

Title (en)
Device and method for securing a sealing element on a rotor

Title (de)
Vorrichtung und Verfahren zum Sichern eines Dichtelements an einem Rotor

Title (fr)
Dispositif et procédé pour sécuriser un élément d'étanchéité sur un rotor

Publication
EP 1916382 A1 20080430 (DE)

Application
EP 06022335 A 20061025

Priority
EP 06022335 A 20061025

Abstract (en)
The assembly device (100) for production of safety mechanism of a sealing element (42) arranged front side of a rotor of a turbine against a displacement in circumferential direction, comprises a clamping device for fastening of the assembly device at the rotor, a fixing device for security mechanism of the sealing element, which secures rotor blades arranged on the rotor against axial displacement, a bending device fastened at the clamping device, and a sheet metal strip intended in a recess and arranged at the sealing element. The assembly device (100) for production of safety mechanism of a sealing element (42) arranged front side of a rotor of a turbine against a displacement in circumferential direction, comprises a clamping device for fastening of the assembly device at the rotor, a fixing device for security mechanism of the sealing element, which secures rotor blades arranged on the rotor against axial displacement, a bending device fastened at the clamping device, and a sheet metal strip intended in a recess and arranged at the sealing element. The fixing device comprises an adjustable lever with a stop element coupled to the lever, by which the sealing element is pressable against the rotor. The clamping device is detachably fastened to the bending device and comprises a strutting mechanism operatable by clamping lever, which is strutable with the rotor. The strutting mechanism embraces an undercut of the rotor, which is intended in a circumference groove of the rotor. The strutting mechanism is strutable between two side walls of the circumference groove of the rotor. A positioning aid (150) is intended for the positioning of the bending device in circumferential direction of the rotor. The assembly device comprises an adjusting aid (140) for the adjustment of the sealing element towards the rotor. The adjusting aid is formed as screw, whose free end serves as cam intended at the sealing element. A stamp is adjustable for bending the metal strip around the axial direction of the rotor from a quiescent position. A stop is used for limiting the stamp movement. The stamp is manually propellable over a lever. The stamp is coupled over a worm gear with the lever and is electrically, pneumatically or hydraulically drivable by an auxiliary drive.

Abstract (de)
Die Erfindung betrifft eine Montagevorrichtung (100) zum Herstellen der Sicherung eines an einem Rotor (23) einer Turbine stirnseitig angeordneten Dichtelementes (42) gegen eine Verschiebung in Umfangsrichtung (U), wobei das Dichtelement (42) am Rotor (23) angeordnete Laufschaufeln (14) gegen eine Axialverschiebung sichert. Ferner umfasst die Erfindung ein Verfahren zum Herstellen der Sicherung eines an einem Rotor (23) einer Turbine stirnseitig angeordneten Dichtelementes (42) gegen eine Verschiebung in Umfangsrichtung (U). Mittels einer modularen, mobilen Montagevorrichtung (100), die das Dichtelement (42) für die Zeitdauer des Biegevorgangs festlegt, kann die Qualität der Montage weiter gesteigert werden.

IPC 8 full level
B21D 39/02 (2006.01); **B21J 15/10** (2006.01); **F01D 5/00** (2006.01); **F01D 5/30** (2006.01)

CPC (source: EP US)
B21D 39/02 (2013.01 - EP US); **F01D 5/3015** (2013.01 - EP US); **F01D 11/006** (2013.01 - EP US); **F01D 25/285** (2013.01 - EP US); **F05D 2230/60** (2013.01 - EP US); **F05D 2230/68** (2013.01 - EP US); **Y10T 29/49321** (2015.01 - EP US); **Y10T 29/49323** (2015.01 - EP US)

Citation (applicant)
• GB 905582 A 19620912 - ROLLS ROYCE
• US 3656865 A 19720418 - SPEARS ESTEN W JR

Citation (search report)
• [X] GB 905582 A 19620912 - ROLLS ROYCE
• [A] EP 1703078 A1 20060920 - SIEMENS AG [DE]
• [A] US 3656865 A 19720418 - SPEARS ESTEN W JR
• [A] GB 954323 A 19640402 - ROLLS ROYCE

Cited by
WO2014037196A1; DE102012215885A1; DE102009011879A1; EP3667015A1; FR3090030A1; CN111299993A

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)
AL BA HR MK RS

DOCDB simple family (publication)
EP 1916382 A1 20080430; CN 101169050 A 20080430; CN 101169050 B 20100602; JP 2008106765 A 20080508; JP 4999636 B2 20120815; US 2008173062 A1 20080724; US 7762112 B2 20100727

DOCDB simple family (application)
EP 06022335 A 20061025; CN 200710181255 A 20071025; JP 2007275031 A 20071023; US 97746007 A 20071025