

Title (en)

Heat exchanger for cooling hot reaction gas.

Title (de)

Wärmetauscher zum Kühlen von heissem Reaktionsgas.

Title (fr)

Echangeur de chaleur pour le refroidissement de gaz de réaction chauds.

Publication

EP 0436828 B1 19931229 (DE)

Application

EP 90123071 A 19901203

Priority

DE 4000527 A 19900110

Abstract (en)

[origin: US5088551A] A heat exchanger for cooling hot reaction gas with a coolant. It rests on a gas-supply compartment (4) and has gas-conveying pipes (9) inside a jacket (1). It is separated from the gas-supply compartment by a tube sheet (6) that accommodates the gas-conveying pipes (9). The pipes extend loosely through the tube sheet, leaving annular gaps (10) and are connected tightly to the tube sheet on the side where the gas enters. The heat exchanger has at least one line (12) for supplying coolant to the side of the tube sheet that faces away from where the gas enters. The diameter of the tube sheet is shorter than that of the jacket. The tube sheet is connected to the lower edge of the jacket by way of an upward-tapering cone (7). The tube sheet is provided with cooling channels (15) that are open at least at one end and communicate with the lines that supply the coolant.

IPC 1-7

F28F 9/02; **F28D 7/00**

IPC 8 full level

F28D 7/00 (2006.01); **F28F 9/02** (2006.01)

CPC (source: EP US)

F28D 7/005 (2013.01 - EP US); **F28F 9/0229** (2013.01 - EP US); **F28D 2021/0075** (2013.01 - EP US)

Designated contracting state (EPC)

AT BE CH DE DK ES FR GB GR IT LI LU NL SE

DOCDB simple family (publication)

EP 0436828 A2 19910717; **EP 0436828 A3 19911127**; **EP 0436828 B1 19931229**; AT E99409 T1 19940115; DE 4000527 A1 19910711; DE 59004035 D1 19940210; JP H06201290 A 19940719; US 5088551 A 19920218

DOCDB simple family (application)

EP 90123071 A 19901203; AT 90123071 T 19901203; DE 4000527 A 19900110; DE 59004035 T 19901203; JP 6276391 A 19910109; US 63902791 A 19910109