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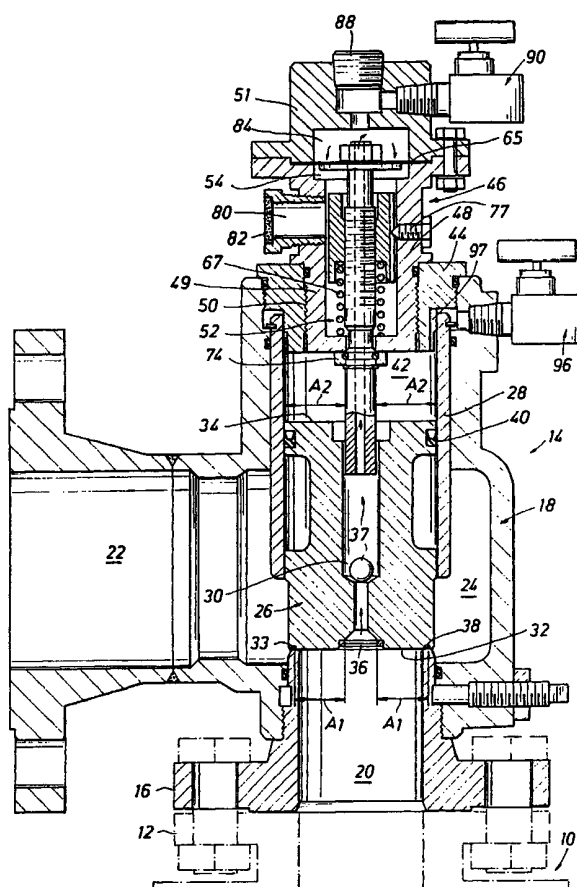
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: PILOT OPERATED RELIEF VALVE



(57) Abstract: A pilot operated safety relief valve (14) having a main piston valve member (26). A dome chamber (42) is provided in the valve body (18) over piston valve member (26) and a cap (44) forms a closure for dome chamber (42). A pilot valve (46) is mounted on the cap (44) and has a diaphragm actuated fluid inlet sensing tube (60) received within a bore (30) of the piston valve member (26). Inlet fluid pressure is communicated through bore (61) of sensing tube (60) to the inlet fluid sensing chamber (84) on the outer side of diaphragm (65). Exhaust chamber (56) is positioned between dome chamber (42) and inlet sensing chamber (84). Adjustment spring (67) continuously urges O-ring (72) in dome chamber (42) to a seated position on seat (70). An annular clearance (78) is provided between sensing tube (60) and piston (26) for providing a restricted fluid flow between dome chamber (42) and the inlet (20).



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : F16K 31/12

US CL : 137/491, 492; 251/38, 42

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)

U.S. : 137/491, 492; 251/38, 42

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

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A, P	US 6,161,570 A (MCNEELY) 19 December 2000 (19.12.2000), all.	1-21
A, P	US 6,119,722 A (ZAEHE) 19 September 2000 (19.09.2000), all.	1-21
A, P	US 6,039,070 A (ZAEHE) 21 March 2000 (21.03.2000), all.	1-21
A	US 4,722,361 A (REIP) 02 February 1988 (02.02.1988), all.	1-21

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier document published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
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