

Title (en)  
GAS SUSPENSION PREHEATER

Publication  
**EP 0342340 A3 19900516 (DE)**

Application  
**EP 89105487 A 19890328**

Priority  
DE 3817355 A 19880520

Abstract (en)  
[origin: US4901448A] The invention relates to a suspension heat exchanger for heat exchange between gas and fines. It contains a plurality of cyclone separators which lie one above another with their axes aligned vertically and in which the cover walls and the inlet pipe connections of the substantially straight upper parts of the cyclones are inclined at an acute angle with respect to the horizontal. This contributes to a particularly simple and space-saving overall construction and to a favourable material separation with relatively low pressure loss.

IPC 1-7  
**F27B 7/20**; **B04C 5/02**; **F27D 13/00**

IPC 8 full level  
**B04C 5/02** (2006.01); **B04C 5/081** (2006.01); **B04C 5/13** (2006.01); **B04C 5/26** (2006.01); **F27B 7/20** (2006.01); **F27D 13/00** (2006.01)

CPC (source: EP US)  
**B04C 5/02** (2013.01 - EP US); **B04C 5/081** (2013.01 - EP US); **B04C 5/13** (2013.01 - EP US); **B04C 5/26** (2013.01 - EP US);  
**F27B 7/2016** (2013.01 - EP US)

Citation (search report)  
• DE 1154768 B 19630919 - WESTFALIA DINNENDAHL GROEPPEL  
• US 3865242 A 19750211 - MUSTO RICHARD LEOPOLD  
• DE 1090940 B 19601013 - REINHOLD KAMPS DIPL ING DR  
• [A] PATENT ABSTRACTS OF JAPAN, vol. 9, no. 78 (C-274)[1801], 6th April 1985; & JP-A-59 213 460 (UBE KOSAN K.K.)

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DE4222593A1; EA021413B1; US8657934B2; WO2011032620A1

Designated contracting state (EPC)  
DE ES FR GB IT

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**EP 0342340 A2 19891123**; **EP 0342340 A3 19900516**; **EP 0342340 B1 19930616**; CA 1315096 C 19930330; DE 3817355 A1 19891130;  
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