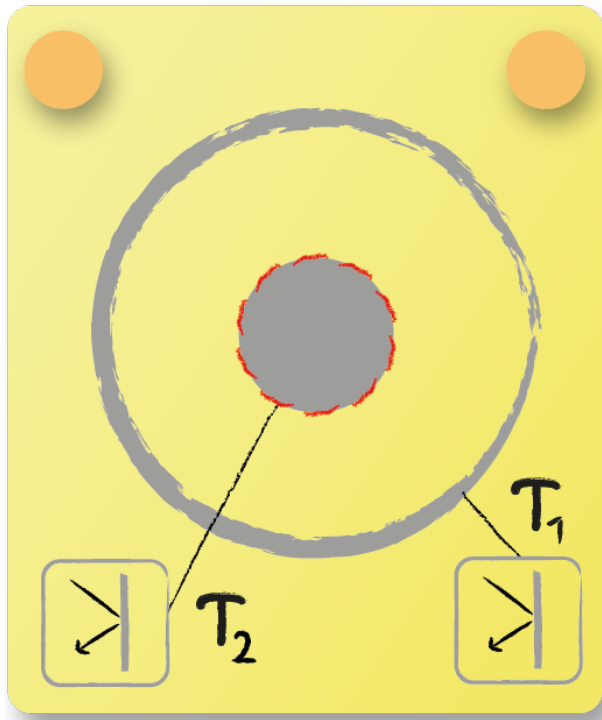


Surface Brightness: Task 14



The image shows a grey body 1 enclosing another grey body 2. Both of which are not transmitting but reflecting arriving radiation.

1



$$\dot{Q}_2 = \sigma \cdot \epsilon_2 \cdot A_2 \cdot T_2^4 + \rho_2 \cdot \phi_{1,2} \cdot \dot{Q}_1$$

2



The surface brightness of body 2 consists of its emission and reflection of radiation arriving from body 1. The displayed geometry indicates, that body 1 partly sees itself, such that the view factor has to be taken into account. The specifications of body 1 are not of interest, since they are included in its surface brightness.