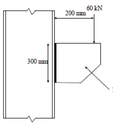
Unit 6 - Week 4

Assignment 4

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2019-08-28, 23:59 IST.

1) A 12 mm thick bracket is connected to the flange of a column by using groove weld as shown in figure. Calculate the horizontal shear stress due to bending? *2 points*

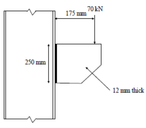


a. 50.2 MPa
b. 66.67 MPa
c. 80.7 MPa
d. 96.67 MPa

a.
b.
c.
d.

No, the answer is incorrect.
Score: 0
Accepted Answers:
b.

2) A 12 mm thick bracket is connected to the flange of the column using fillet weld as shown in figure. Calculate the size of the weld. Assume Fe410 grade steel. The yield stress of weld is same as parent material and it is shop welding. *4 points*



a. 5 mm
b. 4 mm
c. 3.5 mm
d. 12 mm

a.
b.
c.
d.

No, the answer is incorrect.
Score: 0
Accepted Answers:
a.

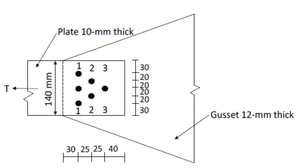
3) Calculate the net area of the angle ISA 100 × 100 × 8 which is connected to the gusset plate through single leg? *0 points*

a. 1000 mm^2
b. 1360 mm^2
c. 1536 mm^2
d. 2000 mm^2

a.
b.
c.
d.

No, the answer is incorrect.
Score: 0
Accepted Answers:
b.

4) Calculate the minimum net area for the plate shown below connected to 12-mm thick gusset plate with 20 mm bolts. *4 points*

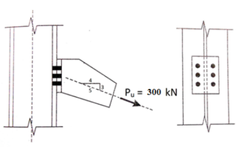


a. 512.5 mm^2
b. 712 mm^2
c. 676.25 mm^2
d. 612.5 mm^2

a.
b.
c.
d.

No, the answer is incorrect.
Score: 0
Accepted Answers:
d.

5) The tension and shear force (both in kN) in each bolt of the joint, as shown below, respectively are: *3 points*



a. 240 kN and 180 kN
b. 180 kN and 240 kN
c. 40 kN and 30 kN
d. 30 kN and 40 kN

a.
b.
c.
d.

No, the answer is incorrect.
Score: 0
Accepted Answers:
c.

6) Clip angle connection are designed to: *1 point*

a. transfer small end moments in addition to large end shear
b. transfer large end shear only
c. transfer small end moments only
d. transfer bending moments

a.
b.
c.
d.

No, the answer is incorrect.
Score: 0
Accepted Answers:
a.

7) The effectiveness of a tension member depends on: *1 point*

a. Ductility factor
b. Method of fabrication
c. Shear lag effect
d. All of the above

a.
b.
c.
d.

No, the answer is incorrect.
Score: 0
Accepted Answers:
d.

8) In bolted moment end plate connection, bending moment, axial force and shear force are transferred by: *1 point*

a. tension only
b. compression only
c. tension and compression
d. friction

a.
b.
c.
d.

No, the answer is incorrect.
Score: 0
Accepted Answers:
c.