

ABSTRACT

REPAIR OF THROUGH-HOLE DAMAGE USING BRAZE SINTERED PREFORM

A method may include removing a portion of a base component adjacent to a damaged portion of the base component to define a repair portion of the base component. The base component may include a cobalt- or nickel-based superalloy, and the repair portion of the base component may include a through-hole extending from a first surface of the base component to a second surface of the base component. The method also may include forming a braze sintered preform to substantially reproduce a shape of the through-hole. The braze sintered preform may include a Ni- or Co-based alloy. The method additionally may include placing the braze sintered preform in the through-hole and heating at least the braze sintered preform to cause the braze sintered preform to join to the repair portion of the base component and change a microstructure of the braze sintered preform to a brazed and diffused microstructure.

FIG. 2