

materials, design (safety) factors and operating limitations.

(c) Design information, when required, will be evaluated against the following minimum design criteria:

(1) Wet Weight Handling Gear: Wet gear shall be considered to consist of gear used to lower equipment, apparatus or objects beneath the surface of the water or for trailing objects, where the wire rope or cable is payed out beneath the surface and becomes part of the line pull at the head sheave or winch drum. Wet gear shall be designed, as a minimum, to withstand and operate in excess of the breaking strength of the strongest section or wire to be used in any condition of loading. The safety factor for all metal structural parts shall be a minimum of 1.5; *i.e.*, the yield strength of the material shall be at least 1.5 times the calculated stresses resulting from application of a load equal to the nominal breaking strength of the strongest section or wire rope to be used. Suitable assumptions for the actual loading conditions shall be used in the design of wet gear. The lead of the wire rope from the head sheave or winch drum shall be considered to vary from the vertical and in azimuth in a manner to represent the most adverse loading condition.

(2) Other weight handling gear will be evaluated on the basis of the standards of a recognized organization or association recognized by the Commandant under § 31.10-6.

(3) Hydraulic or pneumatic systems will be evaluated on the basis of Subchapter F (Marine Engineering) of this chapter.

[CGFR 67-83, 33 FR 1118, Jan. 27, 1968, as amended by CGFR 69-116, 35 FR 6863, Apr. 30, 1970; CGD 95-028, 62 FR 51219, Sept. 30, 1997]

#### § 189.35-11 Special cases.

(a) If the above safety requirements defeat the purpose of any particular piece of weight handling gear, consideration will be given to a relaxation of the requirements.

#### § 189.35-13 Master's responsibility.

(a) The master of the vessel shall ensure the following:

(1) The gear is properly installed and secure.

(2) Suitable safety guards are installed in way of rotating machinery, hazardous cable runs and at other appropriate locations.

(3) Operating limitations are posted in an appropriate manner.

(4) Only qualified operators are permitted to operate the weight handling gear. The master shall designate the operators.

(5) A minimum number of persons are allowed in the immediate area.

(6) The installation does not violate the approved trim and stability information.

(7) A suitable permanent record is maintained on the equipment as appropriate showing such items as inspections, tests, important repairs and casualties experienced. This record shall be made available to the Officer in Charge, Marine Inspection, upon request.

(b) Prior to a vessel's departure, an entry shall also be made in the official logbook that the ship's weight handling gear is in compliance with the applicable requirements in this subchapter.

#### § 189.35-15 Major installations.

(a) Where the installation of weight handling gear requires modifications to the vessel's structure or affects the stability in a manner which cannot be assessed by the information contained in the approved trim and stability information, appropriate plans and information shall be submitted for approval. The installation shall then be inspected by the Officer in Charge, Marine Inspection for conformance with the approved installation plans and information.

#### § 189.35-90 Weight handling gear manufactured prior to March 1, 1968.

(a) Weight handling gear manufactured prior to March 1, 1968, will be accepted on the basis of appropriate tests and examinations should plans or other technical information not be available.

### Subpart 189.40—Drydocking

#### § 189.40-1 Definitions relating to hull examinations.

As used in this part—