

GAS TURBINE ENGINE COMPONENT MATERIAL ADDITION PROCESS

ABSTRACT

A material addition process is described that includes coupling a plate to a gas turbine engine component and adding material to the plate. In one embodiment the gas turbine engine component can be processed by removing a portion that is damaged, such as a portion that includes a crack. A material can be deposited on the plate and built up in layers to replace the removed portion. The material can be layered upon the plate such that its thickness through the layers is smaller than a reach of the layers in a direction of the layer. The plate can be removed in whole or in part after a material has been added. In one form the material can be added by direct laser deposition. In one embodiment a metal powder is fused using a laser. Excess buildup can be removed to reveal a net shape article.

Figure No. 2