

Title (en)
apparatus for quenching of metallic workpieces

Title (de)
Vorrichtung zum Abschrecken von Werkstücken

Title (fr)
appareil de trempe pour pièces métalliques

Publication
EP 1531185 A1 20050518 (DE)

Application
EP 04024336 A 20041013

Priority
DE 10352622 A 20031112

Abstract (en)
In a process to manufacture a one-piece automotive cylinder head, the heat-treated cylinder head is quenched by simultaneous exposure to cooling gases on both the top and lower faces. The feed of cooling gas is sub-divided and the flow speed and rate are regulated to each face. Also claimed is a suitable quenching assembly in which aluminium cylinder heads (4) are placed on a grid (11) under an overhead cold gas blower (8) and above a lower cold gas blower (9). The cooling gas is air. The cylinder heads are presented to the cooling system on a trolley rack.

Abstract (de)
Um die beim Abschrecken eines Zylinderkopfes einer Brennkraftmaschine mit einem Gas auftretenden Eigenspannungen zu minimieren, wird erfindungsgemäß vorgeschlagen, den Zylinderkopf gleichzeitig von seiner Ober- und Unterseite her mit dem Abschreckgas anzuströmen. Hierbei kann die auf die Oberseite strömende Gasmenge unterschiedlich von der auf die Unterseite strömenden sein. <IMAGE>

IPC 1-7
C21D 1/62; **C21D 9/00**

IPC 8 full level
C21D 1/62 (2006.01); **C21D 1/613** (2006.01); **C21D 9/00** (2006.01)

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C21D 1/62 (2013.01); **C21D 1/613** (2013.01); **C21D 9/0068** (2013.01)

Citation (search report)

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- [X] US 6394793 B1 20020528 - BUNGE GENE [US]
- [A] EP 1154024 A1 20011114 - IPSEN INT GMBH [DE]
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- [A] PATENT ABSTRACTS OF JAPAN vol. 0153, no. 17 (C - 0858) 13 August 1991 (1991-08-13)

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