

Title (en)
Wire cooling device

Title (de)
Drahtkühleinrichtung

Title (fr)
Dispositif de refroidissement de fil

Publication
EP 1208924 A2 20020529 (DE)

Application
EP 01127074 A 20011114

Priority
DE 10058369 A 20001124

Abstract (en)
[origin: DE10058369C1] Cooling device comprises a cooling chamber (28) with an inlet (32) and an outlet (33) for the wire (12). The chamber is formed by a cooling sleeve (36) which is closed at one end by a wall (34) penetrated by the wire inlet. A cone sleeve (6) is screwed onto the other end and is penetrated by the wire outlet. A core (10) is screwed into a cylindrical bore (26) and protrudes into the inner cone of the cone sleeve forming an annular chamber (14). An inlet (20) for the cooling medium opens out into a distribution chamber (22) and the outlet (30) for the cooling medium is formed as a lateral opening of the cooling chamber. Preferred Features: The length of the cooling chamber is adjusted using a screw thread and is fixed using a locking nut.
[origin: DE10058369C1] Cooling device comprises a cooling chamber (28) with an inlet (32) and an outlet (33) for the wire (12). The chamber is formed by a cooling sleeve (36) which is closed at one end by a wall (34) penetrated by the wire inlet. A cone sleeve (6) is screwed onto the other end and is penetrated by the wire outlet. A core (10) is screwed into a cylindrical bore (26) and protrudes into the inner cone of the cone sleeve forming an annular chamber (14). An inlet (20) for the cooling medium opens out into a distribution chamber (22) and the outlet (30) for the cooling medium is formed as a lateral opening of the cooling chamber. Preferred Features: The length of the cooling chamber is adjusted using a screw thread and is fixed using a locking nut.

Abstract (de)
Eine Kühleinrichtung für wärmebehandelte Drähte enthält eine Kühldüse aus zwei kegelförmigen Teilen, die durch einen Innenkonus (4) einer Konushülse (6) und einen Außenkonus (8) eines Kerns (10) gebildet werden, wobei der Außenkonus (8) in den Innenkonus (4) hineinragt und mit ihm einen konusmantelförmigen Ringraum (14) bildet. Durch eine etwas kleinere Wahl des Außenkonuswinkels als der Innenkonuswinkel wird die Dicke des konusmantelförmigen Ringraums (14) zwischen den beiden Konussen (6,8) zur Konusspitze hin geringer, so daß das am dicken Konusende eingespeiste Kühlmedium zur Konusspitze hin noch zusätzlich beschleunigt wird. Das Kühlmedium tritt durch die an seinem schmalen Ende gebildeten Ringspalt aus, wo sie den in Gegenrichtung durch die Düse geführten Draht (12) umströmt und kühlt. Das Kühlmedium gelangt in eine Kühlkammer (28), durch welche der Draht (12) ebenfalls hindurchläuft und verläßt diese durch eine Auslaßöffnung (30). <IMAGE>

IPC 1-7
B21C 47/26; **B21C 9/00**; **C21D 9/573**

IPC 8 full level
B21B 45/02 (2006.01); **B21C 3/14** (2006.01); **B21C 9/00** (2006.01); **B21C 47/26** (2006.01); **C21D 9/573** (2006.01)

CPC (source: EP)
C21D 9/5732 (2013.01)

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EP 01127074 A 20011114; AT 01127074 T 20011114; DE 10058369 A 20001124; DE 50105293 T 20011114; ES 01127074 T 20011114