ΤΑΛΑΝΤΩΣΕΙΣ

$T=\frac{t}{N}$ $f=\frac{N}{t}$ $T\cdot f=1$

$\omega=\frac{2\pi}{T}=2\pi f$ $\varphi=\omega\cdot t$ και γενικά: $\varphi=\omega\cdot t+\varphi_o$

$\chi=A\eta\mu\omega t$,αν $t=0:\chi=0,\upsilon>0$ και γενικά: $\chi=A\eta\mu(\omega t+\varphi_o)$, όπου $\chi_{max}=A$

$\upsilon=\upsilon_{max}\sigma\upsilon\nu\omega t$ $\upsilon=\upsilon_{max}\sigma\upsilon\nu(\omega t+\varphi_o)$ $\upsilon_{max}=\omega A$

$\alpha=-\alpha_{max}\eta\mu\omega t$ $\alpha=-\alpha_{max}\eta\mu(\omega t+\varphi_o)$ $\alpha_{max}=\omega^2 A$

$\upsilon=\pm\omega\sqrt{A^2-\chi^2}$

$\alpha=-\omega^2\chi$

$\Sigma F=m\alpha=-D\chi$,όπου $D=m\omega^2$

$\omega=\sqrt{\frac{D}{m}}$ $T=2\pi\sqrt{\frac{m}{D}}$ $f=\frac{1}{2\pi}\sqrt{\frac{D}{m}}$

$E=U+K=\frac{1}{2}D\chi^2+\frac{1}{2}m\upsilon^2=U_{max}=\frac{1}{2}DA^2=K_{max}=\frac{1}{2}m\upsilon_{max}^2$

$U=E\eta\mu^2\omega t$ $K=E\sigma\upsilon\nu^2\omega t$

$C=\frac{Q}{V}$ $Q=CV$ $V=\frac{Q}{C}$

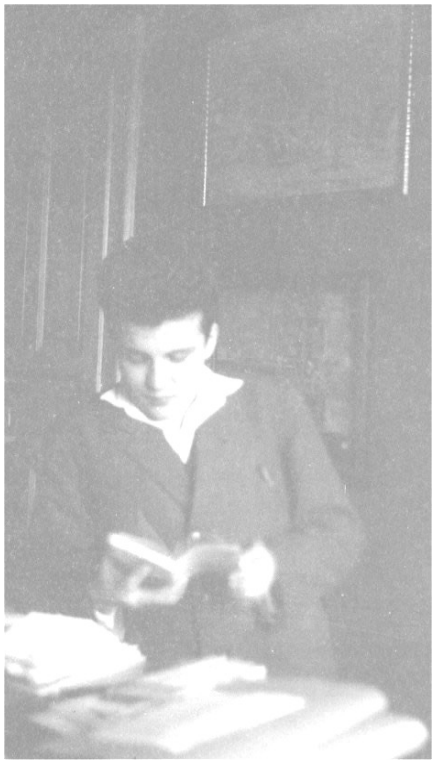
$q=Q\eta\mu(\omega t+\frac{\pi}{2})=Q\sigma\upsilon\nu\omega t$,αν $t=0:q=+Q$,όπου $q_{max}=Q$

$i=I\sigma\upsilon\nu(\omega t+\frac{\pi}{2})=-I\eta\mu\omega t$ $i_{max}=I=\omega Q$

$\omega=\frac{1}{\sqrt{LC}}$ $T=2\pi\sqrt{LC}$ $f=\frac{1}{2\pi\sqrt{LC}}$

$E=U_E+U_B=\frac{1}{2}\frac{q^2}{C}+\frac{1}{2}Li^2=U_{Emax}=\frac{1}{2}\frac{Q^2}{C}=U_{Bmax}=\frac{1}{2}LI^2$

$U_E=E\sigma\upsilon\nu^2\omega t$ $U_B=E\eta\mu^2\omega t$



$F=-b\upsilon$ $A=A_0e^{-\Lambda t}$ $\frac{A_0}{A_1}=\frac{A_1}{A_2}=e^{\Lambda T}$

$f_{εξαν.}=f_{διεγέρτη}$ και στον **συντονισμό: $f_{διεγέρτη}=f_0$ και $A=Amax$**

$\chi_1=A_1\eta\mu\omega t$ και $\chi_2=A_2\eta\mu(\omega t+\varphi)$ $A=\sqrt{A_1^2+A_2^2+2A_1A_2\sigma\upsilon\nu\phi}$

$\chi=\chi_1+\chi_2=A\eta\mu(\omega t+\theta)$ $\varepsilon\varphi\theta=\frac{A_2\eta\mu\phi}{A_1+A_2\sigma\upsilon\nu\phi}$

$\chi_1=A\eta\mu\omega_1 t$ και $\chi_2=A\eta\mu\omega_2 t$

$\chi=\chi_1+\chi_2=2A\sigma\upsilon\nu\frac{\omega_1-\omega_2}{2}t\cdot\eta\mu\frac{\omega_1+\omega_2}{2}t=A'\cdot\eta\mu\bar{\omega}t$,

όπου $\bar{\omega}=\frac{\omega_1+\omega_2}{2}\approx\omega_1\approx\omega_2$ και $A'=2A\sigma\upsilon\nu\frac{\omega_1-\omega_2}{2}t$

$f_{διακροτημάτων}=|f_1-f_2|$