

Title (en)

Use of a thermal barrier coating for a part of a steam turbine and a steam turbine

Title (de)

Verwendung einer Wärmedämmschicht für ein Bauteil einer Dampfturbine und eine Dampfturbine

Title (fr)

Utilisation de revêtement de barrière thermique pour un élément d'une turbine à vapeur et une turbine à vapeur

Publication

EP 1541810 A1 20050615 (DE)

Application

EP 03028575 A 20031211

Priority

EP 03028575 A 20031211

Abstract (en)

The heat insulation layer (7) is used in one component, e.g. a valve housing (34) of a steam turbine, which is next to a second component, e.g. a housing cover (37), to adjust, esp. even out, differing deformation behavior of the components, esp. between room and operational temperatures, to reduce radial and/or axial tolerances. The first component is subject to a heat differential of at least 200[deg]C. The heat insulation layer is used for a steam inlet section of a turbine, which is next to a blade section, a turbine housing, a valve housing unit (31), a turbine blade, or for a component consisting of a main material, e.g. iron/nickel/cobalt alloy. The heat insulation layer consists at least partially, pref. completely, of zirconium oxide (ZrO₂), or titanium oxide (TiO₂). An intermediate protection layer below the heat insulation is a MCrAlX layer, with M being an element from the group nickel, cobalt, and esp. iron, and X being yttrium and/or silicon and/or at least one of the rare earth.

Abstract (de)

Die Erfindung betrifft ein Bauteil (58) einer Dampfturbine mit einer Wärmedämmschicht (7), um das Verformungsverhalten aufgrund unterschiedlicher Erwärmungen des Bauteils (58) zu vergleichmäßigen. <IMAGE>

IPC 1-7

F01D 25/14; **F01D 5/28**; **F01D 11/18**

IPC 8 full level

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CPC (source: EP KR US)

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