5. The system of claim 4, further comprising one or more mixing devices for mixing superheated steam with at least one of the second vapor fraction and the third vapor fraction.
6. The system of claim 5, further comprising one or more flow conduits for introducing superheated steam to at least one of the first, second, and third separators.
7. The system of claim 6, further comprising one or more coils for heating a process fluid disposed respectively intermediate one or more of the first, second, third, fourth, fifth, sixth, and seventh indirect heat exchange coils.
8. The ~~process~~system of claim 1, wherein, within the convection zone, the third indirect heat exchange coil is disposed at a higher temperature region of the convection zone than the fourth indirect heat exchange coil.
9. A system for cracking a hydrocarbon mixture to form olefins, the system comprising:

   a first heater comprising a radiant zone and a convection zone;

   one or more second heaters comprising a radiant zone and a convection zone;

   a first heating coil disposed in the convection zone of the first heater for partially vaporizing a mixed hydrocarbon feed;

   a first separation system for separating the partially vaporized mixed hydrocarbon feed into a first vapor fraction and a first liquid fraction;

   a second heating coil disposed in the convection zone of the first heater for partially vaporizing the first liquid fraction;

   a second separation system for separating the partially vaporized first liquid fraction into a second vapor fraction and a second liquid fraction;

   a third heating coil disposed in the convection zone of the first heater for partially vaporizing the second liquid fraction;

   a third separation system for separating the partially vaporized second liquid fraction into a third vapor fraction and a third liquid fraction;

   a first radiant coil disposed in the radiant zone of one of the one or more second heaters for cracking the first vapor fraction to form olefins; and

   a second radiant coil disposed in the radiant zone of one of the one or more second heaters for cracking the second vapor fraction to form olefins.
10. The system of claim 9, further comprising a fourth heating coil disposed in the convection zone of one of the one or more second heaters for superheating one or more of the first, second, and third vapor fractions.