

SYSTEMS AND METHODS FOR CLEANING A GAS TURBINE ENGINE

Abstract of the Disclosure

Provided herein are methods for cleaning a component (202, 302, 702) of a gas turbine engine (200). The methods described herein subject the component (202, 302, 702) to at least one transient thermal cycle and then clean the component (202, 302, 702) to remove at least a portion of the contaminant deposit (204) from the component (202, 302, 702). During the at least one transient thermal cycle, the surface temperature of the component (202, 302, 702) changes by at least 293 degrees Kelvin (K). In some embodiments, the surface temperature of the component (202, 302, 702) changes by a rate of at least 100 degrees Kelvin per second or, in some embodiments, by a rate of at least 100000 degrees Kelvin per second within the transient thermal cycle. After exposing the component (202, 302, 702) to the at least one transient thermal cycle, the component (202, 302, 702) is cleaned to remove at least a portion of a contaminant deposit (204).

[Figure 1]