

Title (en)
EXHAUST CASING FOR A LOW PRESSURE STEAM TURBINE SYSTEM

Title (de)
ABDAMPFGEHÄUSE FÜR EIN NIEDERDRUCKDAMPFTURBINENSYSTEM

Title (fr)
CARTER D'ÉCHAPPEMENT POUR UN SYSTÈME DE TURBINE À VAPEUR BASSE PRESSION

Publication
EP 3299592 A1 20180328 (EN)

Application
EP 16189912 A 20160921

Priority
EP 16189912 A 20160921

Abstract (en)
The present invention relates to the exhaust casing (10) for a low pressure steam turbine system comprising an upper wall (11) and a side wall (12), an inner surface (13) and an outer surface (14), a plurality of casing reinforcement elements (15), and a guiding rib (17), wherein the guiding rib (17) is attached to the inner surface (13) of the upper wall (11) of the exhaust casing (10) and extending radially inwards, and wherein each of the casing reinforcement elements (15) is fastened to the guiding rib (17). The guiding rib serves as a guide for a steam moving in the substantially vertically upward direction to be turned in 180 degrees in order to flow downwards to the outlet of the exhaust system. The guiding rib further serves as a fastening element for fastening the reinforcement elements to the upper wall of the exhaust casing and may also serve as a connecting element between casing blocks. The steam flow efficiency is improved with this configuration, because it reduces the number of elements within the inner space of the exhaust casing. Thus, collisions of the steam passing through the system with said elements are reduced as well. Consequently, turbulent velocities of the steam are balanced and pressure losses caused by the collisions are reduced. As a result, the efficiency of the exhaust system and the overall performance of the turbine are improved.

IPC 8 full level
F01D 25/30 (2006.01); **F01D 25/28** (2006.01)

CPC (source: EP KR)
F01D 25/24 (2013.01 - KR); **F01D 25/30** (2013.01 - EP KR); **F01D 25/28** (2013.01 - EP)

Citation (search report)

- [X] US 2012207595 A1 20120816 - ROGE JULIEN [FR], et al
- [X] US 5203674 A 19930420 - VINCIGUERRA COSTANTINO [IT]
- [X] US 4863341 A 19890905 - GROENENDAAL JOHN C [US]
- [X] US 4764084 A 19880816 - PARKER DAVID M [US], et al
- [A] US 5024579 A 19910618 - GROENENDAAL JR JOHN C [US], et al
- [A] EP 2666975 A1 20131127 - MITSUBISHI HEAVY IND LTD [JP]

Cited by
EP3653850A1; CN112513427A; US11035256B2; WO2019013250A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 3299592 A1 20180328; **EP 3299592 B1 20200318**; KR 101923482 B1 20181129; KR 20180032200 A 20180329

DOCDB simple family (application)
EP 16189912 A 20160921; KR 20170121549 A 20170921