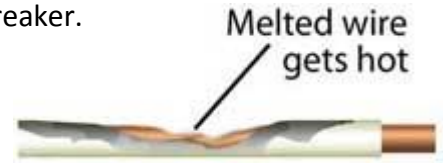
# Water heater flooded, and now breaker is tripping

Recommend thorough checkover using following information, or else replace tank.

1) Manufacturer's recommend replacing water heater that has flooded because of this problem. However if the insulation surrounding tank has sufficiently dried, then tank can probably be salvaged.

2) Replace both thermostats.
Turn power off.
http://waterheatertimer.org/How-to-replace-thermostat-on-electric-water-heater.html
Check wiring at upper thermostat to makes sure water heater is not mis-wired and turning both elements ON at same time.
Here is diagram of 2-element tank: Some tanks vary on lower part and black and red wires are reversed, which is fine. Wire colors can also vary, but upper thermostat wiring will be exactly same as shown.
http://waterheatertimer.org/images/WH-w-combined-530.jpg

3) It is possible that one of the wires inside tank melted fully or partially, and cannot support the amp draw, causing wire to heat up, and/or short against tank. This will trip breaker.
Circuit breakers trip when they sense heat.




4) Try replacing all wires inside tank.
Turn power off.
If tank has foam insulation, it may be impossible to drop wires without using long drill bit or running conduit down side of tank.

5) Check that wire size matches breaker size.
30 amp breaker = 10 gauge wire
20 amp breaker = 12 gauge wire
12 gauge is smaller than 10 gauge
http://waterheatertimer.org/Figure-Volts-Amps-Watts-for-water-heater.html

6) Check that wire/breaker size matches element volt/wattage size
240Volt 0 watts to 3800watt element = 20 amp breaker
240Volt 3800 watt to 5760 watt = 30 amp breaker
Watt rating is printed on side of each element.

7) Check that new elements are not shorted to tank:
Turn power off.
http://waterheatertimer.org/How-to-test-water-heater-element.html

8) Insulation must cover thermostat or cooler room temperature will affect thermostat causing tank to overheat. Thermostats read tank temperature through tank wall, and must be covered with insulation.