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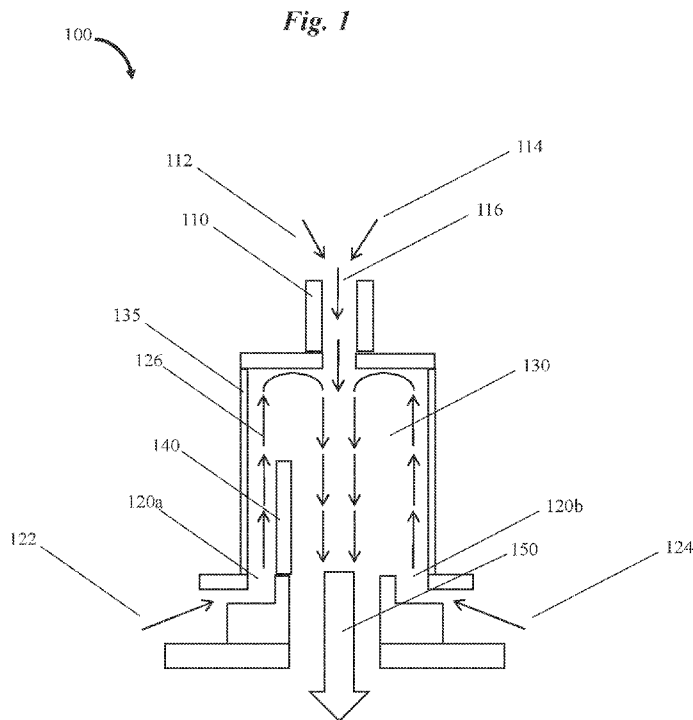
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(54) Title: REACTOR FOR PROCESSING GAS



(57) Abstract: A gas reactor may include a reactor chamber having a first end, a second end, and a lateral surface that extends between the first end and the second end. The gas reactor may include a torch inlet positioned at the first end of the reactor chamber, and the torch inlet may be configured for input flow of a fuel in a first flow direction. The gas reactor may include a reactant inlet positioned at the second end of the reactor chamber and configured to cause a reactant to flow into the reactor chamber in a second flow direction. The fuel or the reactant may move through the reactor chamber in a vortex flow pattern. The gas reactor may include an outlet port positioned at the second end of the reactor chamber in which the outlet port is configured for output flow of a product from the reactor chamber.



RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS,
ZA, ZM, ZW.

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<p>A. CLASSIFICATION OF SUBJECT MATTER</p> <p>IPC - INV. B01J 12/00, B01J 19/24 (2023.01) ADD. B01J 8/00, B01J 8/08, B01J 19/00, B01F 25/10 (2023.01)</p> <p>CPC - INV. B01J 12/00, B01J 19/0053, B01J 19/2405</p> <p>ADD. B01J 8/008, B01J 8/085, B01J 12/005, B01J 19/24, B01J 2219/0883, B01F 25/10</p> <p>According to International Patent Classification (IPC) or to both national classification and IPC</p>																	
<p>B. FIELDS SEARCHED</p> <p>Minimum documentation searched (classification system followed by classification symbols) See Search History document</p> <p>Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched See Search History document</p> <p>Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) See Search History document</p>																	
<p>C. DOCUMENTS CONSIDERED TO BE RELEVANT</p> <table border="1"> <thead> <tr> <th>Category*</th> <th>Citation of document, with indication, where appropriate, of the relevant passages</th> <th>Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td>X --- Y</td> <td>WO 2012/023858 A1 (GASPLAS AS) 23 February 2012 (23.02.2012) entire document, especially Fig. 1, 2, and 4b; pg. 4, ln 20-21; pg. 9, ln 7-8; pg. 10, ln 3-4; pg. 15, ln 7-13, ln 15-17, ln 36-37; pg. 16, ln 1-2, ln 16-18; pg. 19, ln 14-19; pg. 20, ln 13-17</td> <td>1-8, 17, 18 ----- 9-16, 19, 20</td> </tr> <tr> <td>Y</td> <td>US 2016/0194202 A1 (RABINOVICH et al.) 07 July 2016 (07.07.2016) entire document, especially Fig. 4 and 6; para [0044], [0048], [0050]</td> <td>9-11, 13-15, 19, 20</td> </tr> <tr> <td>Y</td> <td>US 2006/0062705 A1 (KANNO et al.) 23 March 2006 (23.03.2006) entire document, especially Fig. 1, para [0008], [0036]</td> <td>12</td> </tr> <tr> <td>Y</td> <td>US 2002/0127155 A1 (MINAEE et al.) 12 September 2002 (12.09.2002) entire document, especially para [0023]</td> <td>16</td> </tr> </tbody> </table>			Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	X --- Y	WO 2012/023858 A1 (GASPLAS AS) 23 February 2012 (23.02.2012) entire document, especially Fig. 1, 2, and 4b; pg. 4, ln 20-21; pg. 9, ln 7-8; pg. 10, ln 3-4; pg. 15, ln 7-13, ln 15-17, ln 36-37; pg. 16, ln 1-2, ln 16-18; pg. 19, ln 14-19; pg. 20, ln 13-17	1-8, 17, 18 ----- 9-16, 19, 20	Y	US 2016/0194202 A1 (RABINOVICH et al.) 07 July 2016 (07.07.2016) entire document, especially Fig. 4 and 6; para [0044], [0048], [0050]	9-11, 13-15, 19, 20	Y	US 2006/0062705 A1 (KANNO et al.) 23 March 2006 (23.03.2006) entire document, especially Fig. 1, para [0008], [0036]	12	Y	US 2002/0127155 A1 (MINAEE et al.) 12 September 2002 (12.09.2002) entire document, especially para [0023]	16
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