

REPAIR METHOD FOR PROPAGATING EPITAXIAL CRYSTALLINE STRUCTURES

ABSTRACT OF THE DISCLOSURE

A repair method of propagating epitaxial crystalline structures is provided. The repair method broadly comprises the steps of providing a substrate to be repaired, placing an additive material as a preformed shape onto an area of the substrate to be repaired, utilizing a heat source to heat an entire volume of the additive material and an area adjacent to the additive material to a fusion temperature, holding at the fusion temperature for a time sufficient to allow grain growth and orientation to occur, and ramping down the heat source at a predetermined controlled rate until solidification is complete.