Электростатика проводников

$$\varepsilon = 1,\ \mu = 1,\ \rho + \rho_{cm} = 0,\ \boldsymbol{j} + \boldsymbol{j}_{cm} = 0$$

$$\mathrm{div}\boldsymbol{E} = 0, \quad \mathrm{rot}\boldsymbol{E} = 0,$$

$$\boldsymbol{E} = -\ \mathrm{grad}\varphi,$$

$$\Delta\varphi = 0.$$

$$\lim_{r\to\infty} \varphi(\boldsymbol{r}) = 0,\ \ \varphi|_{S_a} = \varphi_a = \mathrm{const},$$

$$E_n|_{S_a} = -\ \frac{\partial\varphi}{\partial n}|_{S_a} = 4\pi\sigma_a$$