

Title (en)

METHOD FOR PRODUCING WHEEL DISC FORMS ON FLOW-FORMING MACHINES

Title (de)

VERFAHREN ZUR HERSTELLUNG VON RADSCHIEBENFORMEN AUF STRÖMUNGSFORMUNGSMASCHINEN

Title (fr)

PROCÉDÉ DE FABRICATION DE FORMES DE DISQUE DE ROUE SUR DES MACHINES DE FLUOTOURNAGE

Publication

EP 3131690 B1 20220817 (EN)

Application

EP 15728148 A 20150415

Priority

- DE 102014105400 A 20140415
- IB 2015052742 W 20150415

Abstract (en)

[origin: WO2015159231A1] The invention relates to a vehicle wheel having a wheel disc 10 produced on a flow-forming machine by flow-forming of a preferably metallic preform against a spinning mandrel, attachment flange 12, a flow-formed disc transition surface 33 equipped with ventilation holes, and a disc margin 14 for the connection of the wheel disc to a wheel rim part. The invention also relates to the method for producing the wheel disc and to a spinning mandrel for a suitable flow-forming machine. To improve the manufacture of vehicle wheels with wheel discs produced by flow-forming, and in the process to make it possible to realize a reduction in weight of the finished vehicle wheel without the need for additional working steps which lengthen the manufacture of the wheel disc, in each case at least one zone 20 with material accumulation and/or zone 15 with material reduction generated during the flow forming is formed on the inner side 16 or the outer side of the flow-formed transition surface between adjacent ventilation holes and/or between the ventilation holes at the disc margin and/or at the disc margin in an axial elongation of each ventilation hole.

IPC 8 full level

B21D 22/16 (2006.01); **B21D 53/26** (2006.01)

CPC (source: CN EP)

B21D 22/16 (2013.01 - CN EP); **B21D 53/26** (2013.01 - CN EP); **B21D 53/265** (2013.01 - CN EP)

Citation (examination)

- US 2012177879 A1 20120712 - CRIPSEY TIMOTHY J [US], et al
- WO 03076817 A2 20030918 - METAL FORMING & COINING CORP [US], et al

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

DOCDB simple family (publication)

DE 102014105400 A1 20151015; BR 112016017583 A2 20170808; BR 112016017583 B1 20211013; CN 106457340 A 20170222; CN 106457340 B 20200529; EP 3131690 A1 20170222; EP 3131690 B1 20220817; WO 2015159231 A1 20151022

DOCDB simple family (application)

DE 102014105400 A 20140415; BR 112016017583 A 20150415; CN 201580019944 A 20150415; EP 15728148 A 20150415; IB 2015052742 W 20150415