



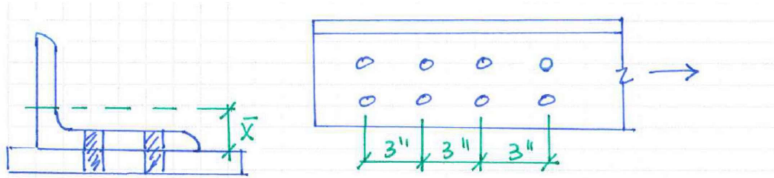
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Question: Question 3 A single L8x6x1/2 is used as a tension brace in a m...

Question 3 A single L8x6x1/2 is used as a tension brace in a multi-story building. The 8 inch leg of the angle is attached to a gusset plate with two lines of four 3/4 inch bolts at a spacing of 3 inch. Determine the effective net area.



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Expert Answer



bhaskar answered this
847 answers

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Using L 8x6x1/2 ($A_g = 6.80 \text{ in}^2$) $\bar{x} = 1.46 \text{ in}$ $\bar{y} = 2.46 \text{ in}$

$$\text{Net area } (A_n) = 6.80 - 2 \left(\frac{3}{4} + \frac{1}{8} \right) \frac{1}{2} = 5.925 \text{ in}^2$$

$$L = 3 \times 3 = 9 \text{ in}$$

$$U = 1 - \frac{\bar{x}}{L} = 1 - \frac{1.46}{9} = 0.837$$

$$\text{Effective net area } A_e = U A_n = 0.837 \times 5.925 = 4.96 \text{ in}^2$$

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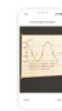
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Q: A single L8x6x1/2 is used as a tension brace in a multi-story building. The 8 inch leg of the angle is attached to a gusset plate with two lines of four 3/4 inch bolts at a spacing of 3 inch. Determine the effective net area.

A: [See answer](#)

Q: Question 3 A single L8x6x1/2 is used as a tension brace in a multi-story building. The 8 inch leg of the angle is attached to a gusset plate with two lines of four 3/4 inch bolts at a spacing of 3 inch. Determine the effective net area.

A: [See answer](#)

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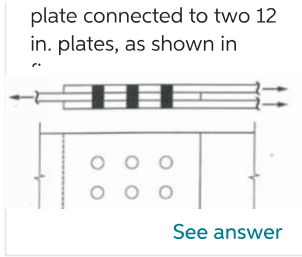


strength of an L6x4x3/4 attached through the

30. Determine the available strength attached through the long leg to a gusset plate connected to two 12 in. plates, as shown in

in. bolts, in two lines of five bolts, a A36 steel. Considering yielding and determine the (a) design strength allowable strength by ASD.

[See answer](#)



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A: [See answer](#)

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