

the minimum pitch is 50 mm  
 Enter the value of edge distance: 50  
 Number of shear planes with threaded intercepting the shear plane: 1  
 Number of shear planes without threads: 0  
 Threaded area of bolt is: 314.16  
 Plate Shank area of bolt is: 314.16  
 The value of  $V_{dsb}$ : 58.04341801385682  
 $k_1$ : 0.5  
 $k_2$ : 0.5075757575757576  
 $k_3$ : 0.975609756097561  
 $k_4$ : 1  
 $k_5$ : 0.5  
 $V_{dsb}$ : 65.6  
 $V_{dsb}$ : 58.04341801385682  
 Number of bolts required: 1.876480617052825  
 Enter the value of number of bolts: 5  
 The value of tensile strength due to yielding of gross section is: 205.6018181818182  
 Gross Area of connecting leg is: (A<sub>g</sub>) 502.0  
 Gross Area of outstanding leg is: (A<sub>g</sub>) 488.0  
 $T_{d1}$ : 200.0  
 $T_{d2}$ : 702.0  
 $T_d$ : 2.0874912195477951  
 Check 1  
 Not Safe  
 Check 2  
 Safe  
 $T_{d1}$ : 406.275.7170731767  
 $T_{d2}$ : 1854.0  
 $T_{d3}$ : 2656.0  
 $T_{d4}$ : 480.0  
 $T_{d5}$ : 409.0  
 $T_{d1}$ : 383.042543439009  
 $T_{d2}$ : 561.7763564373295  
 $T_{d3}$ : 383.042543439009  
 $T_{d4}$ : 285.6818181818182  
 Safe

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# for size member

# values
at(input("Enter the value of ultimate tensile strength:"))
at(input("Enter the value of yield strength of steel:"))
at(input("Enter the value of ultimate strength of steel:"))
# float input("Enter the value of partial factor of bolt:"))
# float input("Enter the value of partial factor of safety Gamma_mb:"))
# float input("Enter the value of partial factor of safety Gamma_mt:"))
# float input("Enter the value of partial factor of safety Gamma_mb:"))

# area required
A = 1.1 * Areq / fy
# the value of gross area required is: ", 1.2 * Areq)

# for section
# for Ag value
at(input("Enter the value of Gross area of steel:"))
at(input("Enter the length of connected leg:"))
at(input("Enter the length of outstand leg:"))
at(input("Enter the value of least thickness:"))
# # a sample value, you can replace with your calculated value

# for connections
at(input("Enter the value of diameter of bolt:"))
# 2
# the diameter of bolt hole is: ", do)

# for pitch distance
# 5 * d
# the minimum pitch is: ", pmin)

# distance
# * do
# Enter the value of edge distance: ", e)

at(input("Number of shear planes with threaded intercepting the shear plane:"))
at(input("Number of shear planes without threads:"))

# 0.7854 * d * d
# threaded area of bolt is: ", Arb)

# 0.7854 * d * d
# Plane shank area of bolt is: ", Asb)

# (sub / (1.732 * Gamma_mb)) * (m * Arb + n * Asb) * 10**3
# the value of Vdsb ", Vdsb)

# / (3 * do)
# kb1 ", kb1)

# print (3 * do) - 0.25
# kb2 ", kb2)

# kb / fu
# kb3 ", kb3)

# kb4 ", kb4)

# (kb1, kb2, kb3, kb4)
# kb ", kb)

# (2.5 * kb * d * t * fu * 10**3) / Gamma_mb
# Vdph ", Vdph)

# (Vdsb, Vdph)
# Vd ", Vd)

# / Vd
# Number of bolts required: ", N)

at(input("Enter the value of number of bolts:"))

# for strength
# 1.1: Yielding of Gross Section

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