Answer on Question #48513 – Physics – Other

How does the thermostat in electric iron work

Solution:

Thermostat, a word based on two ancient Greek ones: thermo (meaning heat) and statos (which means standing and is related to words like stasis, status quo, and static—meaning to stay the same).

We can tell just from its name that a thermostat is something that "keeps heat the same": when iron is too cold, the thermostat switches on the heating so it quickly warms up; once the temperature reaches the level we've set, the thermostat switches the heating off.

A bi-metal thermostat (type of the thermostat in electric iron) is simply a device in which two pieces of dissimilar metal are fused together. One of the pieces of metal will expand at a different rate than the other, causing the bi-metal thermostat to bend to one side. That action is used by engineers to operate a switch which "makes" or "breaks" the contact that operates the heating coil of the iron.