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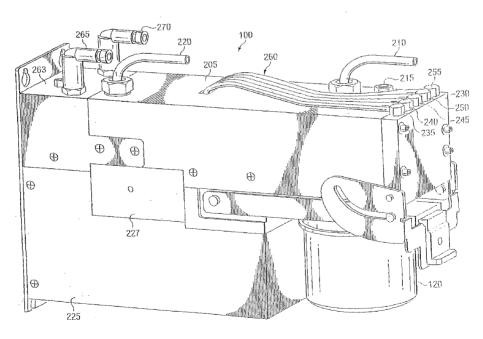
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with international search report

[Continued on next page]

### (54) Title: SYSTEM AND METHOD FOR VALVE SEQUENCING IN A PUMP



(57) Abstract: Systems and methods for minimizing pressure fluctuations within a pumping apparatus are disclosed. Embodiments of the present invention may serve to reduce pressure variations within a fluid path of a pumping apparatus by avoiding closing a valve to create a closed or entrapped space in the fluid path and similarly, avoiding opening a valve between two entrapped spaces. More specifically, embodiments of the present invention may serve to operate a system of valves of the pumping apparatus according to a valve sequence configured to substantially minimize the time the fluid flow path through the pumping apparatus is closed (e.g. to an area external to the pumping apparatus).



## WO 2007/067342 A3



 before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments 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.

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According to International Patent Classification (IPC) or to both national classification and IPC  B. FIELDS SEARCHED			
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C. DOCUMENTS CONSIDERED TO BE RELEVANT			
Category*	Citation of document, with indication, where ap	ppropriate, of the relevant passages	Relevant to claim No.
×	US 2005/0184087 A1 (ZAGARS et al) 25 August 2005 (25.08.2005) abstract, paras. 0001, 0006, 0013, 0017, 0019, 0022-0024, 0026 and 0028 and figs. 2-4		1-5, 7, 31-35, 37
Υ			6, 8-30, 36, 38-60
Υ	US 2005/0126985 A1 (CAMPBELL et al) 16 June 2005 (16.06.2005) abstract, paras. 0002, 0003, 0017, 0028, 0029		6, 8-30, 36, 38-60
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