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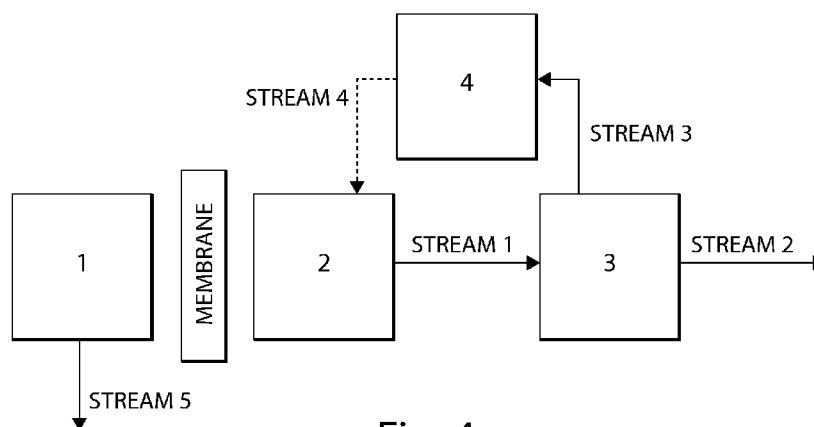


Fig. 4

(57) Abstract: Separation processes using engineered osmosis are disclosed generally involving the extraction of solvent from a first solution to concentrate solute by using a second concentrated solution to draw the solvent from the first solution across a semi-permeable membrane. Enhanced efficiency may result from using low grade waste heat from industrial or commercial sources.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2010/054512**A. CLASSIFICATION OF SUBJECT MATTER*****B01D 61/02(2006.01)i, C02F 1/44(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)

B01D 61/02; B01D 11/00; B01D 61/14; B01D 61/18; C02F 1/04; C02F 1/44; C02F 1/00

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

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & Keywords: "osmosis", "membrane", "ammonia", "recyle (reintroduce)"

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2005-0145568 A1 (ROBERT MC GINNIS) 07 July 2005 See paragraphs [0026]–[0048], claims 1–4, 21, and 22.	1–31
Y	KR 10-2009-0029232 A (YALE UNIVERSITY) 20 March 2009 See the abstract and paragraphs [0078]–[0085].	1–31
A	US 2008-0210634 A1 (THORSEN THOR et al.) 04 September 2008 See the abstract and claim 1.	1–31
A	WO 2007-147013 A1 (BOARD OF REGENTS OF THE NEVADA SYSTEM OF HIGHER EDUCATION , ON BEHALF OF THE UNIVERSITY OF NEVADA, RENO et al.) 21 December 2007 See the abstract and claim 1.	1–31

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

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"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

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Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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