MIL-STD-731
9 December 1959

MILITARY STANDARD

QUALITY OF WOOD MEMBERS FOR CONTAINERS AND PALLETS

UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON: 1960

For sale by the Superintendent of Documents, U. S. Government Printing Office
Washington 25, D. C.

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Supply and Logistics

Quality of Wood Members for Containers and Pallets
MIL-STD-731 2 February 1960

1. This standard has been approved by the Department of Defense and is mandatory for use by the Departments of the Army, the Navy, and the Air Force, effective 9 December 1959.

2. In accordance with established procedure, the Corps of Engineers, the Bureau of Supplies and Accounts, and the Wright Air Development Center have been designated as Army-Navy-Air Force custodians for this standard.

3. Recommended corrections, additions, or deletions should be addressed to the Standardization Division, Armed Forces Supply Support Center, Washington 25, D. C.

FOREWORD

This document has been prepared to establish quality standards for three classes of wood members of containers and pallets. It is intended that it will be used as a material reference in container and pallet specifications. The intended use is further described in 10.1 and tables III and IV.

Each wood member contains a combination of characteristics which effects the performance of the container or pallet in which it is used. The requirements for classes, herein specified, have been established as these characteristics are related to the functional application of the members in container and pallet construction and to the service which the container or pallet may be called upon to perform.

Any other specific requirements or limitations peculiar to a particular container or pallet construction or use, such as prohibiting knotholes or loose knots to provide siftproofness, limitation to certain wood groups or species, and the selection of applicable classes for specific members or types of containers or pallets shall be the responsibility of the container or pallet specification custodian or of the requisitioning agency.

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FIGURES

TABLES

1. SCOPE

1.1 Scope. This standard covers quality requirements for three classes of wood members employed in the construction of boxes, crates, pallets, and blocking and bracing within containers for domestic and overseas shipment.

1.2 Quality classification:

Class 1 — Structural (highly stressed members).

Class 2 — Structural (members with moderate stress).

Class 3 — Nonstructural (members ordinarily unstressed).

2. REFERENCED DOCUMENTS

Federal Specification MMM-A-188 — Adhesive; Urea-Resin-Type (Liquid and Powder).

Military Handbook, MIL-HDBK-7 — Lumber and Allied Products.

(Department of the Army TM 715-5500-1). (Copies of this document may be obtained from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.)

3. DEFINITIONS

3.1 Wood member. A single solid, wood component of a box, crate, pallet, or blocking, or a component built up according to the provisions in 5.5.

3.2 Boxes.

3.2.1 *Cleats.*

3.2.1.1 Nailed wood box cleats are members that reinforce and tie together the boards in the ends of a shook or box and provide improved nailing.

3.2.1.2 Wirebound box cleats are members that form the framework to which face boards of the top, bottom, and sides are stapled.

3.2.1.3 Cleated-panel box cleats are members that form a reinforcing framework for additional strength and stacking resistance. They also provide surfaces for panel and box assembly nailing.

3.2.2 *Battens.*

3.2.2.1 Nailed wood box battens are reinforcing members added either to the inside or outside of tops, bottoms, sides, and ends of a shook or box to reduce the unsupported span of the boards.

3.2.2.2 Wirebound box battens are members to which end face boards are fastened and are attached to the outside faces of the end face boards.

3.2.3 Box skids are members attached to the bottoms of boxes which serve to support the load, to provide for forklift handling, sometimes replace the outside bottom battens, and may be longitudinal or transverse.

3.3 Crates.

3.3.1 Frame members are those parts which form the fundamental structure upon which the strength and rigidity of crates depend.

3.3.2 Longitudinal frame members are horizontal members of the side, end, and top panels.

3.3.3 Diagonals are frame members placed at angles of nearly 45° to other frame members and serve as braces to insure rigidity in the crate.

3.3.4 Struts are vertical frame members, placed between the upper and lower frame members of the side and end panels, and serve as columns for supporting vertical stacking loads.

3.3.5 Skids are horizontal members attached to the bottom of the crate which serve to support the load. Outside skids also serve as fastening members for the side panels.

3.3.6 Headers are transverse members at each end of a skid-type base which serve to hold the base together as a unit, to transfer loads to the skids, and to provide a fastening member for end panels.

3.3.7 Load-bearing floorboards are transverse members of bases which provide a means for anchoring and transfering loads evenly to the skids.

3.3.8 Sills form the framework of sill-type bases, carry and transfer loads to side panels, and serve as fastening members.

3.3.9 Bridging consists of members that are inserted at right angles to sills or joists to prevent lateral turning or buckling.

3.3.10 Rubbing strips are longitudinal

members nailed to the underside of skids or sill bases to provide for sling and forklift truck handling.

3.3.11 Joists are members extending across the crate underneath the top to support and transfer vertical stacking loads to the side panels.

3.3.12 Joist supports are members that serve to support the joists and transfer stacking loads to the side panels.

3.3.13 Lumber sheathing consists of boards nailed to frame members to enclose the crate.

3.4 Pallets. Pallets are materials-handling platforms consisting of one or two faces separated or supported by structural members that provide clearance for slings and the forks of lift trucks.

3.4.1 Deck boards make up the faces of a pallet and are referred to as top or bottom deck boards.

3.4.2 Stringers are wooden runners to which deck boards are fastened. They serve as spacers to permit entry of the forks of lift trucks.

3.4.3 Posts are rectangular or round blocks employed on some four-way entry and eight-way entry pallets in place of stringers, and serve the same purpose.

3.4.4 Stringer boards are boards that tie the blocks together and to which the top deck boards are fastened in a four-way block-type pallet.

3.5 Defects. Defects are any irregularities or imperfections occurring in or on wood that may lower its strength.

3.5.1 Knots are cross sections of branches visible on the surface of a piece of wood.

3.5.2 Sound knots are solid across their faces, are at least as hard as the surrounding wood, and show no indication of decay.

3.5.3 Loose knots because of growth conditions or moisture changes are separated from the surrounding wood and cannot be relied upon to remain in place.

3.5.4 Knotholes are holes in wood from which knots have fallen.

3.5.5 Knot clusters are three or more knots in very close proximity to each other, the fibers of the wood being deflected around the entire unit. They are separated by a distance no greater than their average width, figure 1. A group of single knots is not a knot cluster.

3.5.6 Tandem knots are three or more knots close to each other and on lines approximately parallel to the edges of a board, figure 1. When knots are in tandem or partially so, as in figure 1, the measurement a shall be used instead of the sum of the individual widths.

3.5.7 Decay is disintegration of wood due to action of fungi.

3.5.8 Stain and discoloration are often caused by fungi, but normal color variations in healthy wood are often confused with decay. Heavy fungus stain is usually an indication of incipient decay. Other discolorations not associated with decay are chemical stains occurring during seasoning; oxidation of the surfaces of some woods; purplish stain from contact with iron; mineral stain; and the stains of oils, solvents, and some glues.

3.5.9 Checks, splits, and shakes are lengthwise grain separations of the wood.

3.5.9.1 Checks usually result from stresses set up during seasoning. Through checks ex-

tend through the full thickness of the members.

3.5.9.2 Splits extend through the full thickness of the members and often take a radial direction.

3.5.9.3 Shakes are separations between rings of annual growth that extend through the full thickness of the members.

3.5.10 Wane is bark or lack of wood from any cause on the edge or corner of a piece of wood.

3.5.11 Warp is any distortion in a member from plane surface. Warp includes bow, crook, cup, and twist, or any combination.

3.5.11.1 Bow is the distortion in a member that deviates from a plane surface lengthwise but not across its face. The amount of bow is the greatest distance of the surface of the member from the plane.

3.5.11.2 Crook is the distortion in a member that deviates edgewise from a straight line from end to end. The amount of crook is the greatest distance of edge of the piece from the line.

3.5.11.3 Cup is the distortion in a member that deviates flatwise from a plane surface across its width. The amount of cup is the greatest distance of the surface of the member from the plane.

3.5.11.4 Twist is the distortion in a member caused by the turning of its edges so that the four corners of any face are no longer in the same plane. The amount of twist is the distance the end of an edge is raised above a horizontal flat surface when both edges are resting snugly at the opposite end.

3.6 Grain. Grain is the direction, size, arrangement, appearance, or quality of the fibers in wood.

3.6.1 Cross grain is not parallel with the longitudinal axis of the piece, figure 2. It may be either diagonal or spiral grain or a combination of the two.

3.6.2 Diagonal grain is a condition where the annual rings are at an angle with the longitudinal axis of the piece as a result of sawing at an angle other than parallel with the bark of the tree, figure 2.

3.6.3 Spiral grain is a type of growth in which the fibers take a spiral course about the bole of a tree instead of the normal vertical course, figure 2.

4. GENERAL REQUIREMENTS

4.1 Species of wood. The species of wood which may be used for wood members of containers or pallets are classified in groups as specified herein. When it is stipulated that members shall be of a particular wood group, the species within the group may be mixed together or used interchangeably. When a group or species is not specified, any group may be used at the option of the contractor and the species within that group used interchangeably. Characteristics of the wood groups are described in the appendix (10.2).

Group I

Aspen (popple)	Magnolia
Basswood	Pine (except southern yellow pine)
Buckeye	Redwood
Cedar	Spruce
Chestnut	Willow
Cottonwood	Yellow-poplar
Cypress	
Fir (true firs)	

Group II

Douglas-fir	Tamarack
Hemlock	Western larch
Southern yellow pine	

Group III

Ash (except white ash)	Sweetgum
Soft elm	Sycamore
Soft maple	Tupelo

Group IV

Beech	Oak
Birch	Pecan
Hackberry	Rock elm
Hard maple	White ash
Hickory	

4.2 Surfacing. Rough lumber shall be permitted for bases of all crates and for framing of sheathed crates. At least one surface of all other wood members shall be sufficiently smooth (surfaced or smooth sawn) to permit legible marking.

4.3 Inspection procedures. Inspection procedures shall be conducted in accordance with the requirements in the specification referencing this standard.

5. DETAILED REQUIREMENTS

(When this standard is referenced, the following detailed requirements shall apply unless the specification referencing this standard specifies otherwise.)

5.1 Dimensional limitations. Where nominal sizes[1] are specified, the minimum sizes[2] in table 1 shall govern. When sizes of wood members other than listed are specified, occasional undersize in thicknesses and widths, due to mismanufacture, shall be permited in not more than 10 percent of the pieces. However, these parts shall be no thinner than 7/8 of the required thickness and no part shall be narrower than 1/4 inch less than the required width. If wood members for nailed wood boxes 5/8 inch or more in thickness are surfaced on both sides (to protect the contents), the thickness may be 1/32 inch less than required.

TABLE I. *Relation of nominal to minimum allowable dimensions of softwood lumber*[3]

Thickness (smaller dimensions)		Width (larger dimensions)	
Nominal	Minimum	Nominal	Minimum
Inches	*Inches*	*Inches*	*Inches*
[3] 1	[3] 3/4	2	1 5/8
2	1 5/8	3	2 5/8
3	2 5/8	4	[3] 3 5/8
4	3 5/8	5	[3] 4 5/8
5 and thicker	1/2 less	6 and wider	1/2 less

[3] Hardwood lumber is bought and sold on actual rather than nominal sizes. The minimum allowable sizes are applicable to hardwoods.

[3] The American Lumber Standards thickness for nominal 1-inch boards is 25/32 inch. The 3/4-inch thickness listed is not intended to represent an American Lumber Standard's standard, but rather is one of the usable thicknesses of softwood lumber on which containers and pallets are designed.

[3] The American Lumber Standards dressed width of timbers 5 inches and wider is 1/2 inch off the nominal size.

5.2 Moisture content. Moisture contents shall be determined by a suitable electric-type moisture meter (5.2.3.1) or by the oven-drying method (5.2.3.2).

5.2.1 *Moisture content in container members.* Wood members in containers shall have a moisture content at time of fabrication not greater than 19 percent, nor less than 12 percent of their ovendry weight.

5.2.2 *Moisture content in standard pallet members.* Groups I, II, and III wood members in pallets shall have a moisture content at time of fabrication not greater than 19 percent, nor less than 12 percent of their ovendry weight. Group IV wood members in pallets shall have a moisture content not greater than 22 percent when thicknesses are nominal 1 inch or less, and 26 percent when thicknesses are over nominal 1 inch.

5.2.3 *Methods of determining moisture content.*

5.2.3.1 *Moisture meters.* Meters measuring moisture contents ranging as high as 30 percent shall be used to determine moisture content of group IV pallet members. Meters measuring moisture contents as high as 23 percent shall be used for all other wood members. In the 7 to 25 percent moisture-content range, meter accuracy when properly calibrated shall be within 1 percent, either way, of true moisture content. When electric-type moisture meters are used on rough-sawn wood members, they shall be of the resistance type. When electric-type moisture meters are used on surfaced wood members, they may be either the resistance type, capacity type, or the radio frequency power loss type. Readings on the resistance-type moisture meter shall be made only when the pins have penetrated to a depth of one-fourth of the thickness of the member.

5.2.3.2 *Ovendrying method.* A small sam-

[1] The rough-sawn commercial size by which softwood lumber is known and sold in the market.
[2] The minimum permissible size of rough-sawn commercial lumber after shrinking and machining.

ple, preferably not less than 1 ounce, shall be cut from the piece to be tested. It shall be weighed immediately on a scale that is accurate to ½ of 1 percent. This shall be the original weight. The sample shall be dried in an oven maintained at 212° to 221°F. (100° to 106°C.) until constant weight is attained. This shall be the ovendry weight. The percent moisture content shall be computed by the following formula:

$$\frac{\text{(Original weight)} - \text{(ovendry weight)}}{\text{(Ovendry weight)}} \times 100 \text{ equals percent moisture content}$$

5.3 Defects.

5.3.1 *General.* Wood members shall be so selected and cut that allowable defects or imperfections will not occur in positions that would interfere with the prescribed fabrication or assembly of the container or pallet (see 3.4 for definitions of defects).

5.3.2 *Decay.* Any form of visible decay shall not be permitted except in knots. Stains and discoloration not associated with decay will be acceptable, except that discoloration that interferes with marking on the outside of the container will not be permitted. Decay can usually be detected and differentiated from harmless stains and discoloration by use of the pick test. The pick test is performed with a knife or chisel by lifting up some of the grain or fibers in suspicious looking areas. If the material is softer, more punky, or more brash (breaks without splintering) than healthy wood of the same species, it is probably decayed. Suspicious areas usually are abnormally brown, bleached looking, or mottled and indicated by the absence of luster that is present in normal wood.

5.3.3 *Through checks, splits, and shakes.* Through checks, splits, and shakes that are longer than the width of the member will not be permitted. Seasoning checks that do not extend through the full thickness of the members are permitted. For some containers, the limitations on checks, splits, and shakes may be more liberal, especially if repaired in an approved manner, but these requirements shall be so stated in the applicable container specification.

5.3.4 *Wane.* Wane shall be permitted on one edge only and shall be restricted to the limits shown in table II.

5.3.5 *Warp.* The bow in a member shall not exceed ⅛ inch per foot of length. The crook in a member shall not exceed 1/16 inch per foot of length. The cup in a member shall not exceed ¼ inch in an 8-inch width, ⅛ inch in a 4-inch width, or a like proportion in other widths. The twist in a member shall not exceed ¼ inch per foot of length in an 8-inch width, ⅛ inch per foot of length in a 4-inch width, or a like proportion in other widths.

5.3.6 *Knots.* Sound knots, loose knots, knotholes, knot clusters, and knots containing decay shall be measured and restricted as specified for knots. The width of knots shall be measured across the width of the wood member, perpendicular to the length of the piece, figure 1. Knots shall be limited in width in accordance with table II. The sum of the widths of the knots within a length equal to the width of the wood member in which they occur shall not exceed the maximum allowable width of a single knot for that piece.

5.4 Cross grain. The slope of the cross grain, resulting either from diagonal sawing or from twisted or spiral grain in the log or both, shall be limited in accordance with table II. Slope of cross grain shall be measured by the angle between the general direction of the grain and the longitudinal

axis of the wood member and shall be expressed as a ratio. Slight local deviations of grain direction shall be disregarded. When a wood member contains both diagonal and spiral grain, figure 2, the combined damaging effect shall be taken into account (see 10.8 for measuring and calculating the combined slope).

5.5 Built-up sheathing members. Members to be used for sheathing of sides, end, tops, or bottoms of boxes or of crates may be built up by joining pieces together at their edges by the following methods: (1) Linderman joint and glue, (2) butt joint and glue, and (3) tongue and groove joint and glue. The glue used shall be urea-resin glue conforming to Specification MMM-A-188. To be acceptable, the joints shall be sampled and shall pass the test described in 6.1.

TABLE II. *Classes of wood members for containers and pallets*

Class	Maximum allowable width of knots	Maximum allowable slope of cross grain	Maximum allowable wane
1. Structural	2 inches, but not over ¼ of the width of the wood member.	No steeper than 1 in 10.	¾ thickness. ⅛ width. ⅓ length.
2. Structural	3 inches, but not over ⅜ of the width of the wood member.	No steeper than 1 in 10.	¾ thickness. ¼ width.
3. Nonstructural ..	4 [1] inches, but not over ½ of the width of the wood member.	No steeper than 1 in 8.	¾ thickness. ½ width.

[1] The maximum allowable width of knots in face boards of wirebound boxes shall be 1½ inches.

6. QUALITY CONTROL

6.1 Quality control test of members built up of edge-joined pieces. Fifteen samples shall be cut at random from each lot of built-up members (all members cut for one type and order of container shall be considered a lot). The samples shall be 2 inches ± 1/8 inch wide (parallel to the grain direction) by a length (perpendicular to the grain direction) equal to the width of the member. Any sample that contains a visible split, shake, pitch pocket, or check across the entire width shall be discarded and a new sample shall be chosen to replace it. Samples shall be picked so that the joint to be tested is at least 2⅝ inches from the edge of the board. The 15 chosen samples shall be tested as cantilever beams as shown in figure 3. The length of the sample shall be placed perpendicular to the top edge of the vise. The size of the block and the position of the cleat shall be selected so that the lever is parallel to the sample. The lever shall be at least 30 inches long. The sample shall be positioned vertically so that the joint is 0.4 times the clear span, L, above the top face of the vise. A slow, even pull shall be applied to the top of the lever until the sample fails in bending. The position of the break with respect to the joint shall be recorded. Any break that is wholly or partially at the joint shall be recorded as joint failure. In order for the lot of members to pass this test, at least 12 of the samples shall fail in the wood and below the joint.

(Copies of specifications, standards, drawings, and publications required by contractors in connection with specific procurement functions should be obtained from the procuring agency or as directed by the contracting officer.)

(Copies of this standard for military use may be obtained as indicated in the foreword to the Index of Military Specifications and Standards.)

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Preparing activity:
Army—Corps of Engineers

Custodians:
Army—Corps of Engineers
Navy—Bureau of Supplies and Accounts
Air Force

10. APPENDIX

(The material in this appendix is not a mandatory part of this standard.)

10.1 Intended use. Wood members covered by this standard are for boxes, crates, pallets, and blocking and bracing within containers, according to the recommended use in tables III and IV. The quality is defined with respect to maximum permissible defects or imperfections for the intended use and consequently does not coincide with the quality standards of commercial lumber. There are, however, grades of such lumber, from which pieces conforming to the requirements of this specification, may be economically cut. When lumber is to be procured by the Government for container or pallet manufacture, reference should be made to the recommendations in section 11 of Military Handbook, MIL-HDBK-7, "Lumber and Allied Products." The tables in that section recommend the lowest suitable grades for this purpose.

10.2 Wood groups.

10.2.1 Group I embraces the softer woods of both the coniferous and the broad-leaved species. These woods are relatively free from splitting in nailing, have moderate nail-holding power, moderate strength as a beam, and moderate shock-resisting capacity. They are soft, light in weight, easy to work, hold their shape well after manufacture, and as a rule, are easy to dry.

10.2.2 Group II consists of the heavier coniferous woods and includes no hardwood species. These woods usually have a pronounced contrast in the hardness of the springwood and the summerwood. They have greater nail-holding power than the group I woods, but are more inclined to split and the hard summerwood bands occasionally deflect the nails and cause them to run out at the side of the piece.

10.2.3 Group III consists of hardwoods of medium density. No coniferous species are included. These woods have about the same nailholding power and strength as a beam as the group II woods, but are less inclined to split and shatter under impacts. Group III species are the most useful woods for box ends and cleats. They also furnish most of the rotary-cut veneer for wirebound and plywood boxes.

10.2.4 Group IV woods are hardwood species. They have both the greatest shock-resisting capacity and the greatest nail-holding power, but because of their extreme hardness, they present difficulties with respect to the driving of nails and also have the greatest tendency to split at the nails. They are the heaviest and hardest domestic woods and are difficult to work. They are especially useful where high nail-holding power is required and many of them make excellent rotary-cut veneer for wirebound and plywood boxes.

10.3 Measuring and calculating the combined slope of cross grain. A convenient method of measuring slope of cross grain is by using a sharply pointed steel scribe. Figure 4 illustrates four scribes that are satisfactory for this purpose. The scribe should be drawn in the direction in which the grain seems to run; enough pressure must be applied so that the point will penetrate the wood slightly; and enough freedom of lateral movement must be allowed to permit the point to follow the grain. The combined damaging effect of slope of cross grain can be computed by combining the apparent slope of grain on two adjacent faces of a member. When each of the slopes are expressed as a ratio to 1, i.e., 1 in 18 and 1 in 12, the combined slope is the square root of the sum of the squares of the two slopes (combined slope = $\sqrt{(1/18)^2 + (1/12)^2} = 0.0100$ or 1 in 10).

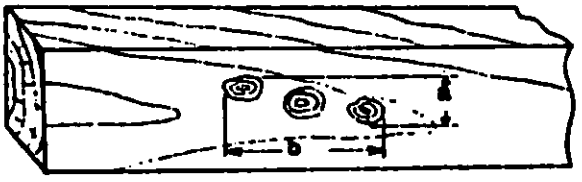
TABLE III. *Wood member classes for component parts of containers and pallets for multiple handling and shipment (including indeterminate storage and worldwide distribution)*

Container	Class 1 structural	Class 2 structural	Class 3 nonstructural
Nailed wood boxes	Cleats Battens	Tops Bottoms Sides	Ends Skids
Cleated-panel boxes		Cleats	
Wirebound boxes	Cleats	Battens	Sawed boards
Fiberboard-lined boxes	Cleats	Tops	Ends
Triple-wall boxes	Cleats	Bottoms Sides	Ends
Sheathed crates	Load-bearing floorboards Top joists	Skids Sills Headers Struts Diagonals Longitudinal framing members Joist supports	Sheathing and nonload-bearing floorboards Rubbing strips Sill bridging
Open crates	Load-bearing floorboards Skids All other framing members		Rubbing strips Nonload-bearing floorboards
Light duty crates	Load-bearing floorboards Skids	Longitudinal framing members Headers Struts Diagonals	Rubbin strips Nonload-bearing floorboards
Pallets		Deck boards Stringer boards Stringers Posts	
Blocking and bracing within containers	Structural		Nonstructural

TABLE IV. *Wood member classes for component parts of containers and pallets for domestic shipment and use of contents at first destination*

Container	Class 1 structural	Class 2 structural	Class 3 nonstructural
Nailed wood boxes		Cleats Battens Tops Bottoms Sides	Ends
Cleated-panel boxes		Cleats	
Wirebound boxes		Cleats Battens	Sawed boards
Fiberboard-lined boxes ..		Cleats	Tops Bottoms Sides Ends
Triple-wall boxes		Cleats	Ends
Sheathed crates	Load-bearing floorboards	Top joists Skids Sills Headers Longitudinal framing members	Struts Diagonals Sheating Nonload-bearing floorboards Joist supports Rubbing strips Sill bridging
Open crates	Load-bearing floorboards	Skids All other framing members	Rubbing strips Nonload-bearing floorboards
Light duty crates	Load-bearing floor boards	Skids All other framing members	Rubbing strips Nonload-bearing floorboards
Pallets		Deck boards Stringer boards Stringers	Posts
Blocking and bracing within containers	Structural		Nonstructural

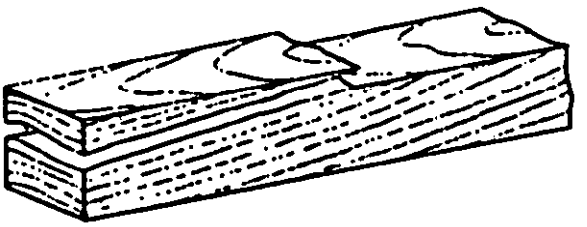
Knot cluster



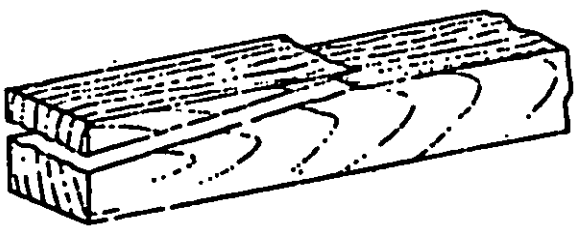
Tandem knots

The distance a is taken as the width when b is twice the width of the piece or less.

FIGURE 1. *Knot clusters and tandem knots*



Diagonal grain



Spiral grain

Spiral and diagonal grain
in combination

FIGURE 2. *Cross grain.*

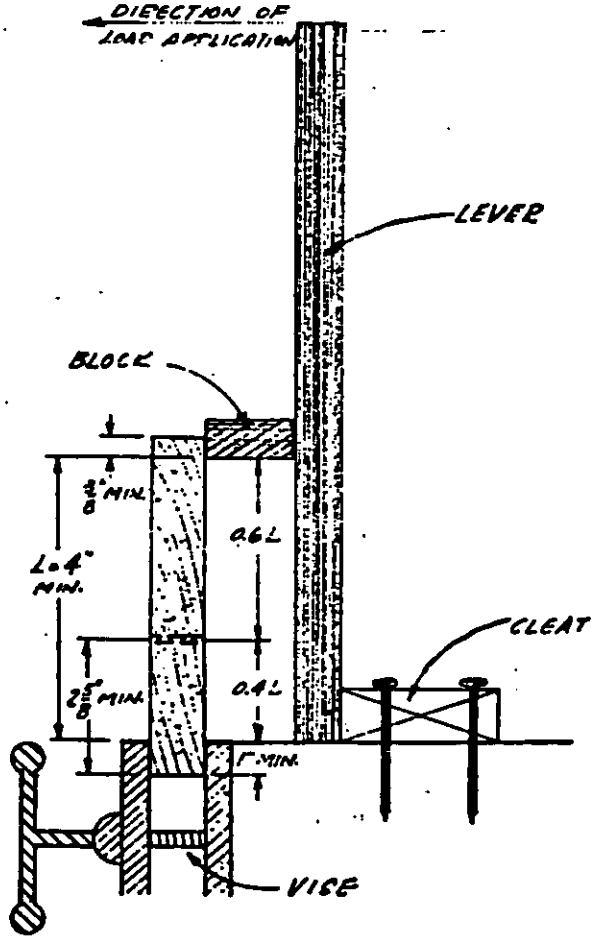


FIGURE 8. *Setup for testing quality of edge points.*

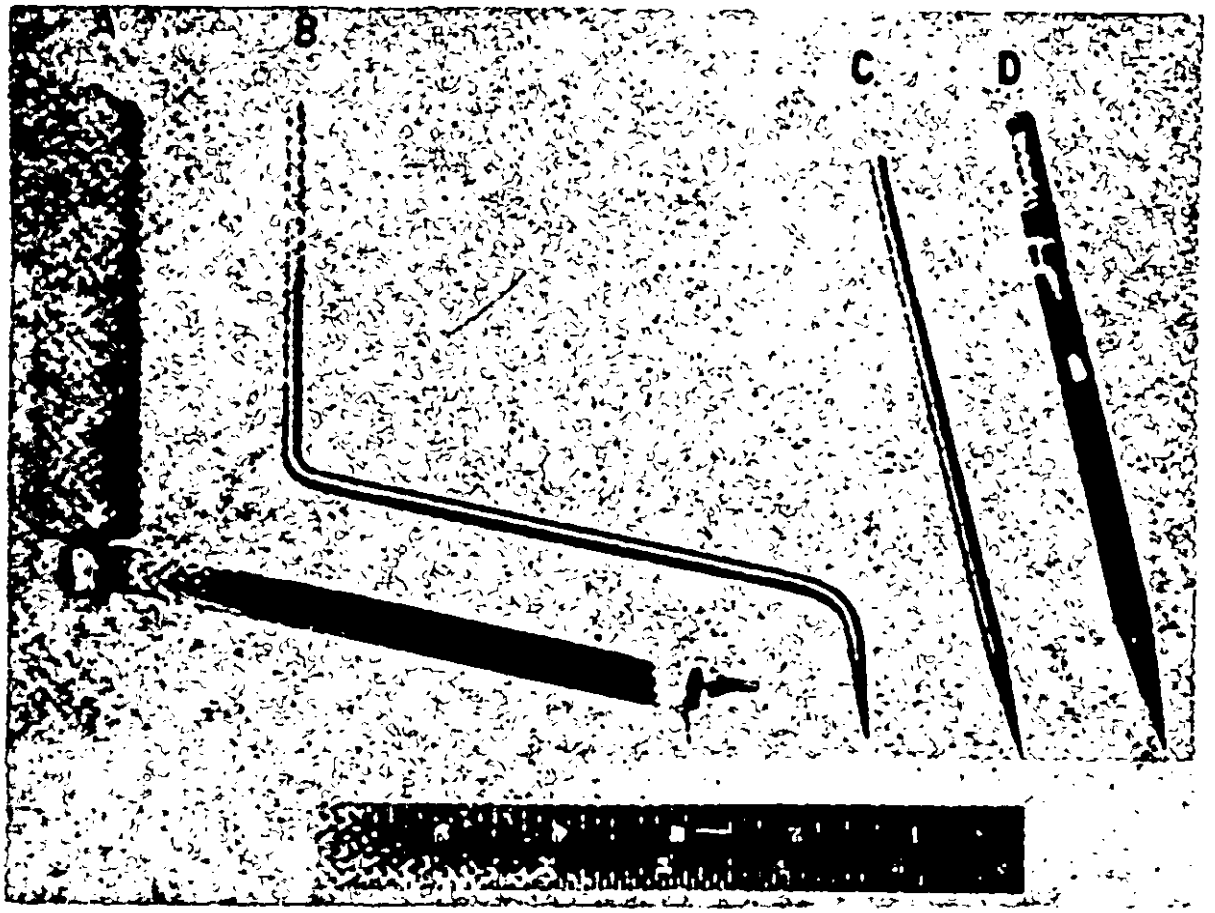


FIGURE 4. *Scribes for determining direction of the fibers on the surface of wood.*

A. Swivel-handled scribe with phonograph needle point.
B. One-piece drill rod bent to shape and point slightly hardened.
C. A straight piece of drill rod with point slightly hardened.
D. Mechanical pencil with phonograph needle point.

343-220 (A-461)

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b. ADDRESS *(Street, City, State, ZIP Code)*	

5. PROBLEM AREAS

a. Paragraph Number and Wording:

b. Recommended Wording:

c. Reason/Rationale for Recommendation:

6. REMARKS

7a. NAME OF SUBMITTER *(Last, First, MI)* – Optional	b. WORK TELEPHONE NUMBER *(Include Area Code)* – Optional
c. MAILING ADDRESS *(Street, City, State, ZIP Code)* – Optional	8. DATE OF SUBMISSION *(YYMMDD)*

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INSTRUCTIONS

1. The preparing activity must complete blocks 1, 2, 3, and 8. In block 1, both the document number and revision letter should be given.
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I RECOMMEND A CHANGE:	1. DOCUMENT NUMBER MIL-STD-731A	2. DOCUMENT DATE (YYMMDD) 90/10/4

3. DOCUMENT TITLE
QUALITY OF WOOD MEMBERS FOR CONTAINERS AND PALLETS

4. NATURE OF CHANGE *(Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed.)*

5. REASON FOR RECOMMENDATION

6. SUBMITTER

a. NAME (Last, First, Middle Initial)	b. ORGANIZATION	
c. ADDRESS (Include Zip Code)	d. TELEPHONE (Include Area Code) (1) Commercial (2) AUTOVON (If applicable)	7. DATE SUBMITTED (YYMMDD)

8. PREPARING ACTIVITY

a. NAME R. J. BRICKEY, Project Manager Equipment Criteria Development Div.	b. TELEPHONE (Include Area Code) (1) Commercial: (805) 982-5572 (2) AUTOVON: 551-5572
c. ADDRESS (Include Zip Code) Commanding Officer (156) Naval Construction Battalion Center Port Hueneme, CA 93043-5000	IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT: Defense Quality and Standardization Office 5203 Leesburg Pike, Suite 1403, Falls Church, VA 22041-3466 Telephone (703) 756-2340 AUTOVON 289-2340