

SMOOTH OUTER COATING FOR COMBUSTOR
COMPONENTS AND COATING METHOD THEREFOR

ABSTRACT OF THE DISCLOSURE

A coating (28) and method for overcoating a TBC (26) on a component (14) used in a high-temperature environment, such as the combustor section of an industrial gas turbine (10). The coating (28) defines the outermost surface of the component (14) and is formed of at least two layers (30,32) having different compositions. An inner layer (30) of the coating (28) contains alumina in a first silica-containing matrix material that is free of zinc titanate. An outer layer (32) of the coating (28) contains alumina, a glass material, and zinc titanate in a second silica-containing matrix material. The outer layer (32) of the coating (28) has a surface roughness of not greater than three micrometers Ra and forms the outermost surface (34) of the component (14). The coating (28) reduces the component temperature by reducing the convective and radiant heat transfer thereto.

FIG. 2