Example Problem 1.  Figure 4.  Double shear.  Sides S4S 2x10, Main S4S 3x10
Job Notes
3/4" A307 bolts @ 3" o.c. in row.  2 rows, 3 per row
angle load to grain: main member = 0, side member = 0
snow load
No. 1 Doug Fir-Larch

Fill in yellow cells below
Fill in turquoise cells if needed
Red cells are calculated
Light green cells are tables

Exempt from the yellow and turquoise cells, this spreadsheet is protected to prevent accidental loss of the formulas.

specific gravity (g) or dowel bearing strengths if they are to be used instead of specific gravities

used 

used

BOLTUP©

Engineering Properties of Selected Wood Species (Ref. 3, Ref. 4)

Species               Density            Mod. Of Elasticity  Tensile (F)  
                      (lb/ft³)          (lb/in² x 10⁶)    (psi)      
Doug Fir-Larch       55   1,700,000   1,000,000   675   575
Eastern Hemlock      41   1,000,000   1,000,000   375   275
Eastern Spruce       41   1,000,000   1,000,000   350   275
Hem-Fir              41   1,000,000   1,000,000   325   225
Red Oak              37   1,000,000   1,200,000   300    475
Scotch Pine          59   1,700,000   1,000,000   varies see colors
White Cedar          54   1,000,000   1,000,000   425   425
White Hemlock        47   1,200,000   1,000,000   300    300
Westn Cedar          47   1,000,000   900,000     varies see colors
South'n Pine         .55   1,700,000   1,600,000     675   575
Red Oak              .67   1,300,000   1,200,000   500    475
Westn Hemlock        .47   1,200,000   1,000,000   300    300
White Oak             .73   1,000,000   900,000     500    500

Fill in turquoise column with dowel bearing strengths if

ENGINEERING PRPRTIES OF SELECTED WOOD SPECIES (Ref. 3, Ref. 4)