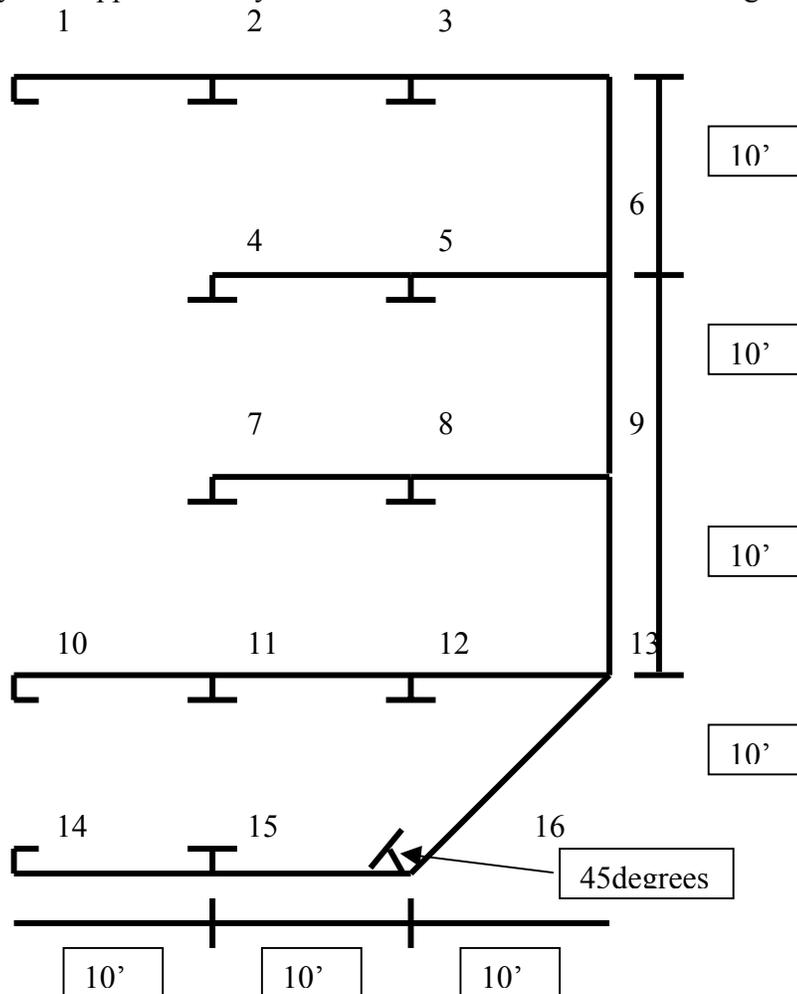


### 13.122 Ship Structural Design and Analysis

#### Problem Set 6

For this and following homework assignments requiring partial safety factor calculations, you are to use the below midship section, maximum bending moment between stations 6 and 13 as calculated from PS2, and the Material Properties and Standard Component Catalogs. The maximum bending moment from PS2 is the hogging case, use the magnitude of this value for the maximum bending moment in sagging (for use in Primary Stress section of the design notes.) Please use the provided PS2 solutions to maintain consistency.

For your assigned strake, calculate the partial safety factors for PCMY, PSPBT, PSPBL, PYTF, PYCF, PYTP, PYCP, GYCF, GYTF, GYTP, and GCCP (3 cases) for the range of structural elements at your disposal. Considering your role as a member of the design team, make a selection of catalog elements based on each partial safety factor calculation, choose the element(s) which satisfies the requirements of all the above partial safety factors, and discuss your reason for choosing one element(s) over another satisfactory combination. Recalculate weight/ft and the vertical moment of inertia for your strake relative to the midpoint of the plate. Summarize the element selection for each partial safety factor in a table positioned at the end of the design notes. Provide an electronic copy of the design notes. Be sure you enter the preliminary data applicable to your strake in Sections 1-4 of the Design Notes.



Strake Number	Assigned To
1	Brown
2	Gecer
3	Greytak
4	Harper
5	Jai
6	Johnson
7	Miller
8	Pedatzur
9	Rucker
10	Small
11	
12	Tozzi
13	Wang
14	
15	West
16	Wolf