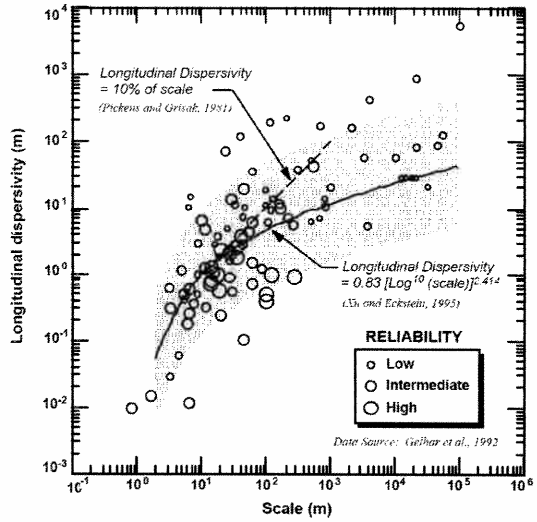
$$C(x,t)=\frac{C_o}{2}\left(erfc\left[\frac{L-v_x t}{2\sqrt{D_x t}}\right]+\exp\left(\frac{v_x L}{D_x}\right)erfc\left[\frac{L+v_x t}{2\sqrt{D_x t}}\right]\right)$$

$$C(x,y,t)=\frac{m'}{4\pi n t\sqrt{D_x D_y}}\exp\left[-\frac{(x-v_x t)^2}{4D_x t}-\frac{y^2}{4D_y t}-\lambda t\right]$$

$$C(x,y,t)=\frac{C_o A}{4\pi t\sqrt{D_x D_y}}\exp\left[-\frac{(x-v_x t)^2}{4D_x t}-\frac{y^2}{4D_y t}-\lambda t\right]$$

$$C(x,y,z,t)=\frac{C_o V_o}{8(\pi t)^{\frac{3}{2}}(D_x D_y D_z)^{\frac{1}{2}}}\exp\left[-\frac{(x-v_x t)^2}{4D_x t}-\frac{y^2}{4D_y t}-\frac{z^2}{4D_z t}\right]$$

$$\Delta C_B\left(\tfrac{mg}{L}\right)=-\frac{DO}{F_O}$$



$$q_X=-K_{XX}\frac{\partial h}{\partial X}$$

$$q_Y=-K_{YY}\frac{\partial h}{\partial Y}$$

$$q_x=-K_{XX}\frac{\partial h}{\partial X}\cos\alpha-K_{YY}\frac{\partial h}{\partial Y}\sin\alpha=-K_{xx}\frac{\partial h}{\partial x}-K_{xy}\frac{\partial h}{\partial y}$$

$$q_y=-K_{YY}\frac{\partial h}{\partial Y}\cos\alpha+K_{XX}\frac{\partial h}{\partial X}\sin\alpha=-K_{xy}\frac{\partial h}{\partial x}-K_{yy}\frac{\partial h}{\partial y}$$

$$K_{xx}=\frac{1}{2}(K_{XX}+K_{YY})+\frac{1}{2}(K_{XX}-K_{YY})\cos 2\alpha$$

$$K_{yy}=\frac{1}{2}(K_{XX}+K_{YY})-\frac{1}{2}(K_{XX}-K_{YY})\cos 2\alpha$$

$$K_{xy}=\frac{1}{2}(K_{YY}-K_{XX})\sin 2\alpha$$

$$\alpha=\frac{1}{2}\tan^{-1}\left(\frac{2K_{xy}}{K_{xx}-K_{yy}}\right)$$

$$K_{XX}=\frac{K_{xx}+K_{yy}}{2}+\left[\left(\frac{K_{xx}-K_{yy}}{2}\right)^2+K_{xy}{}^2\right]^{\frac{1}{2}}$$

$$K_{YY}=\frac{K_{xx}+K_{yy}}{2}-\left[\left(\frac{K_{xx}-K_{yy}}{2}\right)^2+K_{xy}{}^2\right]^{\frac{1}{2}}$$

$$R=1+\frac{\rho_b}{n}K_d$$

$$v_{reactive}=\frac{v_x}{R}$$

$$K_d=K_{oc}f_{oc}$$

$$\sigma_x=\sqrt{2D_x t}$$

$$\sigma_y=\sqrt{2D_y t}$$

$$\sigma_z=\sqrt{2D_z t}$$

$$D^*=\omega D_d$$

$$D_x=\alpha_x v_x+D^*$$

$$D_y=\alpha_y v_x+D^*, D_z=\alpha_z v_x+D^*$$

$$S=K_d C$$

$$S=K_d C^N$$

$$\log S=\log K_d+N\log C$$

$$S=\frac{\alpha\beta C}{1+\alpha C}$$

$1\text{ m}=3.28\text{ ft}$

$1000\text{ L}=1\text{ m}^3$

$1\text{ day}=24\text{ hr}=1440\text{ min}=86400\text{ sec}$

$1\text{ ft}^3=7.48\text{ gal}$