

ALLOYS FOR HIGH TEMPERATURE
APPLICATIONS, ARTICLES MADE THEREFROM,
AND METHOD FOR REPAIR OF

ABSTRACT OF THE DISCLOSURE

An alloy for use in high temperature applications is presented. The alloy comprises, in atom percent, at least about 50% rhodium (Rh); at least about 5% of a metal selected from the group consisting of platinum (Pt), palladium (Pd), and combinations thereof; from about 5% to about 24% ruthenium (Ru); and from about 1% to about 40% chromium (Cr); wherein the alloy comprises less than about 50% by volume of an A3-structured phase, and wherein the quantity defined by the expression $([Cr] + 2[Ru])$ is in the range from about 25% to about 50%, where [Ru] and [Cr] are the atom percentages of ruthenium and chromium in the alloy, respectively. Articles comprising the alloy and methods employing the alloy for repairing articles are also presented.

(FIG. 1)