ERRATA

NUREG-1805 Fire Dynamics Tools (FDT)[s] - Quantitative Fire Hazard Analysis Methods for the U.S. Nuclear Regulatory Commission Fire Protection Inspection Program

Page 5-12, Equation 5-15

Replace

$$\pi F_{1\rightarrow 2,H} = \left(\begin{array}{l} \tan^{-1}\dfrac{\sqrt{\dfrac{b+1}{b-1}}}{\pi\sqrt{B^2-1}} - \dfrac{a^2+(b+1)^2-2(b+1+ab\sin\theta)}{\sqrt{AB}}\tan^{-1}\sqrt{\dfrac{A}{B}}\sqrt{\dfrac{(b-1)}{(b+1)}} + \\ \dfrac{\sin\theta}{\sqrt{C}}\left(\tan^{-1}\dfrac{ab-(b^2-1)\sin\theta}{\sqrt{b^2-1}\sqrt{C}} + \tan^{-1}\dfrac{(b^2-1)\sin\theta}{\sqrt{b^2-1}\sqrt{C}}\right) \end{array}\right)$$

by

$$\pi F_{1\rightarrow 2,H} = \left(\begin{array}{l} \tan^{-1}\sqrt{\dfrac{b+1}{b-1}} - \dfrac{a^2+(b+1)^2-2(b+1+ab\sin\theta)}{\sqrt{AB}}\tan^{-1}\sqrt{\dfrac{A}{B}}\sqrt{\dfrac{(b-1)}{(b+1)}} + \\ \dfrac{\sin\theta}{\sqrt{C}}\left(\tan^{-1}\dfrac{ab-(b^2-1)\sin\theta}{\sqrt{b^2-1}\sqrt{C}} + \tan^{-1}\dfrac{(b^2-1)\sin\theta}{\sqrt{b^2-1}\sqrt{C}}\right) \end{array}\right)$$

Page 17-2, Table 17-1

Replace

Table 17-1. Standard Time-Temperature Curve Points

Time	**Temperature ˚C (˚F)**
5 min	38 (100)
10 min	704 (1,300)
30 min	843 (1,550)
1 hr	927 (1,700)
2 hr	1,010 (1,850)
4 hr	1,093 (2,000)

By

Table 17-1. Standard Time-Temperature Curve Points

Time	**Temperature ˚C (˚F)**
5 min	538 (1,000)
10 min	704 (1,300)
30 min	843 (1,550)
1 hr	927 (1,700)
2 hr	1,010 (1,850)
4 hr	1,093 (2,000)
8 hr	1,260 (2,300)

Page 2-12, Equation (2-6)

Replace

$$K_1 = \frac{2\left(0.4\sqrt{k\rho c}\right)}{mc_p}$$

By

$$K_1 = \frac{2\left(0.4\sqrt{k\rho c}\right)\ A_T}{mc_p}$$

And:

ΔT_g = upper layer gas temperature rise above ambient (T_g - T_a) (K)
k = thermal conductivity of the interior lining (kW/m-K)
A_T = area of the compartment boundaries surface (m^2)
ρ = density of the interior lining (kg/m^3)
c = thermal capacity of the interior lining (kJ/kg-K)
$\dot{Q}$ = heat release rate of the fire (kW)
m = mass of the gas in the compartment (kg)
c_p = specific heat of air (kJ/kg-k)
t = exposure time (sec)