

Title (en)
Method and apparatus for superheating steam

Title (de)
Verfahren und Einrichtung zum Überhitzen von Dampf

Title (fr)
Procédé et appareil pour surchauffer de la vapeur

Publication
EP 0853214 A3 20001206 (DE)

Application
EP 97122697 A 19971222

Priority
DE 19700652 A 19970110

Abstract (en)
[origin: EP0853214A2] A steam superheating method involves directing some or all of the pressure energy of the steam (v) into a rotation round an axis, and converting it into an overlaid axial flow towards the rotary axis. The rotary speed of the steam in the direction of the rotation axis is increased by a reduction in the flow cross section, and condensation and remaining steam are developed. Before the flow cross section is reduced, the condensation is separated from the remaining steam, and evacuated radially outwards. The remaining steam is fed onwards, its rotation speed is reduced, and the remaining steam is superheated and converted to hot steam. Also claimed is a device with a chamber (2) extending on the line of a rotation axis. The entry zone (4) at least partially converts the pressure energy of the steam into kinetic energy at the steam, and separates any condensation from the remaining steam. The kinetic energy is increased in a transit zone (6) against the entry zone, with a smaller cross section surface. The outlet zone, after the transit, reduces the kinetic energy of the remaining steam and converts it into hot steam, using a larger cross section surface than at the transit zone. The outlet zone has an outlet (20) for the hot steam and an outlet (22) for the condensation, at a radial gap from the rotation axis.

IPC 1-7
F22G 1/00

IPC 8 full level
F01K 3/00 (2006.01); **F22G 1/00** (2006.01); **F22G 1/10** (2006.01)

CPC (source: EP US)
F01K 3/002 (2013.01 - EP US); **F22G 1/10** (2013.01 - EP US)

Citation (search report)
• [A] DE 4343088 A1 19950622 - KELLER JUERGEN U UNIV PROF DR [DE]
• [A] GB 245817 A 19260104 - FAY HARRY ROSENCRANTS

Designated contracting state (EPC)
AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)
EP 0853214 A2 19980715; EP 0853214 A3 20001206; EP 0853214 B1 20040310; AT E261567 T1 20040315; DE 59711396 D1 20040415; US 5996350 A 19991207

DOCDB simple family (application)
EP 97122697 A 19971222; AT 97122697 T 19971222; DE 59711396 T 19971222; US 569898 A 19980112