

**Pt. 31**

**14 CFR Ch. I (1–1–10 Edition)**

(4) From 100 MHz to 8 GHz, use radiated susceptibility tests at a minimum of 5 V/m.

[Doc. No. FAA–2006–23657, 72 FR 44028, Aug. 6, 2007]

**PART 31—AIRWORTHINESS STANDARDS: MANNED FREE BALLOONS**

APPENDIX A TO PART 31—INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

AUTHORITY: 49 U.S.C. 106(g), 40113, 44701–44702, 44704.

SOURCE: Docket No. 1437, 29 FR 8258, July 1, 1964, as amended by Amdt. 31–1, 29 FR 14563, Oct. 24, 1964, unless otherwise noted.

**Subpart A—General**

**Subpart A—General**

Sec.

31.1 Applicability.

**§31.1 Applicability.**

(a) This part prescribes airworthiness standards for the issue of type certificates and changes to those certificates, for manned free balloons.

**Subpart B—Flight Requirements**

(b) Each person who applies under Part 21 for such a certificate or change must show compliance with the applicable requirements of this part.

- 31.12 Proof of compliance.
- 31.14 Weight limits.
- 31.16 Empty weight.
- 31.17 Performance: Climb.
- 31.19 Performance: Uncontrolled descent.
- 31.20 Controllability.

(c) For purposes of this part—

**Subpart C—Strength Requirements**

(1) A captive gas balloon is a balloon that derives its lift from a captive lighter-than-air gas;

- 31.21 Loads.
- 31.23 Flight load factor.
- 31.25 Factor of safety.
- 31.27 Strength.

(2) A hot air balloon is a balloon that derives its lift from heated air;

**Subpart D—Design Construction**

(3) The envelope is the enclosure in which the lifting means is contained;

- 31.31 General.
- 31.33 Materials.
- 31.35 Fabrication methods.
- 31.37 Fastenings.
- 31.39 Protection.
- 31.41 Inspection provisions.
- 31.43 Fitting factor.
- 31.45 Fuel cells.
- 31.46 Pressurized fuel systems.
- 31.47 Burners.
- 31.49 Control systems.
- 31.51 Ballast.
- 31.53 Drag rope.
- 31.55 Deflation means.
- 31.57 Rip cords.
- 31.59 Trapeze, basket, or other means provided for occupants.
- 31.61 Static discharge.
- 31.63 Safety belts.
- 31.65 Position lights.

(4) The basket is the container, suspended beneath the envelope, for the balloon occupants;

**Subpart E—Equipment**

(5) The trapeze is a harness or is a seat consisting of a horizontal bar or platform suspended beneath the envelope for the balloon occupants; and

31.71 Function and installation.

(6) The design maximum weight is the maximum total weight of the balloon, less the lifting gas or air.

**Subpart F—Operating Limitations and Information**

- 31.81 General.
- 31.82 Instructions for Continued Airworthiness.
- 31.83 Conspicuity.
- 31.85 Required basic equipment.

[Doc. No. 1437, 29 FR 8258, July 1, 1964, as amended by Amdt. 31–3, 41 FR 55474, Dec. 20, 1976]

**Subpart B—Flight Requirements**

**§31.12 Proof of compliance.**

(a) Each requirement of this subpart must be met at each weight within the range of loading conditions for which certification is requested. This must be shown by—

(1) Tests upon a balloon of the type for which certification is requested or by calculations based on, and equal in accuracy to, the results of testing; and

(2) Systematic investigation of each weight if compliance cannot be reasonably inferred from the weights investigated.