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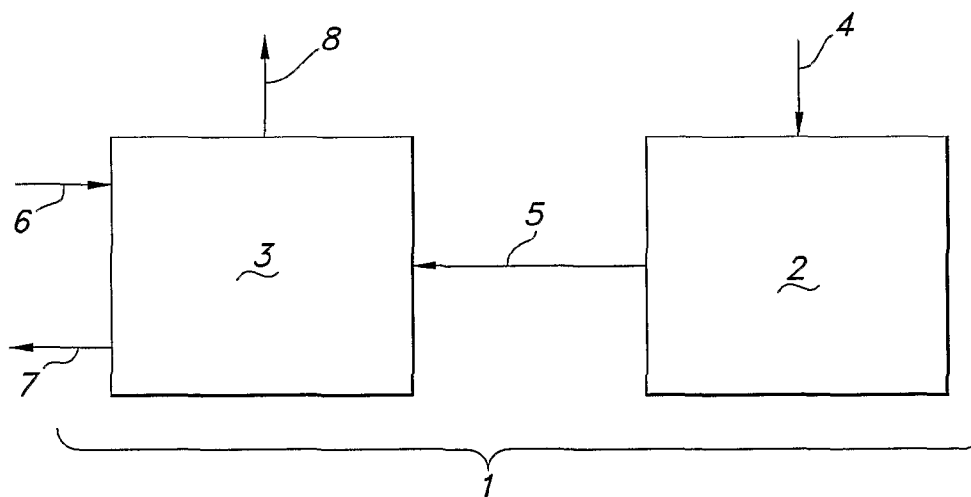
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(54) Title: SYSTEM AND METHOD FOR VAPORIZING A CRYOGENIC LIQUID



(57) Abstract: A system is provided for vaporizing a cryogenic liquid. The system includes means for producing an exhaust gas by flameless thermal oxidation of a fuel. The system also includes means for transferring heat from the exhaust gas to the cryogenic liquid. The heat transferring means is coupled to receive the exhaust gas from the exhaust gas producing means. The means for producing an exhaust gas optionally includes an oxidizer having a matrix bed, a fuel/air mixture inlet positioned to deliver the fuel/air mixture to the matrix bed, and an exhaust outlet positioned to deliver the exhaust gas from the oxidizer to the heat transferring means. The means for transferring heat optionally includes a receptacle configured to hold a heat transfer medium, a conduit for cryogenic liquid extending into the receptacle, and a sparger positioned to deliver exhaust gas from the exhaust gas producing means to the receptacle.

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INTERNATIONAL SEARCH REPORT

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PCT/US06/00937

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - B01J 8/02 (2007.01)

USPC - 431/07

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) - B01J 8/02, 8/00, 8/04; F23D 3/40, 11/44 (2007.01)

USPC - 431/07, 11, 170, 238; 423/659, 245.3; 60/737, 204

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)

MicroPatent, PatBase

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--|-----------------------|
| X | US 6,015,540 A (MCADAMS et al) 18 January 2000 (18.01.2000) columns 5, 6; figure 2 | 17, 19, 20 |
| Y | | 1-11, 18 |
| Y | JP 10325510 A (NAGARA) 08 December 1998 (08.12.1998) abstract; figure 1 | 18 |
| Y | US 6,367,258 B1 (WEN et al) 09 April 2002 (09.04.2002) column 3 | 1-16 |
| Y | US 6,338,337 B1 (PANZ et al) 15 January 2002 (15.01.2002) column 11; figure 4 | 3, 6, 11 |
| Y | US 5,165,884 A (MARTIN et al) 24 November 1992 (24.11.1992) column 1; claim 7 | 12-16 |
| A | US 6,367,429 B2 (IWASAKI et al) 09 April 2002 (09.04.2002) entire document | 1-20 |
| A | US 6,044,647 A (DRUBE et al) 04 April 2000 (04.04.2000) entire document | 1-20 |
| A | US 5,437,152 A (PFEFFERLE) 01 August 1995 (01.08.1995) entire document | 1-20 |

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