

Title (en)

Sintered valve guide and manufacturing method thereof

Title (de)

Gesinterte Ventilschaftführung und Verfahren zur Herstellung davon

Title (fr)

Guide de soupape fritté et procédé de sa fabrication

Publication

EP 1619263 B1 20190424 (EN)

Application

EP 05015445 A 20050715

Priority

JP 2004209064 A 20040715

Abstract (en)

[origin: EP1619263A1] Disclosed is a sintered valve guide formed of a sintered alloy consisting essentially of 3.5 to 5 % copper, 0.3 to 0.6 % tin, 0.04 to 0.15 % phosphorus, 1.5 to 2.5 % carbon and the balance iron, by mass, and as occasion needs, further containing 0.46 to 1.41 % metal oxide, and MnS and/or magnesium silicate. The metallographic structure has: a matrix containing a pearlite phase, a Fe-P-C compound phase and a Cu-Sn alloy phase; pores; and a graphite of 1.2 to 1.7 % by mass of the sintered alloy. In the cross section, the ratio of the pearlite phase to the matrix is 90 area% or more, the ratio of the Fe-P-C com

IPC 8 full level

C22C 33/02 (2006.01); **C22C 9/02** (2006.01); **C22C 32/00** (2006.01); **C22C 38/00** (2006.01); **C22C 38/16** (2006.01); **F01L 3/02** (2006.01); **F01L 3/08** (2006.01); **F16C 33/12** (2006.01)

CPC (source: EP KR US)

B22F 3/10 (2013.01 - KR); **C22C 1/04** (2013.01 - KR); **C22C 9/02** (2013.01 - EP KR US); **C22C 33/0214** (2013.01 - EP KR US); **C22C 33/0228** (2013.01 - EP KR US); **C22C 38/002** (2013.01 - EP KR US); **C22C 38/008** (2013.01 - EP KR US); **C22C 38/16** (2013.01 - EP KR US); **F01L 3/02** (2013.01 - EP US); **F01L 3/08** (2013.01 - EP KR US); **B22F 2998/00** (2013.01 - EP KR US); **B22F 2999/00** (2013.01 - EP KR US); **F01L 2301/00** (2020.05 - EP KR US)

Cited by

EP2488318A4; EP2474637A1; CN114466719A; AT509868A4; AT509868B1; EP2444182A1; DE102010055463C5; US9027249B2; US10232438B2; US9255575B2; US8876935B2; US9212572B2; WO2011154039A1; WO2021063653A1

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

EP 1619263 A1 20060125; EP 1619263 B1 20190424; CN 100516271 C 20090722; CN 1721566 A 20060118; KR 20060050208 A 20060519; US 2006032328 A1 20060216

DOCDB simple family (application)

EP 05015445 A 20050715; CN 200510084201 A 20050715; KR 20050064172 A 20050715; US 18263805 A 20050714