



GRADER'S POCKET GUIDE FOR TIMBERS

SOUTHERN PINE INSPECTION BUREAU
PENSACOLA, FLORIDA

DESIGN VALUES: TIMBERS -- 5" X 5" AND LARGER

Grade	Extreme Fiber in Bending "F _v "	Tension Parallel to Grain "F _t "	Horizontal Shear "F _v "	Compression Perpendicular to Grain "F _{c⊥} "	Compression Parallel to Grain "F _{c∥} "	Modulus of Elasticity (million psi) "E"
Dense Sel Str	1750	1200	110	440	1100	1.6
Select Str	1500	1000	110	375	950	1.5
No.1 Dense	1550	1050	110	440	975	1.6
No.1	1350	900	110	375	825	1.5
No.2 Dense	975	650	100	440	625	1.3
No.2	850	550	100	375	525	1.2

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GRADING RULES FOR TIMBERS

CHARACTERISTICS	SEL STR			NO. 1			NO. 2		
COMPRESSION WOOD	NOT ALLOWED IN DAMAGING FORM FOR THE GRADE CONSIDERED								
SLOPE OF GRAIN	1" in 14"			1" in 11"			1" in 6"		
DECAY	In Knots Only			In Knots Only			Heart-Center decay or unsound red heart and equiv. streaks limited to 10% cross section if wholly enclosed within four surfaces of each piece and 5% otherwise		
HOLES	Medium - well scattered			Medium - well scattered			Limited to 1-1/2" in diameter		
Knots	Nominal Width of face	Narrow Face And At Edge Wide Face (2)	Centerline Wide Face	Unsound Knots(1)	Narrow Face And At Edge Wide Face (2)	Centerline Wide Face	Unsound Knots(1)	Narrow Face Edge of Wide Face	Unsound Knots(1) Centerline of Wide Face
		5"	1-3/8"	1"	1-3/4"		1-3/8"	2-1/2"	2"
	6"	1-5/8"	1-5/8"	1-1/4"	2-1/8"	2-1/8"	1-5/8"	3"	2-1/4"
	8"	1-7/8"	2-1/4"	1-1/2"	2-1/2"	2-3/4"	2"	4-1/2"	2-3/4"
	10"	2-1/8"	2-3/4"	2"	2-3/4"	3-1/2"	2-1/2"	5-1/2"	3"
	12"	2-3/8"	3-1/4"	2-1/8"	3-1/8"	4-1/4"	2-7/8"	6-1/2"	3-1/2"

Knots (cont.)	14"	2-1/2"	3-5/8"	2-1/4"	3-3/8"	4-3/4"	3-1/8"	7-1/2"	3-3/4"
	16"	2-3/4"	3-7/8"	2-1/2"	3-1/2"	5"	3-3/8"	8"	4"
	18"	2-7/8"	4-1/8"	2-1/2"	3-1/2"	5-1/4"	3-1/2"	8-1/2"	4"
	20"	3"	4-3/8"	3"	3-1/2"	5-1/2"	3-1/2"	9"	4"
	Sound, firm, encased, and pith knots			Sound, firm, encased, and pith knots			Sound, firm, encased, and pith knots		
	(1) In unsound knots as allowed, the decay must be confined to the knot itself and not be in surrounding wood and not penetrate deeper than 1-1/2". (2) In timbers of equal face, knots are permitted throughout as specified for narrow faces regardless of location.						(1) In unsound knots as allowed, the decay must not penetrate deeper than 2".		
SHAKES, CHECKS, SPLITS	Splits not longer than thickness of piece; shakes and surface checks not deeper than 1/3 thickness if not dry and 3/8 thickness if dry			Splits not longer than thickness of piece; shakes and surface checks not deeper than 1/3 thickness if not dry and 3/8 thickness if dry			Splits not longer than 1-1/4 times thickness of piece; shakes and surface checks not deeper than 1/2 thickness		
SKIPS	Hit and Miss in 10% of pieces See para. 720(f)			Hit or Miss dressing			Hit or Miss dressing except occasional scant width and thickness from full length skip limited to 1/8", must be No.1 otherwise throughout any portion scant over 1/16"		
STAIN	Medium if dry; not limited if ordered green			Medium if dry; not limited if ordered green			Medium if dry; not limited if ordered green		
WANE	1/8 the width of face and 1/4 length			1/6 the width of face and 1/3 length			1/4 face at one edge and 1/3 face on both edges		
WARP	Very light - See para. 752			Very light - See para. 752			Light - See para. 752		