

Title (en)
TUNNEL FURNACE WITH TWO PARALEL DUCTS

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Application
EP 85112671 A 19851007

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Abstract (en)
[origin: EP0177917A2] The tunnel furnace serves for the heat treatment of for example clay or porcelain and is a so-called counter-running furnace, in which the product stacks (P1, P2) are guided through the two ducts (1, 2) in opposite directions. The ducts are separated by a central wall (3), which is provided with penetration openings (10) above and below the product stacks, and in each case are divided into a heating zone (A1, A2), a combustion zone (B1, B2) and a cooling zone (K1, K2). Between the heating zone of one duct and the adjacent cooling zone of the other, transverse convection (Q) takes place, which makes it possible to use the heat of the cooling zone in the heating zone of the other duct. This transverse convection (Q) is disturbed by a longitudinal convection (L) flowing between the combustion zone and the outside atmosphere in such a manner that the heat balance of the furnace, which in itself is very favourable, is impaired. The invention now envisages, above and below the product stacks (P1, P2) in each duct (1, 2), a number of flow guide surfaces (12) which, in the direction of transport (T1, T2) of the products, form with the central wall (3) an angle (α) of 30-80 DEG, preferably 50-70 DEG, and in each case end next to the penetration openings (10) on the central wall. In this connection, a part of the longitudinal convection is deflected on each guide surface in the direction of the transverse convection so that the longitudinal convection is weakened from guide surface to guide surface and at the same time contributes to the propulsion of the transverse convection. <IMAGE>

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Citation (search report)
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