ΥΠΟΛΟΓΙΣΜΟΣ ΠΕΔΙΩΝ ΣΕ ΑΠΛΕΣ ΜΑΓΝΗΤΟ- ΚΑΙ ΕΛΕΚΤΡΟ- ΣΤΑΤΙΚΕΣ ΠΕΡΙΠΤΩΣΕΙΣ

$$\phi_e\left(z;z_\sigma\right)=-\frac{\sigma_{tot}}{2\varepsilon_0}\left|z-z_\sigma\right|,\quad d\phi_e\left(z;z_\sigma\right)=-\frac{\rho_{tot}\left(z_\sigma\right)dz_\sigma}{2\varepsilon_0}\left|z-z_\sigma\right|$$

$$\phi_e\left(r_T\right)=-\frac{\lambda_{tot}}{2\pi\varepsilon_0}\ln\left(\frac{r_T}{r_{T0}}\right),\quad d\phi_e\left(r_T;x_\lambda,y_\lambda\right)=-\frac{\rho_{tot}\left(x_\lambda,y_\lambda\right)dx_\lambda dy_\lambda}{2\pi\varepsilon_0}\ln\left(\frac{r_T}{r_{T0}}\right)$$

$$\vec{\mathbf{E}}=-\nabla\phi_e,\quad \rho_{tot}=\rho_u+\rho_P,\ \sigma_{tot}=\sigma_u+\sigma_P,\quad \lambda_{tot}=\lambda_u+\lambda_P$$

$$A_y\left(z;z_K\right)=-\frac{\mu_0 K_{u,y}}{2}\left|z-z_K\right|,\quad dA_y\left(z;z_K\right)=-\frac{\mu_0 J_{u,y}\left(z_K\right)dz_K}{2}\left|z-z_K\right|$$

$$A_z\left(r_T\right)=-\frac{\mu_0 I_u}{2\pi}\ln\left(\frac{r_T}{r_{T0}}\right),\quad dA_z\left(r_T;x_I,y_I\right)=-\frac{\mu_0 J_{u,z}\left(x_I,y_I\right)dx_I dy_I}{2\pi}\ln\left(\frac{r_T}{r_{T0}}\right)$$

$$\vec{\mathbf{H}}=\frac{\nabla\times\vec{\mathbf{A}}}{\mu_0}$$