§ 238.225 Electrical system.

All passenger equipment shall comply with the following:

(a) Conductors. Conductor sizes shall be selected on the basis of current-carrying capacity, mechanical strength, temperature, flexibility requirements, and maximum allowable voltage drop.

(b) Sheathing. Outside sheathing of mild, open-hearth steel when used flat, without reinforcement (other than side posts) in a side frame of modified girder or semi-monocoque construction shall not be less than 1/8 inch nominal thickness. Other metals may be used of a thickness in inverse proportion to their yield strengths.

(c) Locomotive fuel tanks. Locomotive fuel tanks shall comply with either the following or an industry standard providing at least an equivalent level of safety if approved by FRA under §238.21:

(1) External fuel tanks. External locomotive fuel tanks shall comply with the requirements contained in Appendix D to this part.

(2) Internal fuel tanks. Internal locomotive fuel tanks shall be positioned in a manner to reduce the likelihood of accidental penetration from roadway debris or collision. Internal fuel tank vent systems shall be designed so they do not become a path of fuel loss in any tank orientation due to a locomotive overturning. Internal fuel tank bulkheads and skin shall, at a minimum, be equivalent to a 5/16-inch thick steel plate with a yield strength of 25,000 pounds per square inch. Material of a higher yield strength may be used to decrease the required thickness of the material provided at least an equivalent level of strength is maintained. Skid plates are not required.

(3) Locomotive fuel tank bulkheads and skin shall, at a minimum, be equivalent to a 5/16-inch thick steel plate with a yield strength of 25,000 pounds per square inch. Material of a higher yield strength may be used to decrease the required thickness of the material provided at least an equivalent level of strength is maintained. Skid plates are not required.

[67 FR 19991, Apr. 23, 2002]