Outgoing Radiation

Gray body surface radiation

$$\sigma A_k \varepsilon_k T_k^4$$

Reflected radiant energy

$$(1 - \varepsilon_k) q_k^{in}$$

Incoming Radiation

Incoming radiation from other surfaces, fires, and emitting, absorbing gas layers

$$q_k^{in}$$

Energy added to the k'th surface to maintain a constant temperature

$$A_k \Delta q_k''$$