

Title (en)
Method for cleaning of metal parts

Title (de)
Verfahren zum Reinigen von metallischen Werkstücken

Title (fr)
Procédé pour le nettoyage des parts métalliques

Publication
EP 0543322 B1 19960313 (DE)

Application
EP 92119602 A 19921117

Priority
DE 4138400 A 19911122

Abstract (en)
[origin: US5268036A] A method and an apparatus for treating workpieces with a fluid, in particular for cleaning metallic workpieces prior to a subsequent heat treatment are disclosed. The workpieces are positioned in an air-tight washing vessel. The vessel is filled with an immersion bath substantially covering the workpieces and having a temperature of between 50 DEG C. and 90 DEG C. After closing the washing vessel it is evacuated down to a vacuum having a pressure being below the saturation vapor pressure of the fluid at the prevailing temperature. Thus, the fluid starts to boil although its temperature is substantially below the boiling temperature of the fluid at atmospheric pressure. After a certain period of time of maintaining the vacuum and the boiling, the vacuum is relieved and the bath is discharged.

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B08B 3/04; **B08B 3/10**

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CPC (source: EP KR US)
B08B 3/102 (2013.01 - EP US); **C23G 1/00** (2013.01 - KR)

Cited by
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Designated contracting state (EPC)
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US 5268036 A 19931207; **US 5268036 B1 19970826**; AT E135268 T1 19960315; BR 9204610 A 19930525; CN 1072739 A 19930602; CZ 283370 B6 19980415; CZ 344592 A3 19930915; DE 4138400 C1 19930218; DE 59205678 D1 19960418; EP 0543322 A1 19930526; EP 0543322 B1 19960313; ES 2085536 T3 19960601; HU 210266 B 19950328; HU 9203643 D0 19930301; HU T63789 A 19931028; JP 3013635 B2 20000228; JP H06264274 A 19940920; KR 930010232 A 19930622; KR 960003158 B1 19960305; RU 2108172 C1 19980410

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US 81275291 A 19911223; AT 92119602 T 19921117; BR 9204610 A 19921123; CN 92113405 A 19921120; CS 344592 A 19921120; DE 4138400 A 19911122; DE 59205678 T 19921117; EP 92119602 A 19921117; ES 92119602 T 19921117; HU 9203643 A 19921120; JP 32986792 A 19921117; KR 920022049 A 19921121; RU 92004392 A 19921118