

the system unless the test would damage equipment or endanger personnel. In the latter case, the use of a synthesized signal or condition applied to the sensor is acceptable if test equipment is maintained in good working order and is periodically calibrated to the satisfaction of the Officer in Charge, Marine Inspection. Other test techniques must be approved by the Commandant (G-MSE).

[CGD 80-064, 49 FR 32193, Aug. 13, 1984, as amended by CGD 95-072, 60 FR 50463, Sept. 29, 1995; CGD 96-041, 61 FR 50728, Sept. 27, 1996]

PART 62—VITAL SYSTEM AUTOMATION

Subpart 62.01—General Provisions

Sec.

62.01-1 Purpose.

62.01-3 Scope.

62.01-5 Applicability.

Subpart 62.05—Reference Specifications

62.05-1 Incorporation by reference.

Subpart 62.10—Terms Used

62.10-1 Definitions.

Subpart 62.15—Equivalents

62.15-1 Conditions under which equivalents may be used.

Subpart 62.20—Plan Submittal

62.20-1 Plans for approval.

62.20-3 Plans for information.

62.20-5 Self-certification.

Subpart 62.25—General Requirements for All Automated Vital Systems

62.25-1 General.

62.25-5 All control systems.

62.25-10 Manual alternate control systems.

62.25-15 Safety control systems.

62.25-20 Instrumentation, alarms, and centralized stations.

62.25-25 Programmable systems and devices.

62.25-30 Environmental design standards.

Subpart 62.30—Reliability and Safety Criteria, All Automated Vital Systems

62.30-1 Failsafe.

62.30-5 Independence.

62.30-10 Testing.

Subpart 62.35—Requirements for Specific Types of Automated Vital Systems

62.35-1 General.

62.35-5 Remote propulsion control systems.

62.35-10 Flooding safety.

62.35-15 Fire safety.

62.35-20 Oil-fired main boilers.

62.35-35 Internal combustion engine starting systems.

62.35-40 Fuel systems.

62.35-50 Tabulated monitoring and safety control requirements for specific systems.

Subpart 62.50—Automated Self-propelled Vessel Manning

62.50-1 General.

62.50-20 Additional requirements for minimally attended machinery plants.

62.50-30 Additional requirements for periodically unattended machinery plants.

AUTHORITY: 46 U.S.C. 3306, 3703, 8105; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; Department of Homeland Security Delegation No. 0170.1.

SOURCE: CGD 81-030, 53 FR 17838, May 18, 1988, unless otherwise noted.

Subpart 62.01—General Provisions

§ 62.01-1 Purpose.

The purpose of this part is to make sure that the safety of a vessel with automated vital systems, in maneuvering and all other sailing conditions, is equal to that of the vessel with the vital systems under direct manual operator supervision.

§ 62.01-3 Scope.

(a) This part contains the minimum requirements for vessel automated vital systems. Specifically, this part contains—

(1) In subpart 62.25, the general requirements for all vital system automation;

(2) In subpart 62.30, the criteria used to evaluate the designed reliability and safety of all automated vital systems;

(3) In subpart 62.35, the minimum additional equipment, configuration, and functional requirements necessary when certain vital systems are automated; and

(4) In subpart 62.50, the minimum additional requirements when automated

§ 62.01-5

systems are provided to replace specific personnel or to reduce overall crew requirements.

§ 62.01-5 Applicability.

(a) *Vessels.* This part applies to self-propelled vessels of 500 gross tons and over that are certificated under subchapters D, I, or U and to self-propelled vessels of 100 gross tons and over that are certificated under subchapter H.

(b) *Systems and equipment.* Except as noted in § 62.01-5(c), this part applies to automation of vital systems or equipment that—

(1) Is automatically controlled or monitored;

(2) Is remotely controlled or monitored; or

(3) Utilizes automation for the purpose of replacing specific personnel or to reduce overall crew requirements.

(c) *Exceptions.* This part does not apply to the following systems and equipment unless they are specifically addressed or unless their failure would degrade the safety and reliability of the systems required by this part:

(1) Automatic auxiliary heating equipment (see part 63 of this subchapter).

(2) Steering systems (see subparts 58.25 and 111.93 of this chapter).

(3) Non-vital and industrial systems.

(4) The communication and alarm systems in part 113 of this chapter.

(d) *Central control rooms.* The requirements of subpart 62.50 only apply to vessels automated to replace specific personnel or to reduce overall crew requirements, except where the main propulsion or ship service electrical generating plants are automatically or remotely controlled from a control room. In this case, § 62.50-20(a)(3) (except the provision in paragraph 62.50-20(a)(3)(ii) relating to electrical power distribution), (b)(3), (c), (e)(1), (e)(2), (e)(4), and (f)(2) apply, regardless of manning.

[CGD 81-030, 53 FR 17838, May 18, 1988, as amended by USCG-2000-7790, 65 FR 58460, Sept. 29, 2000]

46 CFR Ch. I (10-1-04 Edition)

Subpart 62.05—Reference Specifications

§ 62.05-1 Incorporation by reference.

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register. To enforce any edition other than the one listed in paragraph (b) of this section, notice of the change must be published in the FEDERAL REGISTER and the material made available to the public. All approved material is on file at the Office of the Federal Register, Washington, DC 20408 and at Marine Safety and Environmental Protection (G-MSE), U.S. Coast Guard Headquarters Building, 2100 Second Street SW., Washington, DC 20593-0001.

(b) The material approved for incorporation by reference in this part is:

Rules for Building and Classing Steel Vessels, 1986, issued by the American Bureau of Shipping. This document is available from: American Bureau of Shipping, ABS Plaza, 16855 Northchase Drive, Houston, TX 77060. Sections affected by this incorporation by reference are: 62.25-1(c), 62.25-5(a), 62.25-30(a)(1), (a)(2), (a)(3), (a)(5), 62.35-5(d), 62.35-35(a), 62.35-40(c), 62.35-50, 62.50-30(c), and 62.50-30(k).

[CGD 81-030, 53 FR 17838, May 18, 1988, as amended by CGD 95-072, 60 FR 50463, Sept. 29, 1995; CGD 96-041, 61 FR 50728, Sept. 27, 1996; CGD 97-057, 62 FR 51044, Sept. 30, 1997; USCG-2000-7790, 65 FR 58460, Sept. 29, 2000]

Subpart 62.10—Terms Used

§ 62.10-1 Definitions.

(a) For the purpose of this part:

Alarm means an audible and visual indication of a hazardous or potentially hazardous condition that requires attention.

Automated means the use of automatic or remote control, instrumentation, or alarms.

Automatic control means self-regulating in attaining or carrying out an operator-specified equipment response or sequence.

Boiler low-low water level is the minimum safe level in the boiler, in no case lower than that visible in the gage glass (see § 52.01-110 of this chapter, Water Level Indicators).