

Title (en)
capacity control for a screw compressor

Title (de)
Leistungsregelung für einen Schraubenverdichter

Title (fr)
Contrôle du capacité pour un compresseur à vis

Publication
EP 2423508 A3 20160518 (EN)

Application
EP 11177400 A 20110812

Priority
JP 2010192546 A 20100830

Abstract (en)
[origin: EP2423508A2] A screw compressor having a discharge casing (16). The discharge casing (16) includes a discharge side end face that abuts on an end face of a main casing (15) to cover the opening of a bore (20), a discharge port (23A, 23B; 25A, 25B) that is formed on the discharge side end face, a discharge chamber (26) that discharges a compressed gas from a compression operation chamber (36A, 36B) through the discharge port (23A, 23B; 25A, 25B), a valve hole (28) that is disposed near the discharge port (23A, 23B; 25A, 25B) on the female rotor side of the discharge side end face and open at a position opposite the direction of female rotor rotation, a bypass groove (29) that permits the valve hole (28) to communicate with a discharge flow path, and a valve disc (31) that is disposed in the valve hole (28). The screw compressor also includes a valve disc drive device (30) that opens and closes the valve disc (31), and a control device (112) that detects whether the compression operation chamber (36A, 36B) is over-compressed, and if the compression operation chamber (36A, 36B) is over-compressed, controls the valve disc drive device (30) so as to open the valve disc (31).

IPC 8 full level
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Citation (search report)
• [XAYI] WO 2010035592 A1 20100401 - HITACHI APPLIANCES INC [JP], et al
• [XAYI] WO 8910489 A1 19891102 - SVENSKA ROTOR MASKINER AB [SE]
• [Y] JP S6287687 A 19870422 - KOBE STEEL LTD
• [Y] EP 2031249 A2 20090304 - HITACHI APPLIANCES INC [JP]

Cited by
US10487833B2; US11313370B2; US11162705B2

Designated contracting state (EPC)
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BA ME

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EP 2423508 A2 20120229; EP 2423508 A3 20160518; EP 2423508 B1 20170531; CN 102384087 A 20120321; CN 102384087 B 20141210; ES 2638569 T3 20171023; JP 2012047157 A 20120308; JP 5389755 B2 20140115; TW 201217650 A 20120501; TW I494508 B 20150801

DOCDB simple family (application)
EP 11177400 A 20110812; CN 201110237432 A 20110818; ES 11177400 T 20110812; JP 2010192546 A 20100830; TW 100124459 A 20110711