WHAT IS CLAIMED IS:

1. A method for repairing composite components, the method comprising:

positioning repair material within a repair region of a composite component formed of a composite material;

placing the composite component within a vacuum chamber, the vacuum chamber comprising a first zone and a second zone, the first zone and second zone separated by a wall such that the repair region is exposed to the first zone and a remaining portion of the composite component is exposed to the second zone;

heating the repair region to a first temperature using a first heating element;

heating the remaining portion of the composite component to a second temperature using a second heating element; and

melt infiltrating the repair region with an infiltrant to densify the repair material,

wherein the first temperature is at or above a melting point of the infiltrant and the second temperature is less than the melting point.

2. The method of claim 1, wherein:

the first and second heating elements being of a same type of heating element.

3. The method of claim 1, wherein heating the repair region comprises heating the repair region to the first temperature using a carbon heating element.

4. The method of claim 1, wherein the repair material comprises silicon carbide and the infiltrant comprises silicon.

5. The method of claim 1, wherein:

heating the repair region using the first heating element comprises controlling a flow of electric current to the first heating element to heat the repair region to the first temperature; and

heating the remaining portion of the composite component comprises controlling the flow of electric current to the second heating element to heat the remaining portion to the second temperature.

6. A method of infiltrating composite components, the method comprising:

placing a composite component within a vacuum chamber, the vacuum chamber comprising a first zone and a second zone, the first zone and second zones separated by a wall such that a first portion of the composite component is exposed to the first zone and a second portion of the composite component is exposed to the second zone;

heating the first portion of a composite component to a first temperature using a first heating element;

heating the second portion of the composite component to a second temperature using a second heating element, the second portion being adjacent to the first portion; and

melt infiltrating the composite component with an infiltrant to densify the first portion of the composite component,

wherein the first temperature is at or above a melting point of the infiltrant and the second and third temperatures are less than the melting point.

7. The method of claim 6, wherein:

the first heating element and the second heating element being of a same type of heating element.

8. A system for infiltrating composite components, the system comprising:

a furnace defining a vacuum chamber including a first zone and a second zone, the furnace including a wall separating the first zone and the second zone, the furnace further including a composite component holder positioned within the vacuum chamber, the composite component holder configured to receive a composite component to be infiltrated with an infiltrant;

a first heating element positioned within the first zone of the vacuum chamber to heat a first portion of the composite component holder to a first temperature; and

a second heating element positioned within the second zone of the vacuum chamber to heat a second portion of the composite component holder to a second temperature;

wherein the first temperature is at or above a melting point of the infiltrant and the second temperature is less than the melting point.

9. The system of claim 8, wherein the first heating element and the second heating element are of a same type of heating element.

10. The system of claim 8, wherein the first heating element and the second heating element comprise carbon heating elements.