

METHOD FOR REMOVING ENGINE DEPOSITS FROM TURBINE COMPONENTS AND COMPOSITION FOR USE IN SAME

ABSTRACT OF THE DISCLOSURE

A method and cleaning composition for removing engine deposits (58) from turbine components (10), in particular turbine disks (10) and turbine shafts (10). This method comprises the following steps: (a) providing a turbine component (10) having a surface (14) with engine deposits (58) thereon, wherein the turbine component (10) comprises a nickel and/or cobalt-containing base metal (50); and (b) treating the surface (14) of the turbine component (10) with a cleaning composition to convert the engine deposits (58) thereon to a removable smut without substantially etching the base metal (50) of the turbine component (10). The cleaning composition comprises an aqueous solution that is substantially free of acetic acid and comprising: a nitrate ion source in an amount, by weight of the nitrate ion, of from 470 to 710 grams/liter; and a bifluoride ion source in an amount, by weight of the bifluoride ion, of from 0.5 to 15 grams/liter. The smut that is formed can be removed from the surface (14) of the turbine component (10) in a manner that does not substantially alter the surface (14) thereof.

Fig. 2