

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

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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

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