§ 154.514 Cargo and process piping standards.

The cargo liquid and vapor piping and process piping systems must meet the requirements in §§154.503 through 154.562, Subparts 56.01 through 56.35, §§56.50–20 and 56.50–105, and Subparts 56.60 through 56.97 of this chapter.

§ 154.503 Piping and piping system components: Protection from movement.

Where thermal movement and movements of the cargo tank and the hull structure may cause stresses that exceed the design stresses, the piping and piping system components and cargo tanks must be protected from movement by:

(a) Offsets;
(b) Loops;
(c) Bends;
(d) Mechanical expansion joints including:
   (1) Bellows;
   (2) Slip joints;
   (3) Ball joints; or
   (e) Other means specially approved by the Commandant (CG–ENG).

§ 154.506 Mechanical expansion joint: Limits in a piping system.

Mechanical expansion joints in a piping system outside of a cargo tank:

(a) May be installed only if offsets, loops or bends cannot be installed due to limited space or piping arrangement;
(b) Must be a bellows type; and
(c) Must not have insulation or a cover unless necessary to prevent damage.

§ 154.512 Piping: Thermal isolation.

Low temperature piping must be thermally isolated from any adjacent hull structure to prevent the temperature of that structure from dropping below the minimum temperature for the hull material under §154.170.

§ 154.514 Piping: Electrical bonding.

(a) Cargo tanks or piping that are separated from the hull structure by