

## § 170.090

the ABS at least two weeks before the test.

[CGD 95-028, 62 FR 51217, Sept. 30, 1997]

### § 170.090 Calculations.

(a) Except as provided in § 170.098, all calculations required by this subchapter must be submitted with the plans required by § 170.075.

(b) If it is necessary to compute and plot any of the following curves as part of the calculations required in this subchapter, these plots must also be submitted:

- (1) Righting arm or moment curves.
- (2) Heeling arm or moment curves.
- (3) Cross curves of stability.
- (4) Floodable length curves.

### § 170.093 Specific approvals.

Certain rules in this subchapter require specific approval of equipment or arrangements by the Commandant, OCMI, or Coast Guard Marine Safety Center. These approval determinations will be made as a part of the plan review process. When plan review is conducted by the ABS, ABS is authorized to make the approval.

[CGD 95-028, 62 FR 51217, Sept. 30, 1997]

### § 170.095 Data submittal for a vessel equipped to lift.

The following data must be submitted with the plans required by § 170.075 if the vessel is engaged in lifting and is required to comply with subpart B of part 173 of this chapter:

- (a) A graph of maximum hook load versus maximum crane radius.
- (b) A table of crane radius versus the maximum distance above the main deck to which the hook load can be raised.
- (c) A table showing maximum vertical and transverse moments at which the crane is to operate.

### § 170.100 Addresses for submittal of plans and calculations.

The plans, information, and calculations required by this subpart must be submitted to one of the following:

- (a) The Marine Safety Office in the zone where the vessel is to be built or altered.
- (b) Commanding Officer, U.S. Coast Guard Marine Safety Center, 400 Sev-

## 46 CFR Ch. I (10-1-99 Edition)

enth St., SW., Washington, DC 20590-0001.

(c) The American Bureau of Shipping (ABS), Two World Trade Center, 106th Floor, New York, NY 10048.

(d) The American Bureau of Shipping (ABS), ABS Plaza, 16855 North Chase Dr., Houston, TX 77060-6008.

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## Subpart D—Stability Instructions for Operating Personnel

### § 170.105 Applicability.

(a) Except as provided in paragraph (b) of this section, this subpart applies to each vessel.

(b) This subpart does not apply to any of the following vessels unless the stability of the vessel is questioned by the OCMI:

(1) A deck cargo barge that complies with the requirements in § 174.020 of this chapter.

(2) A tank vessel that only carries a product listed in § 30.25-1 of this chapter and that is less than 150 gross tons.

- (3) A tank barge that—
- (i) Operates only in rivers or lakes, bays, and sounds service;
  - (ii) Does not have to meet 33 CFR part 157, subpart B; and
  - (iii) Only carries a product listed in § 30.25-1 of this chapter.

(4) A sailing school vessel that is an open boat that complies with the requirements in § 173.063(e) of this subchapter.

[CGD 79-023, 48 FR 51010, Nov. 4, 1983, as amended by CGD 83-005, 51 FR 923, Jan. 9, 1986; CGD 85-080, 61 FR 944, Jan. 10, 1996]

### § 170.110 Stability booklet.

(a) Except as provided in paragraph (e) of this section, a stability booklet must be prepared for each vessel, except for mobile offshore drilling units subject to the operating manual requirements of § 109.121 of this chapter.

(b) Each stability booklet must be approved by the Coast Guard Marine Safety Center or the ABS.

(c) Each stability book must contain sufficient information to enable the master to operate the vessel in compliance with applicable regulations in this

subchapter. Information on loading restrictions used to determine compliance with applicable intact and damage stability criteria must encompass the entire range of operating drafts and the entire range of the operating trims. Information must include an effective procedure for supervision and reporting of the opening and closing of all loading doors, where applicable.

(d) The format of the stability booklet and the information included will vary dependent on the vessel type and operation. Units of measure used in the stability booklet must agree with the units of measure of the draft markings. In developing the stability booklet, consideration must be given to including the following information:

(1) A general description of the vessel, including lightweight data.

(2) Instructions on the use of the booklet.

(3) General arrangement plans showing watertight compartments, closures, vents, downflooding angles, and allowable deck loadings.

(4) Hydrostatic curves or tables.

(5) Capacity plan showing capacities and vertical, longitudinal, and transverse centers of gravity of stowage spaces and tanks.

(6) Tank sounding tables showing capacities, vertical centers of gravity, and longitudinal centers of gravity in graduated intervals and showing free surface data for each tank.

(7) Information on loading restrictions, such as a maximum KG or minimum GM curve that can be used to determine compliance with applicable intact and damage stability criteria.

(8) Examples of loading conditions.

(9) A rapid and simple means for evaluating other loading conditions.

(10) A brief description of the stability calculations done including assumptions.

(11) General precautions for preventing unintentional flooding.

(12) A table of contents and index for the booklet.

(13) Each ship condition which, if damage occurs, may require cross-flooding for survival and information concerning the use of any special cross-flooding fittings.

(14) The amount and location of fixed ballast.

(15) Any other necessary guidance for the safe operation of the vessel under normal and emergency conditions.

(16) For each self-propelled hopper dredge with a working freeboard, the maximum specific gravity allowed for dredge spoil.

(e) A stability booklet is not required if sufficient information to enable the master to operate the vessel in compliance with the applicable regulations in this subchapter can be placed on the Certificate of Inspection, Load Line Certificate, or in the stability letter required in §170.120.

(f) On board electronic stability computers may be used as an adjunct to the required booklet, but the required booklet must contain all necessary information to allow for the evaluation of the stability of any intact condition that can be evaluated by use of the computer.

[CGD 79-023, 48 FR 51010, Nov. 4, 1983, as amended by CGD 83-071, 52 FR 6979, Mar. 6, 1987; CGD 88-070, 53 FR 34537, Sept. 7, 1988; CGD 76-080, 54 FR 36977, Sept. 6, 1989; CGD 89-037, 57 FR 41825, Sept. 11, 1992; CGD 95-028, 62 FR 51217, Sept. 30, 1997]

#### § 170.120 Stability letter.

(a) Except as provided in paragraph (b) of this section, each vessel must have a stability letter issued by the Coast Guard or the ABS before the vessel is placed into service. This letter sets forth conditions of operation.

(b) A stability letter is not required if the information can be placed on the Certificate of Inspection or the Load Line Certificate.

[CGD 79-023, 48 FR 51010, Nov. 4, 1983, as amended by CGD 95-028, 62 FR 51217, Sept. 30, 1997]

#### § 170.125 Operating information for a vessel engaged in lifting.

In addition to the information required in §170.110, the following information must be included in the stability booklet of a vessel that is required to comply with §173.005 of this subchapter:

(a) *Non-counterballasted vessel.* If a vessel is not counterballasted, stability information setting forth hook load limits corresponding to boom radii based on the intact stability criterion in §173.020 must be provided.