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(54) Title: MULTI-PORT VERTICAL AXIAL VALVE WITH SEALING ROTOR

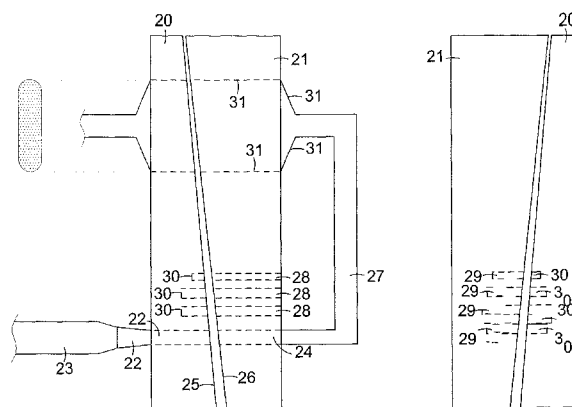


FIG. 3

(57) Abstract: This invention discloses an axial multiport rotary valve capable of accomplishing the simultaneous interconnection of a plurality of conduits in accordance with a previously determined cycle, where any conduit communicates with no more than one other conduit at any one cycle step, or valve index position. The rotary valve comprises a hollow stator element and a rotor element inside the hollow interior of the stator element which rotates with a substantially vertical axis of rotation within the stator element, the surfaces of both elements being in the form essentially of a frustum of an inverted cone. Bed-line ports in the stator and rotor have a non-circular shape with a greater dimension in the vertical plane for higher capacities than provided in the known art.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2008/072776**A. CLASSIFICATION OF SUBJECT MATTER*****F16K 11/072(2006.01)i***

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 8: F16K 11/072

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean Utility models and applications for Utility models since 1975

Japanese Utility models and applications for Utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKIPASS (KIPO internal) & keywords: frustum, cone, taper, process, multi and similar terms

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3977434 A (CHARLES JERE ALBRIGHT et al.) 31 August 1976 See Column 5, Line 59 - Column 6, Line 38; Claim 1 and Figures 5-10.	1-7
A	US 4385746 A (JERRY B. TOMLIN; HERBERT H. HODGEMAN) 31 May 1983 See Column 7, Line 52 - Column 8, Line 62; Claim 1 and Figures 1-4.	1-7
A	US 6802970 B2 (FILIP ROCHETTE) 12 October 2004 See Column 5, Line 64 - Column 7, Line 40; Claim 1 and Figures 1-5.	1-7
A	US 4574840 A (GARY M. SCHUMANN et al.) 11 March 1986 See Column 10, Line 42 - Column 11, Line 19; Claim 1 and Figures 2-6.	1-7
A	JP 06-011056 A (TSUKISHIMA KIKAI CO., LTD.) 21 January 1994 See Paragraphs 13 - 22; Claim 1 and Figures 1-5.	1-7



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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