HIGH PRESSURE TURBINE AIRFOIL RECOVERY DEVICE AND METHOD OF HEAT TREATMENT

ABSTRACT

A fixture (20) and method for repairing superalloy articles. The fixture (20) ideally holds the article in place if repairs are made. An interface between the fixture (20) and the article facilitate transfer of heat between the article and the fixture (20) so that the article can be differentially heat treated. A portion of the article extends from the fixture (20). This portion of the article, which may be repaired within the fixture (20) or may be repaired elsewhere, is solution heat treated while in the fixture (20) so that the area extending from the fixture (20) is solutioned, while heat is transferred from the article through the fixture (20), thereby preventing the temperature of the portion of the article within the fixture (20) from being elevated so as to modify its microstructure. The solutioned portion can then be heat treated, while in the fixture (20), to precipitation harden it as desired.

Fig. 3