

§ 45.65 Excess sheer limitations.

The decrease in freeboard allowed in § 45.63 is limited as follows:

SHEER CALCULATION—TABLE 4

| Station | Actual or- dinate | S. M. | Product |
|--|----------------------|-------|-----------------------------|
| After Half: | | | |
| AP | | 1 | |
| L/6-AP | | 3 | |
| L/3-AP | | 3 | |
| Midship | | 1 | |
| Sum of Aft Products | | | |
| After Standard Sheer .2665L+26.65 ¹ | | | |
| Difference: Sum-STD | | | +Excess/ - Deficiency |
| AFT Sheer: Diff+8 | | | Excess/Deficiency |
| Fwd. Half: | | | |
| FP | | 1 | |
| L/6-FP | | 3 | |
| L/3-FP | | 3 | |
| Midships | | 1 | |
| Sum of Fwd Products | | | |
| Fwd Standard Sheer .5330L+53.30 ¹ | | | |
| Difference: Sum-STD | | | +Excess/ - Deficiency |
| FWD Sheer: Diff+8 | | | Excess/Deficiency |

¹ L in Standard Sheer=L or 500 whichever is less.

Sheer Summation

| | |
|---------------|-------------------------|
| Aft Sheer± | _____ |
| Fwd Sheer± | _____ |
| Net Sheer± | _____ |
| Mean: Net - 2 | _____ Excess/Deficiency |

(a) In vessels having no enclosed superstructure from 0.1 L abaft amidships to 0.1 L forward of amidships, no decrease is allowed.

(b) In vessels having enclosed superstructures amidships less than 0.1 L before and abaft amidships, the decrease must be reduced by linear interpolation.

(c) If excess sheer exists in the forward half, and the after half is at least 75 percent of standard sheer, the full decrease is allowed. If the after sheer is between 50 percent and 75 percent of standard sheer an intermediate decrease, determined by linear interpolation, is allowed for the excess sheer forward. If the after sheer is 50 percent of standard or less, no decrease is allowed for the excess sheer forward.

(d) Where an enclosed poop or fore-castle is of standard height with greater sheer than that of the freeboard deck, or is greater than standard height, an addition to the sheer of the freeboard deck may be made using the following formula:

$$S = vL'/3L$$

Where

s=sheer credit, to be deducted from the deficiency or added to the excess of sheer.

v=difference between actual and standard height of superstructure at the end ordinate.

L'=mean enclosed length of poop or fore-castle up to a maximum length of 0.5 L.

The superstructure deck must not be less than standard height above this curve at any point. This curve must be used in determining the sheer profile for forward and after halves of the vessel.

(e) The maximum decreased for excess sheer must be no more than 1½ inches per 100 feet of length.

(f) Where the deck of an enclosed superstructure has at least the same sheer as the exposed freeboard deck, the sheer of the enclosed portion of the freeboard deck cannot be taken into account.