

WELDING REPAIR METHOD OF AN INTEGRALLY BLADED ROTOR

ABSTRACT OF THE DISCLOSURE

5 A method of repairing a rotor blade, for example on an integrally bladed rotor, includes preparing a surface on a damaged area of the blade. The blade has first and second airfoil surfaces adjoining the prepared surface that are spaced apart a distance. An edge of a patch abuts the prepared surface to provide a weld interface defining a welding plane. First and second cover sheets respectively overlap the
10 first and second airfoil surfaces. The first and second cover sheets adjoin the edge and the first and second airfoil surfaces. The blade, patch and first and second cover sheets are welded along the welding plane providing a welded joint at the weld interface. The first and second cover sheets are substantially unsecured to the first and second airfoil surfaces subsequent to the welding operation.