

Title (en)

Apparatus for the continuous heat treatment of metal workpieces separately or in batches

Title (de)

Vorrichtung zum Durchlaufwärmebehandeln von metallischen Werkstücken, einzeln oder gruppenweise

Title (fr)

Installation de traitement thermique de pièces métalliques en lots ou unitaires au défilé

Publication

**EP 1077267 B1 20040707 (FR)**

Application

**EP 99116269 A 19990818**

Priority

EP 99116269 A 19990818

Abstract (en)

[origin: EP1077267A1] The first channel (11) of the two-channel cooling zone (8) has, along its length, a temperature gradient such that the temperature of the wall directly above the articles (2) is at least that of the condensation temperature of the elements. The second channel (12) walls have a temperature below the condensation temperature of the elements. Heat treatment furnace for metal articles (2) liable to give off elements having high evaporation pressure according to furnace temperature and gas flow and furnace composition comprises, in succession: (a) at least one inlet zone (1) for the articles (2); (b) at least one heating zone (3); (c) at least one cooling zone (8); (d) at least one device (13, 14) for feeding the articles (2) through the zones; and (e) at least one gas flow introduction device (15). The cooling zone (8) comprises two successive different sections (9, 10). The first section (9) extends from the end of the heating zone (3), or the heating channel, to the start of the second section (10), and comprises a channel (11) having, along the whole or part of its length, a temperature gradient such that the temperature of the wall directly above the articles (2) is at least that of the condensation temperature of the elements. The second section (10) comprises a channel (12) whose walls have a temperature below the condensation temperature of the elements.

IPC 1-7

**C21D 9/00**

IPC 8 full level

**C21D 9/00** (2006.01)

CPC (source: EP)

**C21D 9/0043** (2013.01); **C21D 9/0056** (2013.01); **C21D 9/0062** (2013.01); **C21D 9/0006** (2013.01)

Cited by

CN100432274C

Designated contracting state (EPC)

AT BE CH DE FR LI

DOCDB simple family (publication)

**EP 1077267 A1 20010221**; **EP 1077267 B1 20040707**; AT E270714 T1 20040715; DE 69918548 D1 20040812; DE 69918548 T2 20050825

DOCDB simple family (application)

**EP 99116269 A 19990818**; AT 99116269 T 19990818; DE 69918548 T 19990818