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(54) Title: METHOD OF CONTROLLING THERMAL WAVES IN REACTIVE MULTILAYER JOINING AND RESULTING PRODUCT

(57) Abstract: An embodiment of the invention includes a method of simulating a behavior of an energy distribution within a soldered or brazed assembly to predict various physical parameters of the assembly. The assembly typically includes a reactive multilayer material. The method comprises the steps of providing an energy evolution equation having an energy source term associated with a self-propagating reaction that originates within the reactive multilayer material. The method also includes the steps of discretizing the energy evolution equation, and determining the behavior of the energy distribution in the assembly by integrating the discretized energy evolution equation using other parameters associated with the assembly.



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