

Title (en)

Turbomachine, Steam Turbine plant, and Method for heating a steam turbine shaft

Title (de)

Strömungsmaschine, Dampfturbinenanlage und Verfahren zum Wärmen einer Dampfturbinenwelle

Title (fr)

Turbomachine, installation à turbine à vapeur, et procédé de chauffage d'un arbre de turbine à vapeur

Publication

EP 2511485 A1 20121017 (DE)

Application

EP 11162639 A 20110415

Priority

EP 11162639 A 20110415

Abstract (en)

The turbo-machine has a rotatably mounted shaft (10) inside the housing (8,9), where the shaft has a thermally stressed area. A unit (20) is provided for supplying a hot steam to the thermally highly stressed area. The housing has an outer housing that is arranged outside an inner housing. The shaft has a relief groove (15) with a smaller diameter, where the unit is designed such that the hot steam is passed through the relief groove. The shaft is designed as double-flow, where the relief groove is arranged in an inlet area (7) that is formed for supplying the steam. Independent claims are included for the following: (1) a steam turbine plant with a steam generator; and (2) a method for warming a steam turbine shaft.

Abstract (de)

Die Erfindung betrifft ein Verfahren zum Wärmen einer Dampfturbinenwelle (10), wobei die Welle (10) im Falle eines Lastabwurfs mit einem heißen Dampf, der aus der Frischdampfleitung (3) abgezweigt wird, erwärmt wird.

IPC 8 full level

F01K 13/00 (2006.01); **F01D 25/10** (2006.01)

CPC (source: EP)

F01D 25/10 (2013.01); **F01K 13/006** (2013.01); **F05D 2260/85** (2013.01)

Citation (search report)

- [XYI] JP S5912105 A 19840121 - FUJI ELECTRIC CO LTD
- [Y] JP S60206905 A 19851018 - TOSHIBA KK
- [A] US 4651532 A 19870324 - ABE SHOJI [JP]

Cited by

EP3232021A1; CN107299844A; KR101825324B1; US10253654B2; US10577962B2

Designated contracting state (EPC)

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Designated extension state (EPC)

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