

Structural Wood Products

- Sawn Lumber
- Structural Glued-Laminated Timber
- Structural Panel Products
- Structural Composite Lumber
- Wood I-joists



Sawn Lumber

- Sawn lumber is sold in species groups
examples:
 - southern pine
 - Douglas fir-larch
 - spruce-pine-fir

Sawn Lumber

- Dimension Lumber: 2 - 4 in. thick, > 2 in. wide
(e.g. 2x6)
- Beams and Stringers: > 5 in. thick,
width > thickness + 2 in. (e.g. 6x10)
- Posts and Timbers: > 5 in. thick,
width ≤ thickness + 2 in. (e.g. 6x6)

Sawn Lumber

- Nominal dimensions: e.g. 2x6
- Actual dimensions: e.g. 1.5 x 5.5
- Dressed lumber is surfaced on 4 sides (S4S)
- Rough sawn lumber is also available (actual size is 1/8 in. larger than dressed sizes).
- See notes, NDS, or LRFD Manual for actual sizes

Sawn Lumber Grades

- Visual Stress Rating
 - certified lumber graders examine each piece and assign grade based on visual characteristics
 - Select Structural, No. 1, No. 2, No. 3, Stud, Construction, Utility
 - each grade denotes design strength and stiffness values that are found in design specifications (NDS and LRFD Manual)



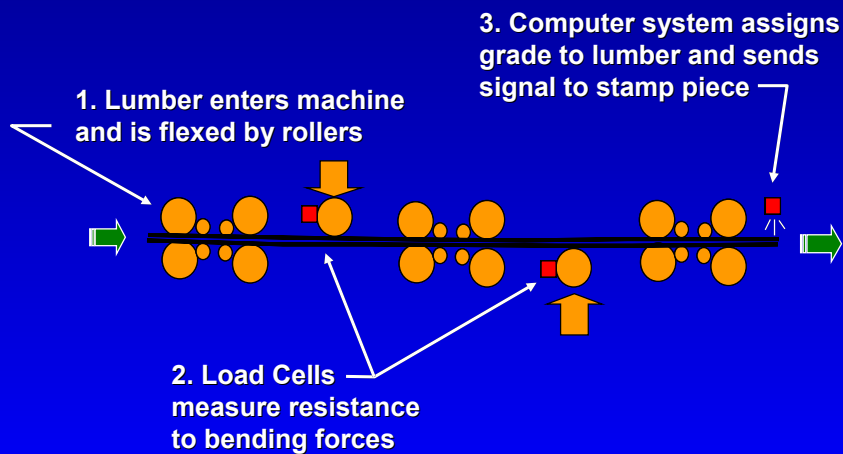
Sample Grade Stamp for Visually Graded Lumber



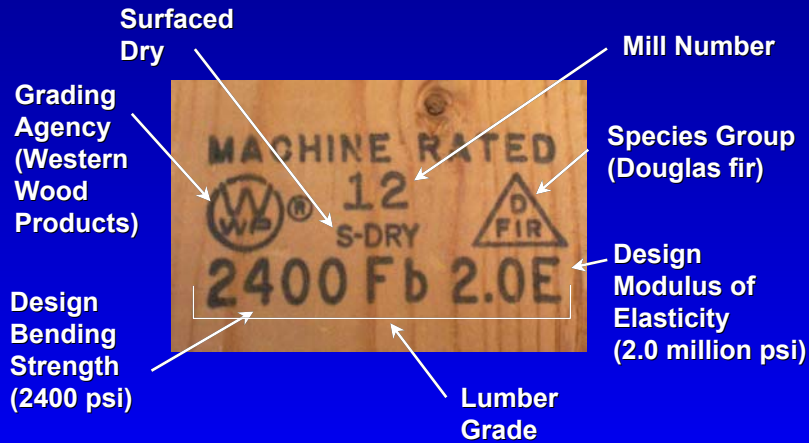
Sawn Lumber Grades

- Machine Stress Rating (MSR)
 - Lumber is sorted based on non-destructive measurement of lumber stiffness (MOE) and visual characteristics
 - MSR lumber has lower variability in strength properties
 - MSR lumber properties are species independent

Machine Stress Rating Process



Sample Grade Stamp for MSR Lumber



Sawn Lumber Grades

- **Machine Evaluated Lumber (MEL)**
 - lumber is sorted based on non-destructive measurement of lumber properties (e.g. density measurement by X-ray)
 - MEL lumber has lower variability in strength properties
 - MSR lumber properties are species independent

Sample Grade Stamp for Machine Evaluated Lumber (MEL)

