Space conventional sheathing 1/8 and 1/16 inch. When wet or humid conditions can be expected, double these spacings for sheathing and subfloor panels. (APA)
- PANELIZED CONSTRUCTION:** Building components fabricated in the form of wall, floor, ceiling, etc., sections, that will be assembled into the completed structure at the building site. Panelized construction cuts on-site labor charges through rapid erection. It offers the high quality available through controlled factory production and inspection procedures. (APA)
- PLANK:** A broad board, usually more than 1 inch thick, laid with its wide dimension horizontal and used as a bearing surface. (AITC)
- PLATE:** In wood frame construction, the horizontal dimension lumber member placed on top and/or bottom of the exterior wall studs to tie them together and to support the joists and rafters. (APA)
- PLYCLIPS:** American Plywood Association trade name for special aluminum H-clips used as an economical substitute for lumber blocking in roof construction. (APA)
- PREFABRICATED:** To construct or fabricate all of the parts, as of a house, at the factory, so that final construction consists only of assembling and uniting of standard parts at the jobsite. (APA)
- PREFRAMED:** Construction term for panelized building, in which the wall, floor or roof sections are complete; that is, they are framed and sheathed at the factory. (APA)
- PURLIN:** Subframing whose major purpose is to support the roof decking, where larger beams are main structural supports. (APA)
- RAFTER(S):** One of a series of structural members of a roof designed to support roof loads. The rafters of a flat roof are sometimes called roof joists. (AITC)
- Supporting member(s) immediately beneath the roof sheathing. (APA)
- RIDGE BEAM:** The top horizontal member of a sloping roof, against which the ends of the rafters are fixed or supported. (APA)
- RIGID FRAME:** Structural member in which the studs and rafters are joined together with plywood gussets, so that they act together like an arch. Rigid frame construction eliminates the need for ceiling or tie members. (APA)
- SANDWICH PANELS:** Sections (as of walls) of layered construction made up of high-strength plywood faces, or "skins" attached to both sides of low-density core materials, such as plastic foam or honeycomb paper fillers. (APA)
- SAW KERF:** (1) Grooves or notches made in cutting with a saw; (2) that portion of a log, timber or other piece of wood removed by the saw in parting the material into two pieces. (AITC)
- SEASONING:** Removing moisture from green wood to improve its serviceability. (AITC)
- SHAKE:** A separation along the grain, the greater part of which occurs between the rings of annual growth. Usually considered to have occurred in the standing tree or during felling. (AITC)
- A separation along the grain of the wood, the separation usually occurring between the annual rings. (AWPA)
- A separation along the grain of wood in which the greater part occurs between the rings of annual growth. (HPMA)
- A separation of the wood, normally between growth rings. (WIC)
- SHEATHING:** The structural covering, usually of boards, building fiberboards, or plywood, placed over exterior studding or rafters of a structure. (AITC)
- The structural covering, usually of plywood or boards, on the outside surface of the framing. It provides support for construction, snow and wind loads and backing for attaching the exterior facing material such as wall siding or roof shingles. (APA)
- SHOP CUTTING PANEL:** Panel rejected as not conforming to the grade requirements defined in the Product Standard. Panel identification, a separate mark that does not mention the Standard, reads: "Shop Cutting Panel--All Other Marks Void." (APA)
- SOFFIT:** The underside of the roof overhang. Plywood is often used as a finishing material for soffits. (APA)
- SPAN TABLES:** A list of allowable spans for plywood. That is, maximum spacing for roof and floor framing under various thicknesses and grades of plywood, along with allowable loads. (APA)

SPLICE PLATE: A piece of wood, often plywood, used to attach lumber members end to end. (APA)

STRESSED-SKIN CONSTRUCTION: A construction in which panels are separated from one another by a central partition of spaced strips with the whole assembly bonded so that it acts as a unit when loaded. (AITC)

STRESSED SKIN PANEL: An engineered structural flat panel for roof deck or floor applications built up of plywood sheets glued to framing members. The assembly covers quickly with greater combined load carrying capacity than its individual members would have if installed separately. (APA)

STRINGER: A timber or other support for cross members in floors or ceilings. In stairs, the support on which the stair treads rest. (AITC)

A lumber supporting member for a series of cross members. Frequently applied to stair supports. (APA)

STRUCTURAL I and II: These terms are used with letter grades on certain structural grades of plywood. They mean that the plywood can be made only from particular species of wood, and that they must meet special requirements of veneer grade and workmanship. Any STRUCTURAL I panel must use all Group 1 veneers throughout. STRUCTURAL II panels allow veneers of species Groups 1 through 3. All STRUCTURAL I and II panels are made with exterior glue. They are recommended for heavy load applications, especially where shear strength is important, or where panels are applied with face grain parallel to supports. (APA)

STRUCTURAL SANDWICH CONSTRUCTION: A layered construction comprising a combination of relatively high-strength facing materials intimately bonded to and acting integrally with a low-density core material. (AITC)

STUD: One of a series of slender wood structural members used as supporting elements in walls and partitions. (AITC)

Generally, 2 x 4's used as the basic vertical framing members of walls. (APA)

STUD SPACING: The distance between the upright members of a wall's framework, traditionally 16 inches on center. Sometimes placed at 24 inches on center when using plywood for structural stability as in the Engineered 24" Framing System. (APA)

STURD-I-WALL: A wall system consisting of APA 303 panel siding applied directly to studs or over nonstructural wall sheathing, i.e., any sheathing not recognized by building codes as meeting bending and racking requirements between studs. 303 plywood siding bearing a Span Index of 24 o.c. in the grade-trademark may be applied vertically to studs spaced 24 inches on center. Panels with a Span Index of 16 o.c. may be used vertically over studs 16 inches on center. Panels

with either designation may be used on studs 24 inches on center when applied with face grain horizontal. (APA)

SUBFLOORING: Plywood applied directly over floor joists which will receive an additional covering such as underlayment, if tile is to be applied. Plywood is used for strength and to reduce the number of floor joints. (APA)

T-BEAM: Beam whose cross-section resembles a "T". Several T-beams side-by-side, if acting as a unit, might form a floor. This is the principle which accounts for the increased stiffness of the APA Glued Floor System. (APA)

TOUCH-SANDING: A sizing operation consisting of a light surface sanding in a sander. Sander skips are admissible. Normally applied to C-Plugged faces. (APA)

TYPE: Classification of plywood into Interior and Exterior panels based on glue-line and veneer grades. (APA)

UNDERLAYMENT: A material applied directly below nonstructural finish flooring such as tile or carpeting. Plywood is available in UNDERLAYMENT grade for use in underlayment and in combination sub-floor-underlayment. (APA)

VAPOR BARRIER: A material with a high resistance to vapor movement, such as foil, plastic film, or specially coated paper, that is used in combination with insulation to control condensation. (AITC)

VENEER GRADES: Standard grades of veneer used in plywood manufacture. The six grades are described as follows:

N-Special order "natural finish" veneer
Select all heartwood or all sapwood. Free of open defects, Allows some repairs.

A-Smooth and paintable. Neatly made repairs permissible. Also used for natural finish in less demanding applications.

B-Solid surface veneer. Circular repair plugs and tight knots permitted.

C-Knotholes to 1". Occasional knot-holes 1/2" larger permitted providing total width of all knots and knotholes within a specified section does not exceed certain limits. Limited splits permitted. Minimum veneer permitted in Exterior type plywood.

C-Improved C veneer with splits limited to 1/8" in width and knotholes. Plugged and borer holes limited to 1/4" by 1/2".

- D-Permits knots and knotholes to 2-1/2" in width, and 1/2" larger under certain specified limits. Limited splits permitted. (APA)

WALL SHEATHING: Plywood nailed to the studs which acts as a base for the siding application. (APA)

WEATHERING: The mechanical or chemical disintegration and discoloration of the surface of wood caused by exposure to light, the action of dust and sand carried by winds and alternate shrinking and swelling of the surface fibers with continual variation in moisture content due to changes in weather. (WIC/NWMA)

BOXED HEART: The term used when the pith falls entirely within the four faces of a piece of wood anywhere in its length. Also called boxed pith. (AITC)

Descriptive of ties and timbers in which the pith falls entirely within the four faces anywhere in the length of the piece. (AWPA)

ANTISPLITTING IRON: A piece of flat iron, sharpened on one edge and bent into one of several shapes, used for driving into the ends of ties or timbers to retard splitting. Such irons dependent upon their shape are called S-irons, C-irons, Beegle irons or crinkle irons. (AWPA)

HEAVY TIMBER: A building code designation for a particular type of construction with good fire endurance. Heavy Timber is widely recognized as comparable to one-hour construction. A plywood roof deck of tongue-and-grooved 1-1/8 inch 2.4.1 over 4 inch wide supports meets the Heavy Timber requirements, and provides the same good performance as nominal 2 inch tongue-and-groove lumber decking. (APA)

PILE: A long, heavy timber, round or square cut, that is driven deep into the ground to provide a secure foundation for structures built on soft, wet or submerged sites; e.g., landing stages, bridge abutments. (AITC)

PILE (GENERAL): A timber, usually round, that is embedded wholly or partly in surface or underwater soil as a support for a superstructure such as a bridge, building, trestle, wharf, etc. (HPMA)

PILE, FOUNDATION: A pile which is entirely embedded in the ground and capped with masonry. (AWPA)

PILE, MARINE: A pile which is partly embedded in bottom soil and partly exposed to salt sea water and generally subject to attack by marine organisms. (AWPA)

STRUCTURAL TIMBERS: Pieces of wood of relatively large size, the strength of which is the controlling element in their selection and use. Trestle timbers (stringers, caps, posts, sills, bracing, bridge ties, guardrails); car timbers (car framing, including upper framing, car sills); framing for building (posts, sills, girders); ship timber (ship timbers, ship decking); and crossarms for poles are examples of structural timbers. (AITC)

TIMBERS, ROUND: Timbers used in the original round form, such as poles, piling, posts and mine timbers. (AITC)



- ALLOWABLE PROPERTY:** The value of a property normally published for design use. Allowable properties are identified with grade descriptions and standards, reflect the orthotropic structure of wood, and anticipate certain end uses. (AITC)
- ANNUAL GROWTH RING:** The layer of wood growth put on a tree during a single growing season. In the temperate zone the annual growth rings of many species (e.g., oaks and pines) are readily distinguished because of differences in the cells formed during the early and late parts of the season. In some temperate zone species (black gum and sweetgum) and many tropical species, annual growth rings are not easily recognized. (AITC)
- ASSEMBLY TIME:** The time interval between the spreading of the adhesive on the laminations and the application of final pressure or heat, or both, to the entire assembly. (AITC)
- BALANCED CONSTRUCTION:** A construction such that the forces induced by uniformly distributed changes in moisture content will not cause warping. Symmetrical construction of plywood in which the grain direction of each ply is perpendicular to that of adjacent plies is balanced construction. (AITC)
- BARK POCKET:** An opening between annual growth rings that contains bark. Bark pockets appear as dark streaks on radial surfaces and as rounded areas on tangential surfaces. (AITC)
- BASTARD SAWN:** Lumber (primarily hardwood) in which the annual rings make angles of 30° to 60° with the surface of the piece. (AITC)
- BENDING, STEAM:** The process of forming curved wood members by steaming or boiling the wood and bending it to a form. (AITC)
- BENDING MEMBERS:** Members that are stressed principally in bending such as beams, girders and purlins. (AITC)
- BUILT-UP TIMBERS:** An assembly made by joining layers of lumber together with mechanical fastenings so that the grain of all laminations is essentially parallel. (AITC)
- BUTTRESS:** A ridge of wood developed in the angle between a lateral root and the butt of a tree, which may extend up the stem to a considerable height. (AITC)
- CAMBER:** The small amount of curvature which can be built into a glued laminated timber to offset anticipated deflection movement. It may also be used to facilitate roof drainage. (AITC)
- CAMBIUM:** A thin layer of tissue between the bark and wood that repeatedly subdivides to form a new wood and bark cells. (AITC)
- CANT:** A log that has been slabbed on one or more sides. Ordinarily, cants are intended for resawing at right angles to their widest sawn face. The term is loosely used. (AITC)
- CASEHARDENING:** A condition of stress and set in dry lumber characterized by compressive stress in the outer layers and tensile stress in the center or core. (AITC)
- CELL:** A general term for the structural units of plant tissue, including wood fibers, vessel members, and other elements of diverse structure and function. (AITC)
- CELLULOSE:** The carbohydrate that is the principal constituent of wood and forms the framework of the wood cells. (AITC)
- CHECK(S):** A lengthwise separation of the wood that usually extends across the rings of annual growth and commonly results from stresses set up in wood during seasoning. (AITC)
- A separation along the grain of the wood, the separation occurring across the annual rings. (AWPA)
- Small splits running parallel to grain of wood, caused chiefly by strains produced in seasoning. (HPMA)
- CHORD:** Either of the two outside members of a truss connected and braced by the web members. Also, sometimes refers to perimeter members of a plywood diaphragm. (APA)
- COMPOUND CURVATURE:** Wood bent to a compound curvature has curved surfaces, no element of which is a straight line. (AITC)
- COMPRESSION FAILURE:** Deformation of the wood fibers resulting from excessive compression along the grain either in direct end compression or in bending. It may develop in standing trees due to bending by wind or snow or to internal longitudinal stresses imposed after the tree is cut. In surfaced lumber compression failures may appear as fine wrinkles across the face of the piece. (AITC)
- COMPRESSION MEMBERS:** Members that are stressed principally in axial compression such as posts, columns, compression chords of trusses and arches. (AITC)
- COMPRESSION WOOD:** Wood formed on the lower side of branches and inclined trunks of softwood trees. Compression wood is identified by its relatively wide annual rings, usually eccentric, relatively large amount of summerwood, sometimes more than 50 percent of the width of the annual rings in which it occurs,

- and its lack of demarcation between springwood and summerwood in the same annual rings. Compression wood shrinks excessively lengthwise, as compared with normal wood. (AITC)
- Abnormal wood that often forms on the lower side of branches and inclined trunks of coniferous trees. It is characterized by: (a) relatively wide annual rings, usually eccentric; (b) summerwood frequently more than 50 percent of the annual rings in which it occurs; (c) little contrast in color between springwood and summerwood; (d) excessive longitudinal shrinkage in comparison to normal wood. (AWPA)
- COOPERAGE:** Containers consisting of two round heads and a body composed of staves held together with hoops, such as barrels and kegs.
- Slack cooperage: Cooperage used as containers for dry, semidry or solid products. The staves are usually not closely fitted and are held together with beaded steel, wire or wood hoops.
- Tight cooperage: Cooperage used as containers for liquids, semisolids and heavy solids. Staves are well fitted and held tightly with cooperage grade steel hoops. (AITC)
- CURE:** To change the properties of an adhesive by chemical reaction (which may be condensation, polymerization or vulcanization) and thereby develop maximum strength. Generally accomplished by the action of heat or a catalyst, with or without pressure. (AITC)
- CURING TIME:** The period of time which an adhesive takes to attain its full strength. (AITC)
- CURVED MEMBERS:** Members which are designed so that significant curvature remains after deflection due to service loads has taken place, such as curved beams and arches. (AITC)
- CUT STOCK:** A term for softwood stock comparable to dimension stock in hardwoods. (AITC)
- CUTTINGS:** In hardwoods, a portion of a board or plank having the quality required by a specific grade or for a particular use. Obtained from a board by crosscutting or ripping. (AITC)
- DELIGNIFICATION:** Removal of part or all of the lignin from wood by chemical treatment. (AITC)
- DENSITY:** As usually applied to wood of normal cellular form, density is the mass of wood substance enclosed within the boundary surfaces of a wood-plus-voids complex having unit volume. It is variously expressed as pounds per cubic foot, kilograms per cubic meter, or grams per cubic centimeter at a specified moisture content. (AITC)
- DENSITY RULES:** A procedure for segregating wood according to density, based on percentage of latewood and number of growth rings per inch of radius. (AITC)
- DEPTH:** The dimension of the cross-section which is measured parallel to the direction of the principal load on the member in bending. (AITC)
- DEW POINT:** The temperature at which a vapor begins to deposit as a liquid. Applies especially to water in the atmosphere. (AITC)
- DIFFUSE-POROUS WOOD:** Certain hardwoods in which the pores tend to be uniform in size and distribution throughout each annual ring or to decrease in size slightly and gradually toward the outer border of the ring. (AITC)
- DIMENSIONAL STABILIZATION:** Special treatment of wood to reduce the swelling and shrinking that is caused by changes in relative humidity. (AITC)
- DRY-BULB TEMPERATURE:** The temperature of air as indicated by a standard thermometer. (AITC)
- DURABILITY:** A general term for permanence or resistance to deterioration. Frequently used to refer to the degree of resistance of a species of wood to attack by wood-destroying fungi under conditions that favor such attack. In this connection the term "decay resistance" is more specific. (AITC)
- EARLYWOOD:** The portion of the annual growth ring that is formed during the early part of the growing season. It is usually less dense and weaker mechanically than latewood. (AITC)
- EXTRACTIVE:** Substances in wood, not an integral part of the cellular structure, that can be removed by solution in hot or cold water, ether, benzene, or other solvents that do not react chemically with wood components. (AITC)
- FLITCH:** A portion of a log sawn on two or more faces--commonly on opposite faces, leaving two waney edges. When intended for resawing into lumber, it is resawn parallel to its original wide faces. Or, it may be sliced or sawn into veneer, in which case the resulting sheets of veneer laid together in the sequence of cutting are called a flitch. The term is loosely used. (AITC)
- GLUE-LINE:** The area occupied by the glue between pieces of wood which are joined by adhesives which is called a "line", since only the edge is visible in a finished member. (AITC)
- GLULAM:** Short for glued-laminated structural timber, term is used to describe large beams fabricated by bonding layers

- of specially selected lumber together with strong, durable adhesives. End and edge jointing permits production of longer and wider structural wood members than are normally available. Glulam timbers are used with plywood for many types of heavy timber construction. (APA)
- GUSSET PLATE:** A piece of plywood used to connect lumber members of a truss or other frame structure. Gussets may be applied to one or both sides of the joint. Plywood is used because of its great strength and resistance to splitting. (APA)
- IMPREG:** Wood in which the cell walls have been impregnated with synthetic resin so as to reduce materially its swelling and shrinking. Impreg is not compressed. (AITC)
- IN-LINE TESTS:** Testing conducted during manufacture rather than on the finished product. (AITC)
- INSERTS:** Nonstructural repairs to correct appearance defects. (AITC)
- JOINT EFFICIENCY OR FACTOR:** The strength of a joint expressed as a percentage of the strength of clear straight-grained material. (AITC)
- LAMINATE:** A product made by bonding together two or more layers (laminations) of material or materials. (AITC)
- To produce a product by bonding together a series of layers, as plywood or laminated structural members. Plywood is laminated with grain of layers at right angles to that of adjacent layers for two-way strength. Structural members, such as beams, are laminated with the grain running the same direction in all layers. (APA)
- LAMINATED:** Layer construction of lumber. May be either horizontal or vertical layers securely glued together. (WIC)
- LAMINATED WOOD:** An assembly made by bonding layers of veneer or lumber with an adhesive so that the grain of all laminations is essentially parallel. (AITC)
- Layers of wood fastened together (usually glued) with their grain direction parallel to the longitudinal direction of the assembly. Sometimes called "Glulam." A single layer of wood in a laminated assembly is called an individual laminate or a lamina, plural laminae. (AWPA)
- LAMINATING:** The process of bonding laminations together with adhesive including the preparation of the laminations, preparation and spreading of adhesives, assembly of laminations in packages and pressure and curing. (AITC)
- LAMINATION:** A full width and full length layer contained in a member bonded together with adhesives. It may be composed of one or several wood pieces in width or length but only one in depth. Wood pieces may be end or edge glued. (AITC)
- LIGNIN:** The second most abundant constituent of wood, located principally in the secondary wall and the middle lamella, which is the thin cementing layer between wood cells. Chemically it is an irregular polymer of substituted propylphenol groups, and thus no simple chemical formula can be written for it. (AITC)
- MODIFIED WOOD:** Wood processed by chemical treatment, compression, or other means (with or without heat) to impart properties different from those of the original wood. (AITC)
- NAVAL STORES:** A term applied to the oils, resins, tars and pitches derived from oleoresin contained in, exuded by, or extracted from trees, chiefly species of pines (genus Pinus). Historically, these were important items in the stores of wood sailing vessels. (AITC)
- NONSTRUCTURAL:** The portion of a member which was not used by the designer in calculating the allowable loads of the member. (AITC)
- OLEORESIN:** A solution of resin in an essential oil that occurs in or exudes from many plants, especially softwoods. The oleoresin from pine is a solution of pine resin (rosin) in turpentine. (AITC)
- ORTHOTROPIC:** Having unique and independent properties in three mutually orthogonal (perpendicular) planes of symmetry. A special case of anisotropy. (AITC)
- OVENDRY WOOD:** Wood dried to a relatively constant weight in a ventilated oven at 101° to 105°C. (AITC)
- PHLOEM:** The tissues of the inner bark, characterized by the presence of sieve tubes and serving for the transport of elaborate foodstuffs. (AITC)
- POT LIFE:** The period of time during which an adhesive, after mixing with catalyst, solvent, or other compounding ingredients, remains suitable for use. (AITC)
- PRINCIPAL MEMBERS:** The major load-carrying members of a structure, such as beams, girders, columns, arches, chord members of trusses and framed arches, and rigid frames. (AITC)
- RELATIVE HUMIDITY:** Ratio of actual pressure of existing water vapor to maximum possible pressure of water vapor in the atmosphere at the same temperature, expressed as a percentage. (AITC)

RESIN: Inflammable, water-soluble, vegetable substances secreted by certain plants or trees and characterizing the wood of many coniferous species. The term is also applied to synthetic organic products related to the natural resins. (AITC)

STICKERS: Strips or boards used to separate the layers of lumber in a pile and thus improve air circulation. (AITC)

SHEAR: A condition of stress or strain where parallel planes slide relative to one another. (AITC)

STRUCTURAL GLUED LAMINATED TIMBER: An engineered, stress-rated product of a timber laminating plant comprising assemblies of specially selected and prepared wood laminations securely bonded together with adhesives. The grain of all laminations is approximately parallel longitudinally. They may be comprised of pieces end joined to form any length, of pieces placed or glued edge-to-edge to make wider ones, or of pieces bent to curved form during gluing. (AITC)

TENSION MEMBERS: Members that are stressed principally in axial tension such as the tension chords in trusses and tension tie members. (AITC)

TENSION WOOD: A form of wood found in leaning trees of some hardwood species and characterized by the presence of gelatinous fibers and excessive longitudinal shrinkage. Tension wood fibers hold together tenaciously, so that sawed surfaces usually have projecting fibers, and planed surfaces often are torn or have raised grain. Tension wood may cause warping. (AITC)

TRUSS: An assembly of members, such as beams, bars, rods and the like, so combined as to form a rigid framework. All members are interconnected to form triangles. (AITC)

A combination of members usually arranged in triangular units to form a rigid framework for supporting loads over a span. Parallel chord trusses are also used for floor and roof supports. (APA)

WIDTH: The dimension of the cross section which is measured perpendicular to the direction of the principal load on the member in bending. (AITC)

WOOD FAILURE: The rupturing of wood fibers expressed as the percentage of the total area involved which shows such failure. (AITC)

HIGH PRESSURE LAMINATED PLASTIC: Laminated thermosetting decorative sheets intended for decorative purposes. The sheets consist essentially of layers of a fibrous sheet material, such as paper, impregnated with a thermosetting condensation resin and consolidated under heat and pressure. The top layers have a decorative color or a printed design. The resultant product has an attractive exposed surface which is durable and resistant to damage from abrasion and mild alkalies, acids and solvents, meeting the requirements of the National Electrical Manufacturers Association (NEMA LD 1-1964, or latest revision thereof. (WIC)

MILLWORK: Planed and patterned lumber for finish work in buildings, including items such as sash, doors, cornices, panelwork, and other items of interior or exterior trim. Does not include flooring, ceiling or siding. (AITC)

Architectural woodwork and related items.
(WIC)

PLANING MILL PRODUCTS: Products worked to pattern, such as flooring, ceiling and siding. (AITC)

PLASTIC BACKING SHEET: A thin sheet, usually phenolic, applied under pressure to the back of a laminated plastic panel to achieve balance by equalizing the rate of moisture absorption or emission. (WIC)

RIPPING: In woodworking, the sawing of wood with the grain. (APA)

SASH: A frame structure, normally glazed (e.g., a window), that is hung or fixed in a frame set in an opening. (AITC)



- ABSORPTION, GROSS:** Total amounts of preservative indicated in the wood at the termination of the pressure period, includes initial absorption and under-pressure injection. (AWPA)
- ABSORPTION, INITIAL:** The amount of preservative absorbed by the wood during any preliminary heating or boiling under vacuum period, and also that absorbed by the wood while the cylinder is being filled prior to the pressure period. (AWPA)
- ACA PRESERVATIVE:** Ammoniacal copper arsenite. (AWPA)
- ACC PRESERVATIVE:** Acid copper chromate. (AWPA)
- AIR, INITIAL:** Compressed air forced into the wood before, and held during, the injection of preservative. (AWPA)
- ALIQOT:** A proportional representative subsample of a homogeneous sample of a preservative, or of treated wood. Any results derived from quantitative or qualitative analysis of the subsample are directly applicable to the original sample. (AWPA)
- ASSAY:** Determination, by appropriate physical and chemical means, of the amount of preservative or fire-retardant in a sample of treated wood, usually expressed in pounds per cubic foot (pcf) or kilograms per cubic meter (kg/m^3). (AWPA)
- BENZOL-INSOLUBLE TEST:** A test used to determine the amount of insoluble material in a mixture of an oil-preservative and benzene (benzol). (AWPA)
- BLEEDING:** The exudation of liquid preservative from treated wood. The exudation may evaporate, remain liquid or harden into a semi-solid or solid state. (AWPA)
- BLOOM:** Crystals formed on the surface of treated wood by exudation and evaporation of the solvent in preservative solutions. (AITC)
- BLOOMING:** The formation of crystals on the surface of treated wood as a result of exudation and evaporation of the solvent or water component of the preservative or fire-retardant solution. (AWPA)
- BORERS, MARINE:** Marine organisms which attack wood in the submerged portions of structures placed in salt or brackish waters. Two general groups of bores are recognized, the crustacean (Limnoria, Chelura, Sphaeroma) and the moluscan (Teredo, Bankia, Martesia). (AWPA)
- BOUCHERIE PROCESS:** A process in which water-borne preservative is applied to end surfaces of green wood through a suitable chamber and either forced through the wood by hydrostatic or other pressure or drawn into the wood by the evaporation of moisture from the tree's leaves. (AWPA)
- BOULTON DRYING PROCESS:** A process for drying wood by removing moisture from it by boiling in preservative under sufficient intensity of vacuum to evaporate water from the material at the temperature of the preservative used. (AWPA)
- BRANDING:** Permanent marking on a treated wood product to identify the supplier and date of treatment; other information may be included in a brand when so specified. (AWPA)
- BROWN ROT:** In wood, any decay in which the attack concentrates on the cellulose and associated carbohydrates rather than on the lignin, producing a light to dark brown friable residue--hence loosely termed "dry rot". An advanced stage where the wood splits along rectangular planes, in shrinking, is termed "cubical rot". (AITC)
- BURNETT PROCESS:** Pressure treatment of wood with a solution of zinc chloride. (Patented by William Burnett in 1838). (AWPA)
- CCA, PRESERVATIVE:** Chromated copper arsenate. (AWPA)
- CHARGE:** All the wood treated together in one cylinder or treating tank at one time. (AWPA)
- COASTAL WATERS:** Salt waters bordering the continents and waters adjacent thereto that are subject to tidal flow. (AWPA)
- COLLAPSE:** The flattening of single cells or rows of cells in heartwood during the drying or pressure treatment of wood. Often characterized by a caved-in or corrugated appearance of the wood surface. (AITC)
- COMPREG:** Wood in which the cell walls have been impregnated with synthetic resin and compressed to give it reduced swelling and shrinking characteristics and increased density and strength properties. (AITC)
- CONDITIONING:** The heating or removal of moisture from unseasoned or partially seasoned wood as a preliminary to preservative treatment and as a means of improving the penetrability and absorptive properties of the wood. (AWPA)
- CORE:** The cylinder of wood, removed by means of an increment borer, from which may be determined, by linear measurement, sapwood thickness and preservative penetration, and, by assay, preservative retention and distribution. (AWPA)

- CRIB TEST:** A method of testing fire resistance of treated wood in which specimens are built up to form a cribwork. After the crib is exposed to a controlled flame for a specified period, persistence and spread of flame, duration of glow, and loss of weight are noted. (AWPA)
- CREOSOTE:** A generic term applied to certain distillates of tars. As used in the wood-preserving industry, the unmodified term "creosote" denotes coal-tar creosote. (AWPA)
- CREOSOTE, COAL TAR:** A distillate of coal tar. As used in the wood-preserving industry, coal-tar creosote, or "creosote" denotes a distillate of coal tar produced by high-temperature carbonization of bituminous coal; it consists principally of liquid and solid aromatic hydrocarbons and contains appreciable quantities of tar acids and tar bases; it is heavier than water and has a continuous boiling range of at least 125°C. beginning at about 200°C. (AWPA)
- CREOSOTE-COAL TAR SOLUTION:** Solution of coal tar and creosote in selected proportions. Usually contains 20 to 50 percent coal tar. (AWPA)
- CREOSOTE, MARINE GRADE:** A coal-tar creosote meeting special requirements as specified for the treatment of materials for marine use. (AWPA)
- CREOSOTE-PETROLEUM SOLUTION:** Solution of creosote and petroleum in selected proportions. (AWPA)
- CYLINDER, TREATING:** A steel tank, commonly horizontal, one or both ends of which may be opened and closed, in which wood is placed for treatment usually by a pressure process with a preservative, fire-retardant or other material. (Also called Retort). (AWPA)
- DECAY:** The decomposition of wood substance by fungi. (AITC) (HPMA)
- Decomposition of wood substance by wood-destroying fungi. (AWPA)
- DECAY, ADVANCED:** The older stage of decay in which the destruction is readily recognized because the wood has become punky, soft and spongy, stringy, ringshaked, pitted or crumbly. Decided discoloration or bleaching of the rotted wood is often apparent. (AITC)
- A stage of decay in which the wood has become definitely changed in appearance, character, composition, hardness and specific gravity. (AWPA)
- DECAY, INCIPIENT:** The early stage of decay that has not proceeded far enough to soften or otherwise perceptibly impair the hardness of the wood. It is usually accompanied by a slight discoloration or bleaching of the wood. (AITC)
- An early stage of decay in which the wood may show discoloration but is not otherwise visibly altered, although some of its properties may have deteriorated appreciably. (AWPA)
- DENSITY RULE:** A requirement limiting the number of annual rings per inch and the amount of summerwood on at least one end of a piece of wood. Density rules apply at present only to southern pine and Douglas fir lumber. (AWPA)
- DISTILLATION TEST:** A test to determine the proportions of an oil or a tar which distill off between or up to specified temperatures. (AWPA)
- DOPE:** "Dote", "doze" and "rot" are synonyms with "decay" and are any form of decay that may be evident as either a discoloration or a softening of the wood. (AITC)
- DOWEL, SPIRAL METAL:** A piece of helically twisted, square iron which is driven into bored holes to retard splitting. Also known as a twist dowel. (AWPA)
- DOZE:** (Synonymous with dote) A form of incipient decay characterized by a dull and lifeless appearance of the wood, accompanied by a lack of strength and softening of the wood substance. (HPMA)
- DRY ROT:** A term loosely applied to any dry, crumbly rot but especially to that which, when in an advanced stage, permits the wood to be crushed easily to a dry powder. The term is actually a misnomer for any decay, since all fungi require considerable moisture for growth. (AITC)
- EMPTY-CELL PROCESS:** Any process for impregnating wood with preservatives or chemicals in which air, imprisoned in the wood under pressure, expands when pressure is released to drive out part of the injected preservative or chemical. The distinguishing characteristic of the empty-cell process is that no vacuum is drawn before applying the preservative. The aim is to obtain good preservative distribution in the wood and leave the cell cavities only partially filled. (AITC)
- See Lowry Process and Rueping Process. (AWPA)
- EXTRACTION:** A process for separating or otherwise obtaining from a piece of wood by appropriate methods, the preservative in the sample, as far as possible. This applies both to wood that is freshly treated and to treated wood in storage or in service. The general application is to wood treated with creosote or creosote-coal tar solutions. The agents of extraction are solvents such as toluene, benzene, chloroform, etc. The results are usually expressed in pounds per cubic foot (pcf) or kilograms/cubic meter (kg/m³). (AWPA)

FIRE ENDURANCE: A measure of the time during which a material or assembly continues to exhibit fire resistance under specified conditions of test and performance. (AITC)

FIRE-PROOFING: A technically inexact term used in the wood-preserving industry to mean impregnation of wood with fire-retarding chemicals. (AWPA)

FIRE RESISTANCE: The property of a material or assembly to withstand fire or to give protection from it. (AITC)

FIRE RETARDANT: A chemical or preparation of chemicals used to reduce flammability or to retard spread of a fire over the surface. (AITC)

A chemical, a chemical mixture, or coating whose proper application to wood substantially increases its resistance to flaming or burning. (AWPA)

FIRE RETARDANT TREATED (FRT): Chemical treatment of wood and plywood to retard combustion. Fire retardant chemicals mixed in water are deposited in the wood under pressure in accordance with American Wood Preservers Association Standard AWPA C27. (APA)

Treatment of wood under pressure with chemicals to reduce its flame spread, fuel contribution and smoke development. Syn.: Treatment, Fire-Protected. Type "A" is chromated zinc chloride. Type "B" is chromated zinc chloride (FR). Type "C" is Minalith. Type "D" is Pyresote. (AWPA)

FIRE-TUBE TEST: A method of testing fire resistance of treated wood in which a single specimen is placed over a controlled flame in a specially designed vertical tube. Loss in weight and temperature are recorded during the progress of testing. (AWPA)

FLAME SPREAD: Term that relates to spread of flame along the surface of a material. Flame spread ratings are expressed in numbers or letters and are used in describing interior finish requirements in building codes. (APA)

Rate of travel of flame in fire resistance tests. (AWPA)

FULL-CELL PROCESS: Any process for impregnating wood with preservatives or chemicals in which a vacuum is drawn to remove air from the wood before admitting the preservative. This favors heavy adsorption and retention of preservative in the treated portions. (AITC)

An initial vacuum is applied; without breaking the vacuum the retort is filled with the treating liquid; and pressure is applied. After the pressure period, the retort is drained and a final vacuum may or may not be applied so that material can be removed free of drip. (AWPA)

HEART ROT: Any rot characteristically confined to the heartwood. It generally originates in the living tree. (AITC)

INCISING: The operation of puncturing the lateral surfaces of wood as an aid in securing more uniform penetration of preservative. (AWPA)

INCREMENT BORER: An augerlike instrument with a hollow bit and an extractor, used to extract thin radial cylinders of wood from trees to determine age and growth rate. Also used in wood preservation to determine the depth of penetration of a preservative. (AITC)

An auger-like instrument with a hollow bit and equipped with an extractor used to sample wood internally without destroying the piece. The core obtained serves to measure sapwood thickness and depth of penetration. Likewise the borer is used to obtain sample cores of treated wood at specified depths (zones) for the determination of preservative retention by assay or by toluene extraction. (AWPA)

INTUMESCE: To expand with heat to provide a low-density film; used in reference to certain fire-retardant coatings. (AITC)

LOWRY PROCESS: An empty-cell process for treating wood, usually with oil, in which there is injected, without a preliminary vacuum, an amount of liquid in excess of the required final retention, this excess then being removed by a quick high vacuum. (Patented by C. B. Lowry in 1906). (AWPA)

NAIL, DATING: A nail with a date or symbol on its head which is driven into timbers to indicate the year of treatment, or the date of installation. (AWPA)

PAINTABLE AFTER TREATMENT: Capable of holding properly applied paint without subsequent blistering, peeling or discoloration of the painted surface. (AWPA)

PECK: Pockets or areas of disintegrated wood caused by advanced stages of localized decay in the living tree. It is usually associated with cypress and incense-cedar. There is no further development of peck once the lumber is seasoned. (AITC)

PENETRATION: The depth to which preservative enters the wood. (AWPA)

PENTA (PENTACHLOROPHENOL): A type of preservative that gives long-lasting protection against termites, rot, mold and mildew. Penta-treated plywood is noncorrosive, fairly clean to handle and does not produce skin burn, and may be used for exterior exposure. (APA)

PENTA PRESERVATIVE: A wood preserving solution of pentachlorophenol, C_6Cl_5OH , dissolved in hydrocarbon solvent. Oftentimes, an auxiliary solvent is added to increase the solubility of the "penta". (AITC)

PETROLEUM OIL As used in the wood-preserving industry "petroleum oil" denotes a distillate, residual, or synthetically rearranged hydrocarbon product, or mixture thereof, derived from crude petroleum and used as a solvent or diluent in making up wood-preserving solutions. (AWPA)

POCKET ROT: Advanced decay that appears in the form of a hole or pocket, usually surrounded by apparently sound wood. (AITC)

PRESERVATIVE(S): Any substance that, for a reasonable length of time, is effective in preventing the development and action of wood-rotting fungi, borers of various kinds, and harmful insects that deteriorate wood. (AITC)

A treating solution which prevents decay in wood. (Noun) Having the ability to preserve wood by inhibiting the growth of decay fungi. (Adjective) (WIC)

Any of a number of treatments to prevent plywood or wood from deteriorating due to exposure to weather, adverse moisture conditions, or insect attack. Treatments range from chemical impregnation under pressure, as for wood foundation or reservoir cover use, to any of the many paints, stains or sealers. (APA)

PRESERVATIVE, OIL-BORNE: A wood preservative that is introduced into wood in the form of a solution in oil. (AWPA)

PRESERVATIVE, OIL-TYPE: Preservatives such as creosote, creosote-coal tar solutions, creosote-petroleum solutions and oil-borne preservatives, or other preservatives strictly of an oily nature which are generally insoluble in water. (AWPA)

PRESERVATIVE, WATER-BORNE: A wood preservative that is introduced into wood in the form of a solution in water. (AWPA)

PRESERVATIVE, WATER-REPELLANT: A solution of one or more toxic chemicals and water-repellant materials that preserves the wood and retards changes in moisture content and the accompanying changes in dimensions. (AWPA)

PRESERVATIVE, WOOD: The term preservative is now intended to include such chemicals or combinations thereof that will protect wood against deterioration from any one or combination of the following: decay, insects, marine borers, fire, weathering, absorption of water and chemical action. The original use of the term was restricted to those materials that exerted a toxic effect on living, wood-destroying organisms. (AWPA)

PRESSURE PERIOD: That portion of a treating operation during which the wood and the treating liquid in the retort are subjected to pressure, in excess of atmospheric or initial air pressure, for the purpose of forcing liquids into the wood. (AWPA)

PRESSURE PROCESS: Any process of treating wood in a closed container whereby the preservative or fire retardant is forced into the wood under pressures greater than 1 atmosphere. Pressure is generally preceded or followed by vacuum, as in the vacuum-pressure and empty cell processes respectively, or they may alternate, as in the full cell and alternating-pressure processes. (AITC)

PRESSURE TREATED: Treatment of wood with preservatives or fire retardants. Treating solution is forced into the wood cells under pressure. (APA)

REFUSAL POINT: The point beyond which the rate of absorption at maximum permitted pressure and temperature is too slow to be significant or does not exceed a specified percentage of the amount already injected when the wood is subjected to a refusal treatment. (AWPA)

REFUSAL TREATMENT: Treatment of wood under specified conditions until the quantity of preservatives absorbed in a given time is not more than a prescribed percentage of the amount already injected. However, the operation limitations specified must take into account the minimum retention specified. (AWPA)

RETENTION BY ASSAY: The determination of preservative retention is a specific zone of treated wood by extraction or analysis of specified samples. (AITC)

The determination of preservative retention in a specified zone of treated wood by extraction or analysis of specified samples such as (a) increment borer cores or (b) chips obtained with a wood bit. The principle applies to freshly treated and to old treated material, and to larger samples if necessary. (AWPA)

RETENTION BY GAUGE OR WEIGHT: The amount of preservative, in pounds per cubic foot of the total charge remaining in the wood immediately after completion of the treating operation. Same as Net Absorption. (AWPA)

RUEPING PROCESS: An empty-cell process for treating, usually with oil, in which the following sequence is employed: Compressed air; cylinder filled without reducing pressure; pressure increased and held until required absorption is obtained; final vacuum. (Patented by Max Rueping in 1902). (AWPA)

SOFT ROT: A special type of decay developing under very wet conditions (as in cooling towers and boat timbers) in the outer wood layers, caused by cellulose-destroying microfungi that attack the secondary cell walls and not the intercellular layer. (AITC)

Deterioration of wood components--often without visual distortion or apparent damage to the wood--by certain molds and other fungi that are outside the common wood-destroying group. The affected wood is likely to be extremely brash and breaks without splinters. (AWPA)

STEAM CONDITIONING: Subjecting wood in a closed space to the action of steam at or above atmospheric pressure. (AWPA)

STEAMING, FINAL: Steaming at low pressure (within specified limits of temperature and time) at the completion of an oil treatment for the purpose of cleaning the surface of the timber and reducing its tendency to bleed. (AWPA)

TAR: A generic term applied to nonaqueous liquids obtained as residuum in the destructive distillation of organic materials such as coal, lignite, petroleum, wood, etc. (AWPA)

TAR ACIDS: Weakly acidic compounds, soluble in sodium hydroxide solution and found in coal tar. They consist chiefly of phenols and their homologues. (AWPA)

TAR BASES: Weakly basic compounds found in coal tar. They consist chiefly of heterocyclic nitrogen-containing compounds. (AWPA)

TAR, COAL: The nonaqueous portion of the liquid distillate obtained during the carbonization of bituminous coal. (AWPA)

THRESHOLD: The minimum amount of preservative that is effective in preventing significant decay, under the conditions of the test, by a particular fungus. This amount of preservative in pounds per cubic foot (pcf), or kilograms per cubic meter (kg/m^3) of wood, is referred to as the "threshold retention". The amount of preservative retention after treatment (R_0) is the generally accepted reference basis, but other bases may be used by investigators, (i.e., residual after weathering (R_r), determined by appropriate assay), in which case, notation should be made for the record. (AWPA)

TOXIC: Capable of inhibiting growth or causing death when ingested by or contacted by wood-destroying organisms. (AWPA)

TOXICITY: A measure of the ability of a preservative to poison a particular test organism. (AWPA)

TREATING PRESSURE: Pressure used in injecting the preservative into wood, usually expressed in pounds per square inch. (AWPA)

TREATMENT, BRUSH: Application of one or more coats of a liquid preservative to the surface of timber with a brush. (AWPA)

TREATMENT, DIP: Application of a liquid preservative to a wood by immersing the wood in the liquid for a short period of time. (AWPA)

TREATMENT, EMPTY-CELL: A treatment in which air imprisoned in the wood is employed to force out part of the preservative when treating pressure is released and a final vacuum is applied. (See Lowry Process and Rueping Process). (AWPA)

TREATMENT, FULL-CELL: A treatment involving a preliminary vacuum followed by pressure impregnation such that the cell cavities in the treated portion of the wood remain partially or completely filled with preservative. (See Bethell Process). (AWPA)

TREATMENT, PRESSURE: The impregnation of wood with a liquid by application of pressure above atmospheric or above any initial air pressure which may have been applied. (AWPA)

WATER REPELLENT(S): Wood preservatives, with water-resistant properties. (APA)

A wood-treating solution which in the treating process deposits waterproof or water-resistant solids on the walls of wood fibers and ray cells, thereby retarding their absorption of liquid water. (Noun)

Having the quality of retarding the absorption of liquid water by wood fibers and ray cells. (Adjective)

WATER-REPELLANT PRESERVATIVE: A solution of wood preservative and water-repellant agents used to protect wood parts from exposure to weather elements. (WIC/NWMA)

A solution of resins and toxic chemicals (usually pentachlorophenol) in a mineral solvent which reduces the swelling and shrinkage of wood and renders it resistant to fungi. (WIC/NWMA)

WET USE: Normal use conditions where the moisture content of the wood in service exceeds 16%, as it may in exterior construction. Used in conjunction with "Wet Use Adhesives". (Old term no longer used--"Waterproof"). (AWPA)

WHITE-ROT: In wood, any decay or rot attacking both the cellulose and the lignin, producing a generally whitish residue that may be spongy or stringy rot, or occur as pocket rot. (AITC)

WOOD PRESERVATION: The art of protecting timber against the action of destructive agents. Usually refers to the treatment of wood with chemical substances (preservatives) which reduce its susceptibility to deterioration by fungi, insects or marine borers. (AWPA)

- A-A EXTERIOR:** A sanded panel grade described by grades of face (A) and back (A) veneers, with minimum C quality inner plies, bonded with exterior glue meeting all the performance requirements of Exterior type plywood. Can be used for fences, built-ins, signs, boats where both sides will show. (APA)
- A-A INTERIOR:** A sanded panel grade described by grades of face (A) and back (A) veneers, with minimum D quality inner plies, bonded with interior or exterior glue. Commonly used in cabinet doors, built-ins, furniture where both sides will show, it can be painted or stained. (APA)
- A-B EXTERIOR:** A sanded panel grade described by grades of face (A) and back (B) veneers, with minimum C quality inner plies, bonded with exterior glue. Can be used as an alternate for A-A Exterior where the appearance of one side is less important. (APA)
- A-B INTERIOR:** A sanded panel grade described by grades of face (A) and back (B) veneers, with minimum D quality inner plies, bonded with interior or exterior glue. Commonly used as an alternate for A-A Interior where the appearance of one side is less important. (APA)
- ADHESIVE:** A substance capable of holding materials together by surface attachment. It is a general term and includes cements, mucilage, and paste, as well as glue. (AITC)
- A substance capable of holding materials together by surface attachment. (APA)
- A substance capable of bonding materials together by surface attachment. It is a general term and includes all cements and glues. (WIC)
- ADHESIVE, TYPE I FULLY WATERPROOF:** Forms a bond that will withstand full weather exposure and will be unaffected by micro-organisms; bond shall be of such quality that specimens will withstand shear and cyclic boil tests specified in Hardwood Plywood Manufacturers Association standards. (WIC)
- ADHESIVE, TYPE II WATER-RESISTANT:** Forms a bond that will retain practically all of its strength when occasionally subjected to a thorough wetting and drying; bond shall be of such quality that specimens will withstand the shear and cold soak test specified in HPMA standards. (WIC)
- A-D INTERIOR:** Sanded interior panel grade described by grades of face (A) and back (D) veneers, with minimum D quality inner plies, bonded with interior or exterior glue. A finish-grade face for paneling, built-ins, and backing. Can be painted or stained. (APA)
- BACK:** The side of a plywood panel having the lower grade veneer. (APA)
- The side reverse to the face of a panel, or the poorer side of a panel in any grade of plywood calling for a face and back. (HPMA)
- BACKING OUT:** Wide, shallow groove machined in back surface of members. (WIC)
- BALANCED PANEL:** For purposes of this Standard, a balanced panel is one which is free from warp that affects serviceability for its intended use. (AITC)
- BALANCING SPECIES:** A species of similar density, to achieve balance by equalizing the rate of moisture absorption or emission. (WIC)
- BANDING:** Portion of wood extending around one or more sides of plywood panels. (HPMA)
- BARK POCKET:** Comparatively small area of bark around which normal wood has grown. (HPMA)
- B-B INTERIOR:** A sanded panel grade described by face (B) and back (B) veneers; with minimum D quality inner plies bonded with interior or exterior glue. It permits circular plugs and is paintable. (APA)
- B-D INTERIOR:** An interior panel grade described by grades of face (B) and back (D) veneers with minimum D quality inner plies and bonded with interior or exterior glue. This is a utility grade with one paintable side. Used for backing, cabinet sides, etc. (APA)
- BINDER:** An extraneous bonding agent, either organic or inorganic, used to bind wood particles together to produce a particleboard. (NPA)
- BIRD PECK:** A small hole or patch of distorted grain resulting from birds pecking through the growing cells in the tree. In shape, a bird peck usually resembles a carpet tack with the point towards the bark; bird peck is usually accompanied by discoloration extending for considerable distance along the grain and to a much lesser extent across the grain. (AITC)
- BIRDSEYE:** Small localized areas in wood with the fibers indented and otherwise contorted to form few to many small circular or elliptical figures remotely resembling birds' eyes on the tangential surface. Sometimes found in sugar maple and used for decorative purposes; rare in other hardwood species. (AITC)
- A small central spot with wood fibers arranged around it so as to give the appearance of an eye. (WIC)
- BOLE:** The main stem of a tree of substantial diameter--roughly, capable of yielding sawtimber, veneer logs, or large poles. Seedlings, saplings and small diameter trees have stems, not boles. (AITC)

- BOLT:** (1) A short section of a tree trunk;
(2) in veneer production, a short log of a length suitable for peeling in a lathe.
(AITC)
- BOW:** The distortion of lumber in which there is a deviation, in a direction perpendicular to the flat face, from a straight line from end-to-end of the piece. (AITC)
- Distortion in a plywood panel so that it is not flat lengthwise. (APA)
- 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. (WIC)
- BRASHNESS:** A condition that causes some pieces of wood to be relatively low in shock resistance for the species and, when broken in bending, to fail abruptly without splintering at comparatively small deflections. (AITC)
- Condition of wood characterized by low resistance to shock and by abrupt failure across the grain without splintering.
(HPMA)
- BREAKING RADIUS:** The limiting radius of curvature to which wood or plywood can be bent without breaking. (AITC)
- BRUSHED PLYWOOD:** A manufacturing surface treatment for plywood siding in which softer wood is abraded away so that the harder grain pattern stands in relief, creating a striking panel surface. (APA)
- BURL:** (1) A hard, woody outgrowth on a tree, more or less rounded in form, usually resulting from the entwined growth of a cluster of adventitious buds. Such burls are the source of the highly figured burl veneers used for purely ornamental purposes.
(2) In lumber or veneer, a localized severe distortion of the grain generally rounded in outline, usually resulting from overgrowth of dead branch stubs, varying from 1/2 inch to several inches in diameter; frequently includes one or more clusters of several small contiguous conical protuberances, each usually having a core or pith but no appreciable amount of end grain (in tangential view) surrounding it. (AITC)
- A swirl or twist in the grain of the wood which usually occurs near a knot or crotch but does not contain a knot. (HPMA)
- In softwoods, a distortion of the grain due to injury of the tree. In hardwoods, a swirl or twist of the grain near a knot but does not contain a knot. It must have a sound center. The measurement of the burl is the average of the maximum and minimum dimensions of the burl.
- (1) Very small burl--does not exceed 1/2" in diameter.
- (2) Small burl--does not exceed 3/4" in diameter.
- (3) Medium burl--does not exceed 1" in diameter. (WIC)
- BUTT:** A joint formed by square edge surfaces (ends, edges, faces) coming together; end butt joint, edge butt joint. (WIC)
- BUTT JOINT:** An end joint formed by abutting the squared ends of two pieces. (AITC)
- The joint formed when two parts are fastened together without overlapping. (APA)
- CASEWORK:** All the parts that constitute a finished case or cabinet, inclusive of doors, drawers and shelves. (WIC)
- CENTER:** Inner ply of a plywood panel with five or more plies, whose grain direction runs the same way as the face and back plies. (APA)
- CHAMFER:** The flat surface created by slicing off the square edge or corner of a piece of wood or plywood. (APA)
- CHANNEL GROOVE:** A plywood siding shiplapped for continuous patterns. Grooving is typically 1/16 in. deep and 3/8 in. wide, 4 in. o.c. (other spacings are available) in faces of 3/8 in. thick plywood. (APA)
- CHIPBOARD:** A paperboard used for many purposes that may or may not have specifications for strength, color, or other characteristics. It is normally made from paper stock with a relatively low density in the thickness of 0.006 inch and up. (AITC)
- COMB GRAIN:** Rift cut oak veneer with straight grain figure (see "Quartered"). (HPMA)
- COPED:** To cut one member to match the profile of another moulded member. (WIC)
- CORE:** Plywood inner plies whose grain runs perpendicular to that of outer plies. (APA)
- Also referred to as "center". The innermost portion of plywood, usually veneer; however, it may be of sawed lumber either one piece or several pieces joined and glued, or it may be particleboard, hardboard or of some other material. (HPMA)
- CORE GAP (OR CENTER GAP):** An open veneer joint extending through or partially through a plywood panel, which results when core (or center) veneer sections are not tightly butted together during manufacture. Product Standard PS 1 specifies that the average of all gaps shall not exceed 1/2 inch, and that every effort be made to produce closely butted core joints.
- CORE STOCK:** A solid or discontinuous center ply used in panel-type glued structures (such as furniture panels and solid or hollowcore doors). (AITC)

CROOK: 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. (WIC)

CROSSBAND: To place the grain of layers of wood at right angles in order to minimize shrinking and swelling; also, in plywood of three or more plies, a layer of veneer whose grain direction is at right angles to that of the face plies. (AITC)

In plywood, the veneer layers whose grain direction is at right angles to that of the face plies. (APA)

CROSSBANDING: Veneer used in the construction of plywood with five or more plies. In five-ply construction, it is placed at right angles to the grain of the core and faces. (HPMA)

In the construction of flush doors, the veneer which is placed between the core and face veneers with the direction of the grain at right angles to that of the face veneer. (WIC)

CROSSBAR: Type of figure or irregularity of grain resembling a dip in the grain running at right angles, or nearly so, to the length of the veneer. (HPMA)

CROSS BREAK: A separation of the wood cells across the grain. Such breaks may be due to internal stress resulting from unequal longitudinal shrinkage or to external forces. (AITC) (HPMA)

CROSS LAMINATION: Consecutive layers are placed at right angles to each other (cross-laminated) in plywood manufacture. Cross-laminated construction minimizes shrinkage and produces a strong panel. See LAYER. (APA)

CUP: A distortion of a board in which there is a deviation flatwise from a straight line across the width of the board. (AITC)

Distortion of a plywood panel from flatness across the panel. (APA)

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. (WIC)

DADO: A rectangular groove across the grain of a wood member into which the end of the joining member is inserted; also a housed joint; variations include "dado and tenon", and "stopped or blind dado" joints. (WIC)

DADO, BLIND OR STOPPED: A dado that is not visible when the joint is completed. (WIC)

DADO JOINT: A joint formed by intersection of two boards, in which one is notched with a rectangular groove (APA)

DEFECTS, OPEN: Checks, splits, open joints, knotholes, cracks, loose knots, wormholes, gaps, voids, or other openings interrupting the smooth continuity of the wood surface. (HPMA)

DELAMINATION: The separation of layers in an assembly because of failure of the adhesive, either in the adhesive itself or at the interface between the adhesive and the lamination. (AITC)

The separation of layers in a laminate through failure within the adhesive or at the bond between the adhesive and the laminae. (AITC)

Separation of plies or layers of wood or other material through failure of the adhesive bond. (HPMA)

DIMENSION STOCK: A term largely superseded by the term "hardwood dimension lumber". It is hardwood stock processed to a point where the maximum waste is left at the mill, and the maximum utility is delivered to the user. It is stock of specified thickness, width, and length, or multiples thereof. According to specification it may be solid or glued up, rough or surfaced, semifabricated or completely fabricated. (AITC)

DISCOLORATIONS: Stains in wood substances. Common veneer stains are sap stains, blue stains, stain produced by chemical action caused by the iron in the cutting knife coming in contact with the tannic acid of the wood, and those resulting from the chemical action of the glue. (HPMA)

DOVETAIL: A joint formed by inserting a projecting wedge-shaped member (dovetail tenon) into a correspondingly shaped cut-out member (dovetail mortise); variations include the "dovetail dado", and the "blind dovetail dado." (WIC)

DOVETAIL, BLIND: A dovetail joint that is not visible when the joint is completed. (WIC)

DOWELED: A joint using "dowels" (doweled construction); also "doweled edge joint". (WIC)

EASED EDGE(S): A term used to describe slight rounding of edge surfaces of a piece of lumber or plywood to remove sharp corners. (APA)

Slightly rounded edge not to exceed 1/16" radius, to remove sharp corners. (WIC)

EDGE BAND: Not more than 1/16" of the edge band shall show on the face of the plywood or particleboard. (WIC)

EDGE JOINT: The place where two pieces of wood are joined together edge to edge, commonly by gluing. The joints may be made by gluing two squared edges as in a plain edge joint or by using machined joints of various kinds, such as tongued-and-grooved joints. (AITC)

EDGE TREATMENT: Refers to edge finishing method used, such as banding with wood or plastic, or filling with putty or spackling. (APA)

END JOINT: The place where two pieces of wood are joined together end to end, commonly by scarf or finger jointing. (AITC)

FACE: The better side of any plywood panel whose outer plies are of different veneer grades; also either side of a panel where grading rules draw no distinction between faces. Example is an A-C Exterior panel, the A veneer side is the face of the panel. (APA)

The better side of any plywood panel in which the outer plies are of different veneer grades. Also either side of a panel in which there is no difference in the veneer grade of the outer plies. (HPMA)

FACE JOINT: The joint occurring between the wide faces of laminations. (AITC)

FIBERBOARD: A broad generic term inclusive of sheet materials of widely varying densities manufactured of refined or partially refined wood (or other vegetable) fibers. Bonding agents and other materials may be added to increase strength, resistance to moisture, fire or decay, or to improve some other property. (AITC)

FIGURE: The pattern produced in a wood surface by annual growth rings, rays, knots, deviations from regular (natural) grain such as interlocked and wavy grain, and irregular coloration. (AITC) (HPMA)

FILLED PARTICLEBOARDS: Particleboards having a factory applied coating of filler on one or both faces to prepare the surface for further finishing by printing, lacquering, painting, etc. (NPA)

FILLER: In woodworking, any substance used to fill the holes and irregularities in planed or sanded surfaces to decrease the porosity of the surface before applying finish coatings. (AITC)

FINGER: A series of fingers machined on the ends of two pieces of wood to be joined, which mesh together and are securely glued in position. (WIC)

FINGER JOINT: An end joint made up of several meshing wedges or fingers of wood bonded together with an adhesive. Fingers are sloped and may be cut parallel to either the wide or edge faces of the piece. (AITC)

A series of fingers machined on the ends of two pieces of wood to be joined, which mesh together and are held firmly in position with an adhesive. (HPMA)

A means of joining individual pieces of wood together to form longer lengths. To do so, the ends of the pieces are machined to form a set of interlocking fingers. The fingers are coated with adhesive and meshed together under pressure. (WIC/NWMA)

FLAKE: A small flat wood particle of predetermined dimensions, uniform thickness, with fiber direction essentially in the plane of the flake; in overall character resembling a small piece of veneer. Produced by special equipment for use in the manufacture of flakeboard. (AITC)

Specially generated thin flat particles with the grain of the wood essentially parallel to the flat surface and with dimensions usually wide and long with respect to the thickness. (NPA)

FLAT GRAIN: Veneer cut so that the growth rings on more than half of the width of the piece make an angle of less than 45° with the surface. Also called "plain cut", "flat sawed", or "slash grain". (HPMA)

FLAT-PLATEN PRESSED PARTICLEBOARD: A particleboard manufactured by pressing a mass of particles coated with an extraneous binding agent between parallel platens in a hot press with the applied pressure perpendicular to the faces. (NPA)

GAP: Open slits in the inner plies or improperly joined veneers. (HPMA)

GLUE BLOCK: A wood block, usually triangular in cross-section, securely glued to an angular joint between two members, for greater glue bond area. (WIC)

GRAIN: The direction, size, arrangement, appearance or quality of the fibers in wood or lumber. To have a specific meaning, the term must be qualified. (AITC)

The natural pattern of growth in wood. The grain runs lengthwise of the tree; therefore, the strength is greatest in that direction. (APA)

The direction, size, arrangement and appearance of the fibers in wood or veneer. (HPMA)

The fibers in wood and their direction, size arrangement, appearance or quality. When severed, the annual growth rings become quite pronounced and the effect is referred

to as "grain".

Flat Grain (F.G.) or Slash Grain (S.G.) lumber or veneer is a piece sawn or sliced approximately parallel to the annual growth rings so that some or all of the rings form an angle of less than 45° with the surface of the piece.

Mixed Grain (M.G.) is any combination of Vertical or Flat Grain in the same member.

Vertical Grain (V.G.) lumber or veneer is a piece sawn or sliced at approximately right angles to the annual growth rings so that the rings form an angle of 45° or more with the surface of the piece. (WIC)

GRAIN CHARACTER: A varying pattern produced by cutting through growth rings, exposing various layers. It is most pronounced in veneer cut tangentially or rotary. (WIC)

GRAIN DIRECTION: In the face and back veneers of a plywood panel, grain usually runs the long dimension making the panel strongest in that direction. (APA)

GRAIN FIGURE: The pattern produced in a wood surface by annual growth rings, rays, knots, or deviations from natural grain, such as interlocked and wavy grain, and irregular coloration. (WIC)

GRAIN RAISE: The condition resulting on the surface of a plywood panel when the harder or more dense fibers of wood swell and raise above the surrounding softer wood. (APA)

GRAIN RUPTURE: Veneer with slight breaks from improper cutting or irregular grain. (AITC)

GROOVE: One of the surface treatments frequently given to textured plywood, in which a series of narrow parallel channels are cut into the surface of the panel. Grooving is available in a variety of widths and spacings on several surface textures. (APA)

Rectangular slot of three surfaces cut parallel with the grain of the wood. (WIC)

HALF LAP: A joint formed by extending (lapping) the joining part of one member over the joining part of the other member. (WIC)

HALF-ROUND: Veneer produced in the same manner as rotary cutting, except that the piece being cut is secured to a "stay log", a device that permits the cutting of the log on a wider sweep than when mounted with its center secured in the lathe. (HPMA)

HARDBOARD: A generic term for a panel manufactured primarily from interfelted lignocellulosic fibers (usually wood), consolidated under heat and pressure in a hot press to a density of 31 pounds per cubic foot or greater, and to which other materials may have been added during manufacture to improve certain properties. (AITC)

A generic term for a flat homogeneous, panel manufactured primarily from interfelted ligno-cellulosic fibers consolidated under heat and pressure to a density of 31 lb/cu. ft. or more. (HPMA)

A generic term for a panel manufactured primarily from interfelted lignocellulosic fibers consolidated under heat and pressure in a hot press and conforming to the requirements of CS251. (WIC)

A board consisting of wood fiber bonded under pressure to form a homogeneous sheet, having a density greater than 31 pounds per cubic foot; synthetic resin may be added to the fiber to provide additional bonding. (WIC/NWMA)

Generally one of the botanical groups of trees that have broad leaves in contrast to the conifers or softwoods. The term has no reference to the actual hardness of the wood. (AITC)

Wood of the broadleaved trees--oak, maple, ash, walnut--as contrasted to the softwood of the needleleaved trees such as pine, fir, spruce, hemlock. Term has no reference to actual hardness of the wood. Construction and industrial plywood may use either type. (APA)

General term used to designate lumber or veneer produced from broadleaved or deciduous trees in contrast to softwood, which is produced from evergreen or coniferous trees. (HPMA)

General term used to designate lumber or veneer produced from broadleaved or deciduous trees in contrast to softwood, which is produced from evergreen or coniferous trees. (WIC)

HARDWOOD, NONDENSE: Any hardwood having an average specific gravity of 0.42 or less when determined by oven-dry weight and green volume. (AITC)

HEARTWOOD: The wood extending from the pith to the sapwood, the cells of which no longer participate in the life processes of the tree. Heartwood may contain phenolic compounds, gums, resins and other materials that usually make it darker and more decay resistant than sapwood. (AITC)

The nonactive core of a tree, distinguishable from the growing sapwood by its usually darker color. (APA)

The inner core of a woody stem, extending from pith to sapwood, composed entirely of nonliving cells and usually differentiated from the outer enveloping layer of sapwood by its darker color. (AWPA)

The nonactive center of a tree generally distinguishable from the outer portion (sapwood) by its darker color. (HPMA)

The wood extending from the pith or the center of the tree to the sapwood, usually darker in color than sapwood. (WIC)

HEARTWOOD, LIVE: Heartwood of a normal color, brightness and resilience. Heartwood containing brown-colored medium stain is not considered to be live heartwood. (WIC)

KNOCKED DOWN: Unassembled, as contrasted to assembled or built-up. (WIC)

INNER PLYS: All layers of a plywood panel except face and back. (APA)

JOINT: The junction of two pieces of wood or veneer. (AITC)

The line between the edges or ends of two adjacent sheets of veneer or strips of lumber in the same plane. (HPMA)

KNOT: That portion of a branch or limb which has been surrounded by subsequent growth of the stem. The shape of the knot as it appears on a cut surface depends on the angle of the cut relative to the long axis of the knot. (AITC)

Natural growth characteristic of wood that occurs where a branch base is embedded in the trunk of a tree. (APA)

Cross section of tree branch or limb with grain usually running at right angles to that of the piece of wood in which it occurs. (HPMA)

KNOT, OPEN: Opening produced when a portion of the wood substance of a knot has dropped out, or where cross checks have occurred to produce an opening. (HPMA)

KNOTHOLES: Openings produced when knots drop from the wood in which they were originally embedded. (HPMA)

KNOTS, PIN: Sound knots less than 1/4 in. in diameter. (HPMA)

KNOTS, SOUND, TIGHT: Knots that are solid across their face and fixed by growth to restrain their place. (HPMA)

A portion of a branch or a limb whose growth rings are partially or completely intergrown on the face with the growth rings of the surrounding wood. It shall not contain any decay and shall be so fixed by growth shape that it will retain its place in the piece. The average of the maximum and minimum dimensions of the knot on the exposed surface shall be used in measuring the size.

For plywood:

(1) A pin knot does not exceed 1/4" in diameter.

For solid stock:

(1) A small pin knot does not exceed 1/4" in diameter.

(2) A pin knot does not exceed 1/2" in diameter.

(3) A small knot is larger than 1/2" but does not exceed 3/4". (WIC)

LAP: To position so that one surface extends over the other. Term may be used to designate a plywood exterior lap siding technique, in which each plywood panel overlaps the edge of the next lower panel. A plywood shiplap joint unites two panels when half the thickness of each panel is cut away so that the two pieces fit together with outer faces flush. (APA)

A condition where one piece of veneer in the same ply overlaps an adjacent piece. (HPMA)

LAP JOINT: A joint made by placing one member partly over another and bonding the overlapped portions. (AITC)

LATEWOOD: The portion of the annual growth ring that is formed after the earlywood formation has ceased. It is usually denser and stronger mechanically than earlywood. (AITC)

LAYER: A single ply, or veneer, or two or more plies laminated with grain directions parallel. (APA)

LOCK: Interlocking machine joint between two members. (WIC)

LOOSE AND LONG: Run to pattern only. Not assembled, nor machined for assembly, not cut to length. The terms "material only" and "mill run" mean the same as "loose and long". (WIC)

LOOSE SIDE: In knife-cut veneer, that side of the sheet that was in contact with the knife as the sheet was being cut, and containing cutting checks (lathe checks) because of the bending of the wood at the knife edge. (HPMA)

MACHINE RUN: Not sanded after machining. (WIC)

MACHINED AND KNOCKED DOWN: All pieces fully machined, ready for assembly. (WIC)

MACHINED, SMOOTHLY: Free of defective machining, with a minimum of 16 knife marks to the inch. Torn grain is not permitted. Handling marks and/or grain raising due to moisture shall not be considered a defect. (WIC)

- MATERIAL ONLY:** Run to pattern only. Not assembled, nor machined for assembly, nor cut to length. The terms "loose and long" and "mill run" mean the same as "material only". (WIC)
- MAT-FORMED PARTICLEBOARD:** A particleboard in which the coated particles are formed into a mat (having substantially the same length and width as the finished board) before being flat-pressed. (NPA)
- MEDIUM DENSITY FIBERBOARD:** A dry formed panel product manufactured from lignocellulosic fibers combined with a synthetic resin or other suitable binder. The panels are compressed to a density of 31 pounds per cubic foot to 50 pounds per cubic foot in a hot press by a process in which substantially the entire inter-fiber bond is created by the added binder. Other materials may have been added during manufacture to improve certain properties. The product shall meet the standards of National Particleboard Association NPA 4-73. (WIC)
- MEMBER:** An individual piece of solid stock or plywood which forms an item of millwork. (WIC)
- MILL RUN:** Run to pattern only. Not assembled, nor machined for assembly, nor cut to length. The terms "material only" and "loose and long" mean the same as "mill run". (WIC)
- MINERAL STREAK:** An olive to greenish-black or brown discoloration of undetermined cause in hardwoods. (WIC)
- MISMATCHED PLYWOOD:** A panel having the face made up of specially selected dissimilar (in color and grain) veneer strips of the same species and generally V-grooved at the joints between strips to simulate lumber planking. (HPMA)
- MITER:** The joining of two members at an angle that bisects the angle of junction. (WIC)
- MITER, LOCK:** A miter joint employing a tongue and groove working to further strengthen the joint. (WIC)
- MITER, SHOULDER:** Any type of a miter joint that presents a shoulder, such as a lock miter or a splined miter. (WIC)
- MITER JOINTS:** A joint formed by fitting together two pieces of lumber or plywood that have been cut off on an angle. (APA)
- MOLDING:** A wood strip having a curved or projecting surface, used for decorative purposes. (AITC)
- MORTISE:** A slot cut into a board, plank or timber, usually edgewise, to receive the tenon of another board, plank or timber to form a joint. (AITC)
- MORTISE AND TENON, BLIND:** A mortise and tenon joint in which the tenon does not extend through the mortise and does not remain visible once the joint is completed; also "blind tenoned". (WIC)
- MORTISE AND TENON, SLOTTED:** A mortise and tenon right angle joint in which the tenon is visible on two edges once the joint is completed. (WIC)
- MORTISE AND TENON, STUB:** A short tenon inserted in a plow or groove. (WIC)
- MORTISE AND TENON, THROUGH:** A mortise and tenon joint in which the inserted tenon extends completely through the mortise and the end of the tenon remains visible once the joint is completed. (WIC)
- MOULDED EDGE:** Edge of piece machined to any profile other than square or eased edge. (WIC)
- OVERLAID PARTICLEBOARDS:** Particleboards having factory-applied overlays which may be resin-treated papers, high or low pressure decorative plastic laminates, plastic films, hardboard, hardwood veneers, etc. (NPA)
- OVERLAY:** A thin layer of paper, plastic, film, metal foil, or other material bonded to one or both faces of panel products or to lumber to provide a protective or decorative face or a base for painting. (AITC)
- PANEL FACES:** Outer veneers of a plywood panel. (APA)
- PANEL PATCH:** A repair installed in the face or back veneer of a panel after lay-up and pressing of the panel. (APA)
- PANELING:** Wood panels joined in a continuous surface, especially, decorative panels for interior wall finish. Textured plywood in many varieties is often used as interior paneling either in full wall sections or for accent walls. (APA)
- PARTICLEBOARD(S):** A generic term for a panel manufactured from lignocellulosic materials--commonly wood--essentially in the form of particles (as distinct from fibers). These materials are bonded together with synthetic resin or other suitable binder, under heat and pressure, by a process wherein the inter-particle bonds are created wholly by the added binder. (AITC)
- A panel composed of small chips or pieces of wood that are bonded together in the presence of heat and pressure by a synthetic resin adhesive. (HPMA)
- A panel material composed of small discrete pieces of wood bonded together in the presence of heat and pressure by an extraneous binder. Particleboards are further defined by the method of pressing. When the pressure is applied in the direction perpendicular to the faces as in a conventional multi-platen hot press, they are defined as "flat-platen pressed",

and when the applied pressure is parallel to the faces, they are defined as "extruded". (NPA)

A mat-formed flat panel consisting of particles of wood bonded together with a synthetic resin or other suitable binder. The particles are classified by size and dried to a uniform moisture content, after which they are mixed with a binder, mat-formed into a panel, compressed to proper density and then cured under heat and pressure. (WIC)

A formed panel consisting of wood particles which are bonded under pressure with a synthetic resin; the board may be either homogeneous or layered. (WIC/NWMA)

PARTICLEBOARD CORESTOCK: Common name given to a particleboard manufactured for use as a core for overlaying. (NPA)

PARTICLEBOARD FLOOR UNDERLAYMENT: A grade of particleboard made or sanded to close thickness tolerances for use as a leveling course and to provide a smooth surface under floor covering materials. (NPA)

PARTICLES: The aggregate component of a particleboard manufactured by mechanical means from wood, including all small subdivisions of wood. Particle size may be measured by the screen mesh that permits passage of the particles and another screen upon which they are retained, or by the measured dimensions, as for flakes. (NPA)

PATCH(ES): An insertion of sound wood in veneers or panels for replacing defective areas. Patches may be in a variety of shapes. Most commonly used are "boat" patches, oval shaped with sides tapering to points or small rounded ends; "router" patches with parallel sides and rounded ends; and "sled" patches, rectangular in shape with feathered ends. (APA)

Insertions of filler material or sound wood plugs or shims placed and glued into veneers or panels from which defective portions have been removed. (HPMA)

A repair made by inserting and securely gluing a sound piece of wood of the same species in place of a defect that has been removed. The edges shall be cut clean and sharp and fit tight with no voids. "Boat" patches are oval-shaped with sides tapering in each direction to a point or to a small rounded end; "router" patches have parallel sides and rounded ends; "sled" patches are rectangular with feathered ends. (WIC)

PITCH: An accumulation of resin which occurs in separations in the wood or in the wood cells themselves. (WIC)

PITCH POCKET: An opening extending parallel to the annual growth rings and containing, or that has contained, pitch, either solid or liquid. (AITC)

A well-defined opening between the annual growth rings, which contains pitch.

1. A very small pocket is a maximum of 1/16" in width x 3" in length, or 1/8" in width x 2" in length.

2. A small pocket is a maximum of 1/16" in width x 6" in length, or 1/8" in width x 4" in length.

3. A medium pocket is a maximum of 1/16" in width x 12" in length, or 1/8" in width x 8" in length. (WIC)

PITCH STREAK(S): A well-defined accumulation of pitch in a more or less regular streak in the wood of certain conifers. (AITC)

A well-defined accumulation of pitch in the wood cells in a more or less regular streak.

1. A very small pitch streak is a maximum of 1/16" in width x 12" in length, or 1/8" in width x 6" in length.

2. A small streak is a maximum of 1/8" in width x 12" in length, or 1/4" in width x 6" in length.

3. A medium streak is a maximum of 1/4" in width x 16" in length, or 3/8" in width x 12" in length. (WIC)

PITH: The small, soft core occurring near the center of a tree trunk, branch, twig or log. (AITC)

A small, soft core occurring in the center of the log. (WIC)

PITH FLECK: A narrow streak, resembling pith on the surface of a piece; usually brownish, up to several inches in length; resulting from burrowing of larvae in the growing tissues of the tree. (AITC)

PLAIN SLICED: Veneer sliced parallel to the pith of the log and approximately tangent to the growth rings. Also termed "Flat cut". (HPMA)

PLOW: A rectangular groove or slot of three surfaces cut parallel with the grain of a wood member, in contrast to a dado, which is cut across the grain. (WIC)

PLY: A single veneer in a glued plywood panel. (APA)

A single sheet of veneer, or several pieces laid with adjoining edges, which form one layer in a piece of plywood. Also, when two or more full sized sheets of veneer are combined in thickness so that the grain of each sheet is in the same direction. (HPMA)

PLYWOOD: A composite panel or board made up of crossbanded layers of veneer only or veneer in combination with a core of lumber or of particleboard bonded with an adhesive. Generally, the grain of one or more plies

- is roughly at right angles to the other plies, and almost always an odd number of plies are use. (AITC)
- A panel composed of a crossbanded assembly of layers or plies of veneer, or veneers in combination with a lumber core or particleboard core, that are joined with an adhesive. Except for special constructions, the grain of alternate plies is always approximately at right angles, and the thickness and species on either side of the core are identical for balanced effect. An odd number of plies is always used. (WIC)
- PLYWOOD, HARDWOOD:** A panel composed of an assembly of layers or plies of veneer (or veneers in combination with lumber core, particleboard core, hardboard core, or of special core material) joined with an adhesive. Except for special constructions, the grain of alternate plies is always approximately at right angles, and the face veneer is usually a hardwood species. (HPMA)
- QUARTERED:** Veneer produced by slicing or sawing a log to bring out certain figures called medullary or pith rays, which are especially conspicuous in oak. The log is flitched in several different ways to allow the cutting of the veneer in a radial direction. (HPMA)
- RABBET:** A joint formed by the rabbet(s) on one or both members; also rabbeted edge joint; rabbeted right angle joint. (WIC)
- Rectangular cut consisting of two surfaces cut on the edge of a member. A "rabbet" has two surfaces and a "plow" has three. (WIC)
- A rectangular cut consisting of 2 surfaces cut on edge of a member parallel with the grain. (WIC/NWMA)
- RABBET JOINT:** A joint formed by cutting a groove in the surface or along the edge of a board, plank, or panel to receive another piece. (APA)
- RAISED GRAIN:** 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. (AITC)
- Roughened condition of surface of dressed lumber on which hard summerwood is raised above the softer springwood, but is not torn loose from it. (WIC)
- RELATIVE HUMIDITY:** Ratio of the amount of water vapor present in the air to that which the air would hold at saturation at the same temperature. It is usually considered on the basis of the weight of the vapor but, for accuracy, should be considered on the basis of vapor pressures. (AITC)
- RESAWN:** Rough sawn. A decorative treatment normally provided by scoring the surface of a panel with a saw after manufacture, which imparts a rough, rustic appearance. (APA)
- RIFT CUT:** Method of cutting veneer perpendicular to the medullary rays. (HPMA)
- RING, ANNUAL GROWTH:** The growth layer put on in a growth year. (WIC)
- RING FAILURE:** A separation of the wood during seasoning, occurring along the grain and parallel to the growth rings. (See also, Shake). (AITC)
- ROTARY CUT:** Veneer produced by centering the entire log in a lathe and turning it against a broad cutting knife which is set into the log at a slight angle. (HPMA)
- ROUGH CUT:** Irregular shaped areas of generally uneven corrugation on the surface of veneer, differing from the surrounding smooth veneer and occurring as the veneer is cut by the lathe or slicer. (HPMA)
- ROUGH SAWN:** A decorative treatment normally provided by scoring the surface of a panel with a saw after manufacture which imparts a rough, rustic appearance. Same as resawn. (APA)
- SANDED, CROSS:** Sanded across, rather than parallel to, the grain of a wood surface. (WIC)
- SANDED, MACHINE:** Sanded by drum or equivalent sander to remove knife or machine marks. Handling marks and/or grain raising due to moisture shall not be considered a defect. (WIC)
- SANDED, SMOOTHLY:** Sanded sufficiently smooth so that sander marks will be concealed by painter's applied finish work. Handling marks and/or grain raising due to moisture shall not be considered a defect. (WIC)
- SAPWOOD:** The (living) wood of pale color near the outside of the log. Under most conditions the sapwood is more susceptible to decay than heartwood. (APA)
- The outer light-colored wood of the tree stem which is physiologically active while the tree is growing. (AWPA)
- The living wood of lighter color occurring in the outer portion of a tree. Sometimes referred to as "sap". (HPMA)
- Wood occurring between the bark and the heart of the tree. (WIC)
- SASH:** A single assembly of stiles and rails into a frame for holding glass, with or without dividing bars, to fill a given opening. It may be either open or glazed. (AITC)

SCARF: End joint formed by having the two ends of the members beveled to form sloping plane surfaces. (WIC)

SCARF JOINT: An end joint formed by joining with glue the ends of two pieces that have been tapered or beveled to form sloping plane surfaces, usually to a feather edge, and with the same slope of the plane with respect to the length in both pieces. In some cases, a step or hook may be machined into the scarf to facilitate alignment of the two ends, in which case the plane is discontinuous and the joint is known as a stepped or hooked scarf joint. (AITC)

An angled or beveled joint in plywood where pieces are spliced together. The length of the scarf is 5 to 12 times the thickness. (APA)

SELF-EDGE: Application to the edge of plywood or particleboard of a plastic laminate of the same pattern as the face surface. (WIC)

SHAVING: A thin slice or strip of wood pared off with a knife, planer, or other cutting instrument in which the cut may be either across, parallel to, or at an angle to the axis of the fibers. (NPA)

SHIPLAP: A method of jointing in which the ends or edges are milled rectangularly so that they overlap. See JOINT TREATMENT. (APA)

SLICED: Veneer produced by thrusting a log or sawed flitch into a slicing machine which shears off the veneer in sheets. (HPMA)

SLIVERS: Particles of nearly square or rectangular cross-section with a length parallel to the grain of the wood at least four times the thickness. (NPA)

SOFTWOOD(S): Generally, one of the botanical groups of trees that in most cases have needlelike or scalelike leaves; the conifers, also the wood produced by such trees. The term has no reference to the actual hardness of the wood. (AITC)

The general term for trees that have needlelike or scale-like leaves and bear cones. Also the wood produced by such trees. The term has no reference to the actual hardness of the wood. (APA)

General term used to describe lumber or veneer produced from needle and/or cone-bearing trees. (HPMA)

SOLID CORE: Plywood panels in which the inner plies are free from voids. (HPMA)

SOLID STOCK: Solid, sound lumber (as opposed to plywood), which may be more than one piece of the same species, securely glued for width or thickness. (WIC)

SOLID STUCK: A mould that is worked on the article itself, as opposed to an applied mould. (WIC)

SOUND: Absence of decay. (WIC)

SPECIES: A distinct kind of wood. (HPMA) (WIC)

SPECIFIC GRAVITY: As applied to wood, the ratio of the oven-dry weight of a sample to the weight of a volume of water equal to the volume of the sample at a specified moisture content (green, air-dry or oven-dry). (AITC)

As applied to wood, the ratio of the oven-dry weight of a sample to the weight of a volume of water equal to the volume of the sample at some specified moisture conditions such as green, air-dry or oven-dry.

As applied to preservatives, the ratio of the weight of a given volume of a preservative at an observed temperature (usually 100°F) to the weight of an equal volume of water at some standard temperature (usually 60°F). (AWPA)

The ratio of the weight of a certain volume of a substance to the weight of an equal volume of water, the temperature of which is 39.2°F. (4°C.) (HPMA)

SPLINE: A joint formed by the use of a "spline". A spline is a thin, narrow strip usually of plywood, inserted into matching grooves which have been machined in abutting edges of panels or lumber to insure a flush alignment and secure joint; customarily runs the entire length of the joint. (WIC)

Separations of wood fiber running parallel to the grain. (HPMA)

A separation of the wood due to the tearing apart of the wood cells.

1. A very short split is approximately as long as one-half the width of the piece.

2. A short split is approximately as long as the width of the piece. (WIC)

STAIN: A discoloration in wood that may be caused by such diverse agencies as microorganisms, metal or chemicals. The term also applies to materials used to impart color to wood. (AITC)

A variation (normally blue or brown) from the natural color of the wood. It should not be confused with natural red heart.

1. Slight stain is a light color, barely perceptible.

2. Medium stain is a pronounced discoloration.

3. Heavy stain is the darkest color that develops in lumber. (WIC)

STAIN, BLUE: A deep-seated fungus discoloration, predominantly bluish, but sometimes grayish, blackish, or brownish in appearance; confined almost exclusively to sapwood. (AWPA)

STAIN, SAP: Any stain that predominantly affects sapwood. (AWPA)

STAIN, STICKER: A brown or blue stain caused by fungi that occurs in air-seasoning of lumber where the stickers rest on the faces of the stock; also a brown chemical stain occurring on and beneath the surface of portions of a piece that are in contact with stickers. (AWPA)

STARVED JOINT: A glue joint that is poorly bonded because an insufficient quantity of glue remained in the joint. (AITC)

STRIATED: A texture in plywood siding characterized by closely spaced shallow grooves or striations which form a vertical pattern. (APA)

SURFACE CHECK: The separation of a wood, normally occurring across the rings of annual growth, usually as a result of seasoning, and occurring only on one surface of the piece.

1. A fine surface check is not longer than 4"
2. A small surface check is over 4" and not longer than 6".
3. A medium surface check is over 6" and not longer than 8". (WIC)

TENON: A projecting member left by cutting away the wood around it for insertion into a mortise to make a joint. (AITC)

Projecting tongue-like part of a wood member to be inserted into a slot (mortise) of another member to form a mortise and tenon joint. (WIC)

TEXTURED PLYWOOD: Panels with many different machined surface textures, Available in Exterior type with fully waterproof glue-line for siding and other outdoor uses and for interior wall panelling. (APA)

TIGHT SIDE: In knife-cut veneer, that side of the sheet that was farthest from the knife as the sheet was being cut and containing no cutting checks (lathe checks). (HPMA)

TONGUE: Projection on the edge or end of a wood member that is inserted into the groove or plow of a similar size to form a joint. (WIC)

TONGUE AND GROOVE: A joint formed by the insertion of the "tongue" of one wood member into the "groove" of the other. (WIC)

TONGUE-AND-GROOVE JOINT: A system of jointing in which the rib or tongue of one member fits exactly into the groove of another. A specially designed American Plywood Association tongue-and-groove plywood edge joint is particularly efficient in transferring the load across the joint. T&G panels measure 48" overall, or about 47-1/2" +/- 1/8", on the face. (APA)

TOP FLAT SURFACE: The flat surface that can be sanded with a drum sander. (WIC)

TORN GRAIN: A roughened area caused by machine work in processing. (WIC)

TRIM: The finish materials in a building, such as moldings, applied around openings (window trim, door trim) or at the floor and ceiling of rooms (baseboard, cornice and other moldings). (AITC)

TWIST: A distortion caused by the turning or winding of the edges of a board so that the four corners of any face are no longer in the same plane. (AITC)

A distortion caused by the turning or winding of the edges of the surface so that the four corners of any face are no longer in the same plane. (WIC)

VENEER: A thin layer or sheet of wood. (AITC)

Thin sheets of wood, laminated in manufacture of plywood, glued to form a panel that is split and puncture-resistant. (APA)

A thin sheet of wood, rotary cut, sliced, or sawed from a log, bolt, or flitch. Veneer may be referred to as a ply when assembled into a panel. (HPMA)

A thin sheet or layer of wood, usually rotary cut, sliced or sawn from a log or flitch. Thickness may vary from 1/100" to 1/4". (WIC)

VENEER QUARTERED: Refers to the method of producing veneer in which a log is sliced or sawed to bring out certain figures produced by the medullary or pith rays, which are especially conspicuous in oak. The log is flitched in several different ways to allow the cutting of the veneer in a radial direction. (WIC)

VENEER, ROTARY CUT: Refers to a method of producing veneer in which the entire log is centered in a lathe and is turned against a broad cutting knife which is set into the log at a slight angle. (WIC)

VENEER, SLICED: Refers to the method of producing veneer in which a log or sawn flitch is held securely in a slicing machine and is thrust downward into a large knife which shears off the veneer in sheets. (WIC)

V-GROOVED: Narrow and shallow V- or U-shaped channels machined on the plywood face to achieve a decorative effect. V-grooving is most commonly encountered in mismatched wall panels as the grooves fall on the edge joints of the pieces of veneer making the face appear as planking. (HPMA)

WAINSCOT: The wooden lining of the lower part of an interior wall. (APA)

A lower interior wall surface that contrasts with the wall surface above it. Unless otherwise specified, it shall be 4'-0" in height above the floor. (WIC)

WANE: Bark or lack of wood from any cause on edge or corner of a piece. (AITC)

Bark or lack of wood from any cause, except eased edges, on the edge or corner of a piece of lumber. (WIC)

WARP: Any variation from a true or plane surface. Warp includes bow, crook, cup, and twist, or any combination thereof. (AITC)

Any deviation from a true or plane surface, including crook, bow, cup, twist, or any combination thereof. (WIC)

WARPING: To bend, twist or turn from a straight line. (APA)

WINDOW: A window consists of two or more single sash to fill a given opening. It may be either open or glazed. (WIC)

WOOD FAILURE (PERCENTAGE): The area of wood fiber adhering at the glue line following completion of the specified shear test. Determination is by visual examination and the value is expressed as an estimated percentage of the wood area remaining adhered to the fractured surface in the test area. (HPMA)

The area of wood fiber remaining at the glue line following completion of a shear test and expressed as a percentage of the test area. (WIC)

WOOD FILLER: An aggregate of resin and strands, shears, or flour of wood which is used to fill openings in wood and provide a smooth, durable surface. (HPMA)
(WIC)

WORKED: Machined or formed in any manner except surfaced four sides. (WIC)

WORKMANSHIP, FIRST CLASS: The finest or highest class or grade of workmanship. All joints shall be tight and true. Cabinet parts shall be square, plumb and in alignment and securely glued. The exposed surface shall be free of splits, torn or chipped surfaces, tool marks, cross sanding, gouges, dents, sand through and other similar type defects. (WIC)