§ 171.057 Intact stability requirements for a sailing catamaran.

(a) A sailing vessel that operates on protected waters must be designed to satisfy the following equation:

\[
\frac{0.1(W)B}{(As)(Hc)} \geq X
\]

Where—

- \(B\) = the distance between hull centerlines in meters (feet).
- \(As\) = the maximum sail area in square meters (square feet).
- \(Hc\) = the height of the center of effort of the sail area above the deck, in meters (feet).
- \(W\) = the total displacement of the vessel, in kilograms (pounds).
- \(X\) = 4.88 kilograms/square meter (1.0 pounds/square foot).

(b) A sailing vessel that operates on partially protected or exposed waters must be designed to satisfy the following equation:

\[
\frac{0.1(W)B}{(As)(Hc)} \geq X
\]

Where—

- \(B\) = the distance between hull centerlines in meters (feet).
As=the maximum sail area in square meters (square feet).
Hc=the height of the center of effort of the sail area above the deck, in meters (feet).
W=the total displacement of the vessel, in kilograms (pounds).
X=7.32 kilograms/square meter (1.5 pounds/square foot).

Subpart C—Subdivision and Damage Stability

§ 171.065 Subdivision requirements—Type I.

(a) Except as provided in paragraphs (c) and (f) of this section, the separation between main transverse watertight bulkheads on a vessel, other than one described in paragraph (b) of this section, must not exceed—

(floodable length)×(factor of subdivision)

where—
the factor of subdivision is listed under FS in Table 171.065(a).

(b) The factor of subdivision used to determine compliance with paragraph (a) of this section must be the smaller of 0.5 or the value determined from Table 171.065(a) if—

(1) The vessel is 430 feet (131 meters) or more in LBP; and
(2) The greater of the values of Y as determined by the following equations equals or exceeds the value of X in Table 171.065(b):

\[ Y = \frac{(M + 2P)}{V} \]

or

\[ Y = \frac{(M + 2P1)}{(V + P1 - P)} \]

where—
M, V, and P have the same value as listed in Table 171.065(a); and
P1=the smaller of the following:
(i) 0.6LN (0.056LN) where—
N=the total number of passengers; and
L=LBP in feet (meters).
(ii) The greater of the following:
(A) 0.4LN (0.037LN).
(B) The sum of P and the total volume of passenger spaces above the margin line.

(c) The distance A in Figure 171.065 between main transverse watertight bulkheads may exceed the maximum allowed by paragraphs (a) or (b) of this section if each of the distances B and C between adjacent main transverse watertight bulkheads in Figure 171.065 does not exceed the smaller of the following:

(1) The floodable length.
(2) Twice the separation allowed by paragraphs (a) or (b) of this section.
(d) In each vessel 330 feet (100 meters) or more in LBP, one of the main transverse watertight bulkheads aft of the collision bulkhead must be located at a distance from the forward perpendicular that is not greater than the maximum separation allowed by paragraph (a) or (b) of this section.
(e) The minimum separation between two adjacent main transverse watertight bulkheads must be at least 10 feet (3.05 meters) plus 3 percent of the LBP of the vessel, or 35 feet (10.7 meters), whichever is less.
(f) The maximum separation of bulkheads allowed by paragraphs (a) or (b) of this section may be increased by the