

AP42 7.1.3 DRAFT 09/06

Loss factors may be estimated for deck fitting configurations that are not listed in Table 1-12, at the zero miles-per-hour wind speed condition (IFRTs and CFRTs), from the following equation:

$$K_{\text{fai}} = 0.27(A_{\text{fi}})^{0.86}$$

Where:

- K_{fai} = zero-wind-speed loss factor for a particular type of deck fitting, in pound-moles per year.
- A_{fi} = liquid surface area within a particular type of deck fitting, in square inches. The liquid surface area is the area inside the deck fitting well or leg sleeve, less any area occupied by an obstruction in the deck fitting well or leg sleeve (such as a fixed-roof support column, unslotted guidepole, guidepole float, or deck support leg).

The coefficient, 0.27, has units of pound-moles per (square inches)^{0.86}-year, and the exponent, 0.86, is dimensionless.

This equation is only applicable when the distance from the liquid surface to the top of the deck fitting well or leg sleeve is 12 inches or greater. Shorter deck fitting wells or leg sleeves may result in higher loss rates. There are no similar algorithms available for estimating loss factors for shorter deck fitting wells or leg sleeves.

This equation is for an uncontrolled deck fitting. Effective deck fitting controls would be expected to result in lower loss factors than would be estimated by this equation, but there are no algorithms available for estimating the effectiveness of deck fitting controls.

This equation is for the zero miles-per-hour wind speed condition. There are no algorithms available for estimating loss factors at non-zero wind speeds (EFRTs).