

for the service intended will be emphasized. Disassembly of the equipment will be required only when there is evidence of a deficiency or an unsafe condition. Non-destructive tests, such as radiography, ultrasonic, electronic, or other methods may be used if appropriate, however will not be required.

§ 189.35-9 Plans.

(a) Plans will not normally be required, however depending on the use of the weight handling gear, submission of plans or other technical information may be required by the Officer in Charge, Marine Inspection. Unless an unsafe condition is in evidence, vessel operations will not be delayed while plans or other technical information are under review. Plans, when required, shall normally include:

(1) One line electrical diagrams showing appropriate overload protection as currently required by subchapter J (Electrical Engineering) of this chapter.

(2) Plans showing hydraulic or pneumatic equipment.

(3) Stress and/or arrangement diagrams with supporting design calculations as appropriate to the specific equipment in question.

(b) When weight handling gear is built to a recognized code or specification, plans or other technical data will not normally be required. Purchase specification or vendor's information may be accepted in lieu of design calculations if sufficiently definitive of 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

§ 189.35–15

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—

(a) *Drydock examination* means hauling out a vessel or placing a vessel in a drydock or slipway for an examination of all accessible parts of the vessel's underwater body and all through-hull fittings.

(b) *Internal structural examination* means an examination of the vessel while afloat or in drydock and consists of a complete examination of the vessel's main strength members, including the major internal framing, the hull plating, voids, and ballast tanks, but not including cargo or fuel oil tanks.

(c) *Underwater survey* means the examination, while the vessel is afloat, of all accessible parts of the vessel's un-

46 CFR Ch. I (10–1–11 Edition)

derwater body and all through-hull fittings.

[CGD 84–024, 52 FR 39656, Oct. 23, 1987, as amended at 53 FR 32232, Aug. 24, 1988; CGD 95–028, 62 FR 51220, Sept. 30, 1997]

§ 189.40–3 Drydock examination, internal structural examination, cargo tank internal examination, and underwater survey intervals.

(a) Except as provided for in paragraphs (b) through (g) of this section, each vessel must undergo drydock and internal structural examinations as follows:

(1) Vessels that operate in salt water must undergo two drydock and two internal structural examinations within any five year period. No more than three years may elapse between any two examinations.

(2) Vessels that operate in fresh water at least six months in every 12 month period since the last drydock examination must undergo drydock and internal structural examinations at intervals not to exceed five years.

(b) Vessels with wooden hulls must undergo two drydock and two internal structural examinations within any five year period regardless of the type of water in which they operate. No more than three years may elapse between any two examinations.

(c) If, during an internal structural examination or underwater survey, damage or deterioration to the hull plating or structural members is discovered, the Officer in Charge, Marine Inspection, may require the vessel to be drydocked or otherwise taken out of service to further assess the extent of the damage and to effect permanent repairs.

(d) Each vessel under paragraph (a) of this section that is less than 15 years of age may be considered for an underwater survey instead of alternate drydock examinations, provided the vessel is fitted with an effective hull protection system. Vessel owners or operators must apply to the Officer in Charge, Marine Inspection, for approval of underwater surveys instead of alternate drydock examinations for each vessel. The application must include the following information:

(1) The procedure to be followed in carrying out the underwater survey.