

Title (en)
PNEUMO-HYDRAULIC CONVERTER FOR ENERGY STORAGE

Title (de)
PNEUMO-HYDRAULISCHER WANDLER FÜR ENERGIESPEICHERUNG

Title (fr)
CONVERTISSEUR PNEUMO-HYDRAULIQUE POUR ACCUMULER L'ENERGIE

Publication
EP 0857256 B1 19990331 (DE)

Application
EP 96934298 A 19961101

Priority

- CH 9600386 W 19961101
- CH 311495 A 19951103

Abstract (en)
[origin: WO9717546A1] In order to maintain high efficiency close to isothermy despite high frequencies in a pneumo-hydraulic converter with reciprocating pistons, pipe cluster-heat exchange pipes (38) are provided in the gas working chambers of the converter and the exchange fluid in the pipes is kept at approximately ambient temperature. For this the gas working chambers must be arranged axially next to one another and, in order to eliminate dead space, connected in pairs by conical exchange valves (12a/12b) which take in the entire wall thickness of the valve flange (5a/5b) dividing the air chambers.

IPC 1-7
F15B 1/027; **F15B 3/00**; **F04B 9/115**; **F28F 5/00**

IPC 8 full level
F15B 21/04 (2006.01); **F15B 1/02** (2006.01); **F15B 1/027** (2006.01); **F15B 3/00** (2006.01); **F28F 5/00** (2006.01)

CPC (source: EP US)
F15B 3/00 (2013.01 - EP US); **F15B 11/0725** (2013.01 - EP US); **F28F 5/00** (2013.01 - EP US); **F15B 2211/20515** (2013.01 - EP US); **F15B 2211/2053** (2013.01 - EP US); **F15B 2211/20546** (2013.01 - EP US); **F15B 2211/20569** (2013.01 - EP US); **F15B 2211/214** (2013.01 - EP US); **F15B 2211/216** (2013.01 - EP US); **F15B 2211/30525** (2013.01 - EP US); **F15B 2211/615** (2013.01 - EP US); **F15B 2211/625** (2013.01 - EP US); **F15B 2211/88** (2013.01 - EP US)

Cited by
CN102135080A

Designated contracting state (EPC)
AT CH DE ES FR GB LI NL

DOCDB simple family (publication)
WO 9717546 A1 19970515; AT E178389 T1 19990415; CA 2236746 A1 19970515; DE 59601569 D1 19990506; EP 0857256 A1 19980812; EP 0857256 B1 19990331; JP 3194047 B2 20010730; JP H11501387 A 19990202; OA 10682 A 20010503; US 6145311 A 20001114

DOCDB simple family (application)
CH 9600386 W 19961101; AT 96934298 T 19961101; CA 2236746 A 19961101; DE 59601569 T 19961101; EP 96934298 A 19961101; JP 51771997 A 19961101; OA 9800048 A 19980429; US 6809198 A 19980501