

Title (en)  
FURNACE FOR HEAT-TREATING WORK PIECES

Publication  
**EP 0203454 A3 19890607 (DE)**

Application  
**EP 86106537 A 19860514**

Priority  
DE 3518347 A 19850522

Abstract (en)  
[origin: US4738577A] A helical conveyor system comprising two groups of bar-shaped support elements are attached to two mounting means in the heat treatment chamber of a furnace. The mounting means and the associated support elements are mobile relative to each other both in the vertical direction and in the direction of the circumference of the conveyor system for moving the work pieces along the conveyor system. The design, assembly and operation of the conveyor system and the mode of conveyor system operation are simplified by the provision of a vertical support shaft penetrating the furnace roof for the first mounting means. The support shaft holds at least one sleeve firmly connected with the second mounting means allowing the support shaft and the sleeve to be rotated relative to each other around and to be moved relative to each other along a central axis, the shaft and the sleeve guiding each other.

IPC 1-7  
**C21D 9/00; F27B 9/14**

IPC 8 full level  
**C21D 1/00** (2006.01); **C21D 9/00** (2006.01); **F27B 9/14** (2006.01); **F27B 9/16** (2006.01); **F27B 9/20** (2006.01)

CPC (source: EP US)  
**C21D 9/005** (2013.01 - EP US); **F27B 9/142** (2013.01 - EP US); **F27B 9/16** (2013.01 - EP US); **F27B 9/201** (2013.01 - EP US)

Citation (search report)  
• [AD] WO 8402390 A1 19840621 - RUHRGAS AG [DE]  
• [A] GB 908765 A 19621024 - SOUTH WESTERN GAS BOARD  
• [A] US 2530595 A 19501121 - EMIL BLAHA  
• [A] US 3469831 A 19690930 - BEAVERS JACK

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Designated contracting state (EPC)  
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DOCDB simple family (publication)  
**EP 0203454 A2 19861203; EP 0203454 A3 19890607; EP 0203454 B1 19930721**; AT E91726 T1 19930815; BR 8602318 A 19870121; CN 1014269 B 19911009; CN 86103498 A 19861126; DE 3518347 C1 19861204; DE 3688714 D1 19930826; IN 167340 B 19901006; JP S61266517 A 19861126; US 4738577 A 19880419

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**EP 86106537 A 19860514**; AT 86106537 T 19860514; BR 8602318 A 19860521; CN 86103498 A 19860522; DE 3518347 A 19850522; DE 3688714 T 19860514; IN 394MA1986 A 19860521; JP 11713686 A 19860521; US 86534286 A 19860521