this case, there must be a neutral over-
current relay and alarm system that is
set to function at a current value not
more than the neutral rating.

(2) Equalizer buses. For each three-
wire generator, the circuit breaker
must protect against a short circuit on
the equalizer bus.

(j) Circuit breaker reclosing. Generator
circuit breakers must not automati-
cally close after tripping.

[CGD 74–125A, 47 FR 15236, Apr. 8, 1982, as
amended by CGD 81–030, 53 FR 17847, May 18,
FR 23908, May 1, 1997]

§ 111.12–13 Propulsion generator pro-
tection.

For general requirements, see
§ 111.35–1 of this chapter.

Subpart 111.15—Storage Batteries
and Battery Chargers: Con-
struction and Installation

§ 111.15–1 General.

Each battery must meet the require-
ments of this subpart.


§ 111.15–2 Battery construction.

(a) A battery cell, when inclined at 40
degrees from the vertical, must not
spill electrolyte.

(b) Each fully charged lead-acid bat-
tery must have a specific gravity that
meets section 22 of IEEE 45–2002 (incor-
porated by reference; see 46 CFR 110.10–
1).

(c) Batteries must not evolve hydro-
gen at a rate exceeding that of a simi-
lar size lead-acid battery under similar
charging condition.

(d) Batteries must be constructed to
take into account the environmental
conditions of a marine installation, in-
cluding temperature, vibration, and
shock.

[CGD 94–108, 61 FR 28277, June 4, 1996, as
amended by USCG–2003–16630, 73 FR 63106,
Oct. 31, 2008]

§ 111.15–3 Battery categories.

(a) A battery installation is classified
as one of three types, based upon power
output of the battery charger, as fol-
lows:

(1) Large. A large battery installation
is one connected to a battery charger
that has an output of more than 2 kw
computed from the highest possible
charging current and the rated voltage
of the battery installation.

(2) Moderate. A moderate battery in-
stallation is one connected to a battery
charger that has an output of between
0.2 kw and 2 kw computed from the
highest possible charging current and
the rated voltage of the battery instal-
lation.

(3) Small. A small battery installation
is one connected to a battery charger
that has an output of less than 0.2 kw
computed from the highest possible
charging current and the rated voltage
of the battery installation.

(b) Batteries that generate less hy-
drogen under normal charging and dis-
charging conditions than an equivalent
category of lead-acid batteries (e.g.,
sealed batteries) may have their bat-
tery category reduced to an equivalent
category of lead-acid batteries.

[CGD 74–125A, 47 FR 15236, Apr. 8, 1982, as
amended by CGD 94–108, 61 FR 28278, June 4,
1996]

§ 111.15–5 Battery installation.

(a) Large batteries. Each large battery
installation must be in a room that is
only for batteries or a box on deck. In-
stalled electrical equipment must meet
the hazardous location requirements in
subpart 111.105 of this part.

(b) Moderate batteries. Each moderate
battery installation must be in a bat-
tery room, in a box on deck, or in a box
or locker in another space such as an
engineroom, storeroom, or similar
space, except if a moderate battery in-
stallation is in a ventilated compart-
ment such as the engineroom and is
protected from falling objects, a box or
locker is not required. A moderate bat-
tery installation must not be in a
sleeping space. An engine cranking bat-
tery for one or more engines must be as
close as possible to the engine or en-
gines.

(c) Small batteries. Small size battery
installations must not be located in
poorly-ventilated spaces, such as clos-
ets, or in living spaces, such as state-
rooms.

(d) Battery trays. Each battery tray
must be chocked with wood strips or