

Title (en)
PROCESS FOR PRODUCING A TURBULENCE APPARATUS AND APPARATUS FOR CARRYING OUT THE PROCESS

Title (de)
VERFAHREN ZUR HERSTELLUNG EINER TURBULENZVORRICHTUNG SOWIE VORRICHTUNG ZUR DURCHFÜHRUNG DES VERFAHRENS

Title (fr)
PROCÉDÉ DE FABRICATION D'UN DISPOSITIF DE FORMATION DE TURBULENCES ET DISPOSITIF EN VUE DE L'EXÉCUTION DU
PROCÉDÉ

Publication
EP 2205374 B1 20110615 (DE)

Application
EP 08802729 A 20081001

Priority
• EP 2008008310 W 20081001
• DE 102007048474 A 20071009

Abstract (en)
[origin: US2010218922A1] The invention relates to a process for producing a turbulence apparatus and to an apparatus for producing the turbulence apparatus which is to be held in at least one flow duct of a heat exchanger of a motor vehicle, comprising the following process steps: in a first process step, at least one shaping operation is used to produce at least one substantially meandering turbulence apparatus (30) with substantially smooth walls (2) from a substantially continuously planar sheet-metal strip (9), wherein a longitudinal direction (LR) of the walls (2) runs substantially parallel to a forward feed direction (VR) of the sheet-metal strip (9). In a second process step, wall sections are deformed at least by an angle (a) with respect to the forward feed direction (VSR) in such a way that undercuts (3) are produced with respect to the forward feed direction (VSR), wherein the substantially continuous sheet-metal strip (9) is cut to length into turbulence apparatuses (1, 30) of predetermined lengths before the second process step is carried out.

IPC 8 full level
B21D 13/04 (2006.01); **B21D 53/04** (2006.01); **F28F 3/02** (2006.01); **F28F 13/12** (2006.01)

CPC (source: EP US)
B21D 13/045 (2013.01 - EP US); **B21D 53/04** (2013.01 - EP US); **F28F 3/027** (2013.01 - EP US); **Y10T 29/4935** (2015.01 - US);
Y10T 29/53122 (2015.01 - US); **Y10T 428/12417** (2015.01 - US)

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

DOCDB simple family (publication)
US 2010218922 A1 20100902; US 8701289 B2 20140422; AT E512733 T1 20110715; CN 101821033 A 20100901; CN 101821033 B 20130213;
DE 102007048474 A1 20090416; EP 2205374 A1 20100714; EP 2205374 B1 20110615; WO 2009049771 A1 20090423

DOCDB simple family (application)
US 68078908 A 20081001; AT 08802729 T 20081001; CN 200880111338 A 20081001; DE 102007048474 A 20071009;
EP 08802729 A 20081001; EP 2008008310 W 20081001