Charge Marine Inspection, to determine that the complete unit is in a safe and satisfactory condition. The visual examination includes, but is not limited to, the combustion chamber, heat exchanger, refractory, exhaust stack, and associated pumps and piping.

[CGD 80–064, 49 FR 32193, Aug. 13, 1984, as amended by USCG–1999–4976, 65 FR 6501, Feb. 9, 2000]

§ 61.30–20 Automatic control and safety tests.

Operational tests and checks of all safety and limit controls, combustion controls, programming controls, and safety relief valves must be conducted by the owner, chief engineer, or person in charge at the inspection for certification, periodic inspection, and when directed by the Officer in Charge, Marine Inspection, to determine that the control components and safety devices are functioning properly and are in satisfactory operating condition. These tests and checks must be conducted in the presence of a marine inspector and must include the following: proper prepurge, burner ignition sequence checks, operation of the combustion controls, limit controls, fluid flow controls, fluid level controls, high temperature control, proper postpurge control, and verification of the flame safeguard.

[CGD 88–057, 55 FR 24237, June 15, 1990, as amended by USCG–1999–4976, 65 FR 6501, Feb. 9, 2000]

NOTE: Sections 63.05–90 and 63.10–90 of this chapter may be referenced concerning operating tests.

Subpart 61.35—Design Verification and Periodic Testing for Automatic Auxiliary Boilers

SOURCE: CGD 88–057, 55 FR 24237, June 15, 1990, unless otherwise noted.

§ 61.35–1 General.

(a) All automatic auxiliary boilers except fired thermal fluid heaters must be tested and inspected in accordance with this subpart and subpart 61.05 of this part.

(b) Fired thermal fluid heaters must be tested and inspected in accordance with subpart 61.30 of this part.

(c) All controls, safety devices, and other control system equipment must be tested and inspected to verify their proper design, construction, installation, and operation.

(d) All tests must be performed after installation of the automatic auxiliary boiler and its control system(s) aboard the vessel.

(e) As far as practicable, test techniques must not simulate monitored system conditions by misadjustment, artificial signals, improper wiring, tampering, or revision of the system tested. The use of a synthesized signal or condition applied to a sensor is acceptable if the required test equipment is maintained in good working order and is periodically calibrated. Proper operation and proper calibration of test equipment must be demonstrated to the Officer in Charge, Marine Inspection.

§ 61.35–3 Required tests and checks.

(a) Tests and checks must include the following:

(1) *Safety (Programming) controls.* Safety controls must control and cycle the unit in the proper manner and sequence. Proper prepurge, ignition, postpurge, and modulation must be verified. All time intervals must be verified.

(2) *Flame safeguard.* The flame safeguard system must be tested by causing flame and ignition failures. Operation of the audible alarm and visible indicator must be verified. The shutdown times must be verified.

(3) *Fuel supply controls.* Satisfactory shutdown operation of the two fuel control solenoid valves must be verified. No visible leakage from the valves into the burner(s) must be verified.

(4) *Fuel oil pressure limit control.* A safety shutdown must be initiated by lowering the fuel oil pressure below the value required for safe combustion. System shutdown and the need for manual reset prior to automatic start-up must be verified.

(5) *Fuel oil temperature limit control.* (Units designed to burn heavy fuel oil.) A safety shutdown must be initiated by lowering the fuel oil temperature below the designed temperature. System shutdown and the need for manual