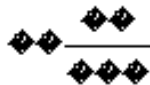## § 179.300-6 Thickness of plates.

(a) For class DOT-110A tanks, the wall thickness after forming of the cylindrical portion of the tank must not be less than that specified in §179.301 nor that calculated by the following formula:

$$\lozenge\lozenge \frac{\lozenge\lozenge}{\lozenge\lozenge\lozenge}$$

Where:

d = inside diameter in inches;

E = 1.0 welded joint efficiency;

P = minimum required bursting pressure in psig;

S = minimum tensile strength of plate material in p.s.i. as prescribed in §179.300–7;

t = minimum thickness of plate material in inches after forming.

(b) For class DOT-106A tanks, the wall thickness of the cylindrical portion of the tank shall not be less than that specified in §179.301 and shall be such that at the tank test pressure the maximum fiber stress in the wall of the tank will not exceed 15,750 p.s.i. as calculated by the following formula:

$$s = [\, p \, (1.3 \, D^2 + 0.4 \, d^2\,] / (\, D^2 - d^2\,)$$

where:

d = inside diameter in inches;

D = outside diameter in inches;

p = tank test pressure in psig;

s = wall stress in psig

(c) If plates are clad with material having tensile strength at least equal to the base plate, the cladding may be considered a part of the base plate when determining the thickness. If cladding material does not have tensile strength at least equal to the base plate, the base plate alone shall meet the thickness requirements.

[29 FR 18995, Dec. 29, 1964, as amended by Order 71, 31 FR 9083, July 1, 1966. Redesignated at 32 FR 5606, Apr. 5, 1967; 66 FR 45186, 45390, Aug. 28, 2001]