

CE388 - FUNDAMENTALS OF STEEL DESIGN

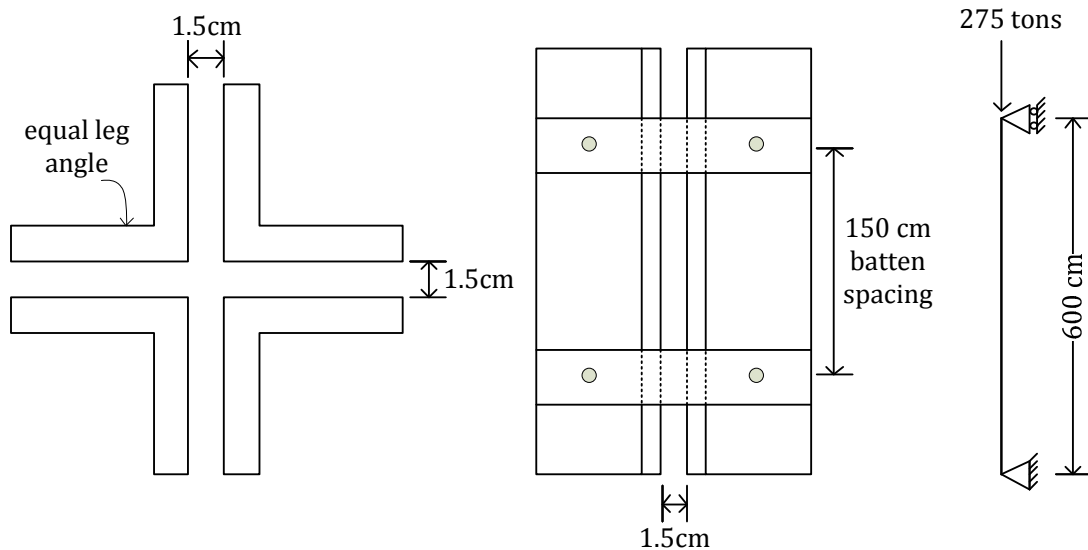
2013-2014 Spring Term

Homework III

Due date: 7 April 2014

Submit your homeworks to the "CE388 Dropbox" throwing which is located in basement of K2 building until 7 April 2014, 17:00. Fifty percent penalty applies to homeworks submitted from 7 April 2014, 17:00 until 8 April 2014, 17:00. Homeworks submitted thereafter will receive no credit.

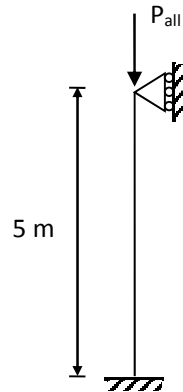
1. A built-up compression member is constructed by connecting 4 equal leg angles as shown below. The spacing between battens in both principal directions are 150 cm. The pin ended member has a length of 600 cm. Determine the lightest equal leg angle section for this built-up column such that the allowable load according to TS 648 provisions is 275 tons. St 37 Steel and EY Loading. (50 points)



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2. Find P_{all} for the following built-up compression member according to TS648 Provisions. Also, check if the lattice diagonals (L50x50x5) are adequate or not. Assume L50x50x5 diagonals as pin connected at the ends ($k=1$). In your calculations, assume that all members are made from St 37 Steel. (50 points)



Use recommended K values.

