

HEELING FORCES ←

THIS DIAGRAM REFLECTS THE CONDITIONS APPLICABLE TO CATAMARANS AND IS NOT APPROPRIATE FOR CONSIDERATION OF BALLASTED MONOHULL VESSELS.

TYPICALLY THE SPAR AND RIGGING LOADS FOR CATAMARANS ARE 1.5 TIMES HIGHER THAN FOR MONOHULLS OF SIMILAR SAIL AREA DUE TO THEIR HIGH RESISTANCE TO HEELING

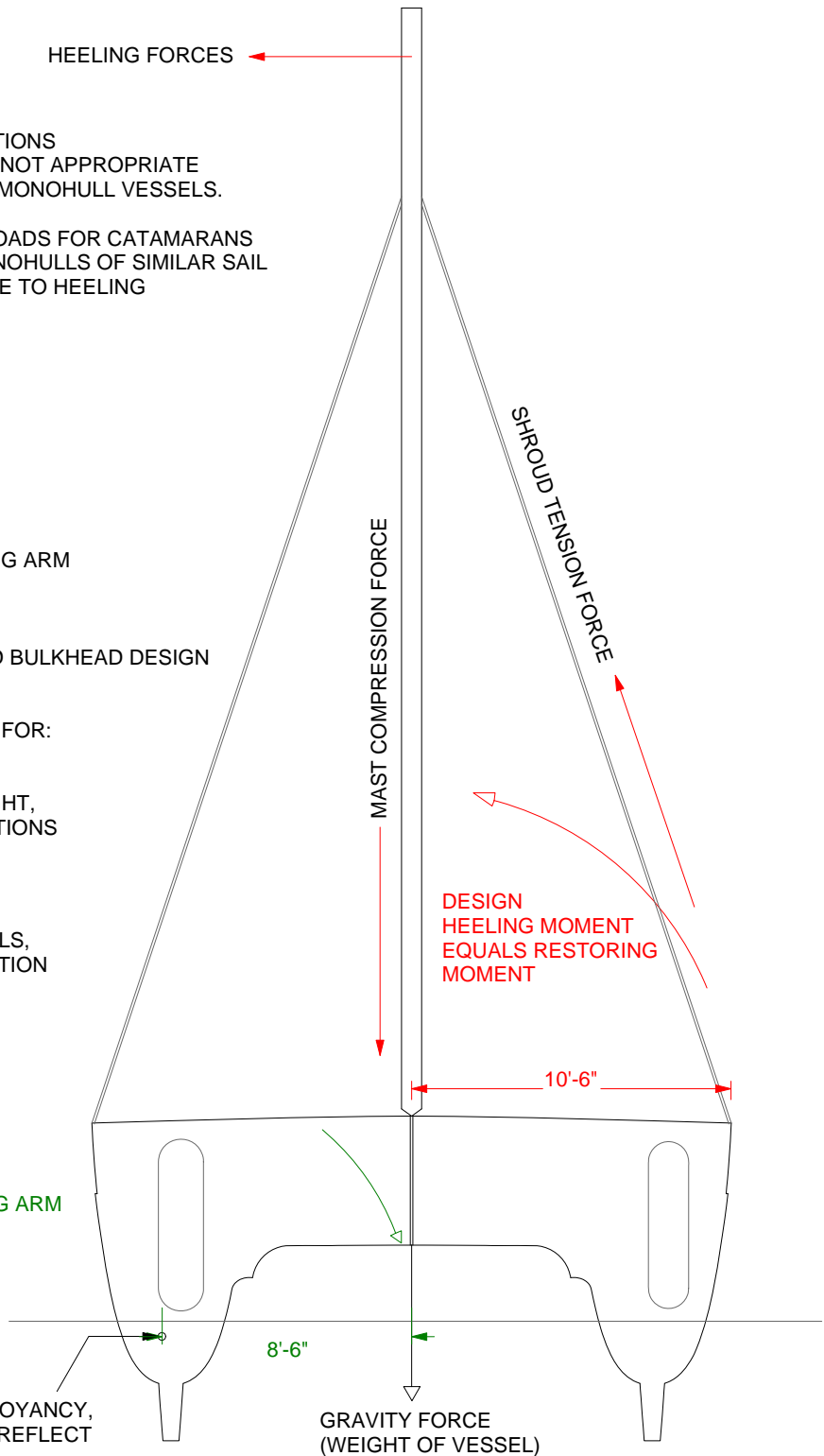
MAST COMPRESSION  
 = HEELING MOMENT / HEELING ARM  
 = 204,000 ft.lb. / 10.5 ft.  
 = 19,428 ft.lb.  
 TIMES SAFETY FACTOR OF 3,  
 USE 60,000 lb. FOR MAST AND BULKHEAD DESIGN

SAFETY FACTOR ACCOUNTS FOR:  
 INERTIAL LOADS,  
 EXTREME CONDITIONS  
 VARIATIONS IN VESSEL WEIGHT,  
 MATERIAL PROPERTY VARIATIONS

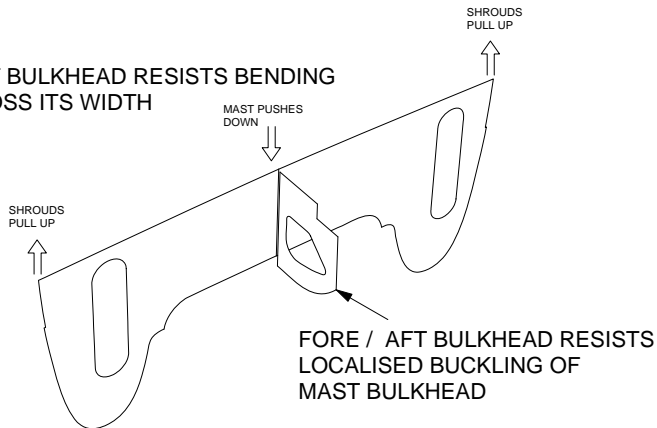
MAST DESIGN CONSIDERS:  
 COMPRESSION LOADS,  
 BENDING LOADS DUE TO SAILS,  
 INERTIAL LOADS DUE TO MOTION

RESTORING MOMENT  
 = VESSEL WEIGHT X RIGHTING ARM  
 = 24,000 lb. X 8.5 ft.  
 = 204,000 ft.lb.

HEELING PIVOT IS CENTRE OF BUOYANCY,  
 OUTBOARD OF HULL CENTRE TO REFLECT  
 HEELED CONDITION AT 15° +/-



MAST BULKHEAD RESISTS BENDING  
 ACROSS ITS WIDTH



ANTARES 44 CALCULATIONS  
 MAST LOAD DIAGRAM  
 CA-04-04

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