

The oven elements on a range are made with a nickel cadmium wire inside a metal tube. The nickel cadmium wire has a ceramic insulating tube around it to keep it from shorting to the outside metal tube.

Voltage is applied to each end of the nickel cadmium wire causing it to get very hot. This is how the element heats.

Sometimes oven cleaner, or grease will soak through the metal tube and cause the nickel cadmium wire to short to the outer metal tube. This short causes the metal tube to melt and the nickel cadmium wire to burn.

This is a fairly common symptom when an element fails. It is not a sign of the range failing, the element failed. Replacing the oven element will repair the problem and the new element will not fail because the original did.

Sometimes when an element shorts like this, it damages the relay contacts in the clock. If this has happened, you will have to replace the element and the clock.