

## 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 (ZrO<sub>2</sub>), or titanium oxide (TiO<sub>2</sub>). 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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