Title: VARIABLE GAS SOURCE GAS EXCHANGE SYSTEM

Abstract: A gas measurement system is provided that includes a mechanism for customizing gas supplied to the system. The system further includes a plurality of test locations that can be serviced by a common vessel portion and common sampling and testing infrastructure. The system further includes a controller that is able to control the customization of the supply gas and the location of the common vessel portion.
INTERNATIONAL SEARCH REPORT

International application No. PCT/US 12/44378

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - G01N 1/26 (2012.01)
USPC - 73/25.01

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): G01N 1/26 (2012.01)
USPC: 73/25.01

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
IPC(8): G01N 1/26 (2012.01)
USPC: 73/23.2.23.01,31,04,386; 47/1.01R.17,58.1R (keyword limited; terms below)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
PubWEST (PGPB, USPT, EPAB, JPAB); Google Scholar; Google Patent; Search Terms: gas nitrogen oxygen carbon dioxide monoxide photosynthesis respirat plant shrub sapling control gas valve solenoid container drape vessel envelope housing pressure content mix manifold ratio flow housing sample membrane curtain chamber test enclosure

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<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</td>
<td>US 20030146394 A1 (Prange et al.) 07 August 2003 (07.08.2003), entire document, especially Fig 2, 19-24; para [0060], [0111], [0129]-[0135], [0138]</td>
<td>1, 5, 8</td>
</tr>
<tr>
<td>Y</td>
<td>US 20110003390 A1 (Kudda) 06 January 2011 (06.01.2011), para [0031]-[0034], [0102], [0106], [0115], [0141], [0159], [0156], [0162], [0167], [0189], [0253]</td>
<td>6, 9-20</td>
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<td>Y</td>
<td>US 200401 16770 A1 (O'Connor et al.) 17 June 2004 (17.06.2004), Fig 3; para [0034]</td>
<td>7, 11, 17</td>
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<tr>
<td>A</td>
<td>US 5,426,593 A (Seiden et al.) 20 June 1995 (20.06.1995) entire document</td>
<td>1-20</td>
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<tr>
<td>A</td>
<td>US 20030204989 A1 (Toquain et al.) 06 November 2003 (06.11.2003) entire document</td>
<td>1-20</td>
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<td>A</td>
<td>US 20090137301 A1 (Hirabayashi) 28 May 2009 (28.05.2009) entire document</td>
<td>1-20</td>
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<tr>
<td>A</td>
<td>US 20100184123 A1 (Fall et al.) 22 July 2010 (22.07.2010) entire document</td>
<td>1-20</td>
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</tbody>
</table>

Further documents are listed in the continuation of Box C.

* Special categories of cited documents:
   "A" document defining the general state of the art which is not considered to be of particular relevance
   "E" earlier application or patent but published on or after the international filing date
   "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)
   "O" document referring to an oral disclosure, use, exhibition or other means
   "P" document published prior to the international filing date but later than the priority date claimed

Date of the actual completion of the international search: 03 September 2012 (03.09.2012)

Date of mailing of the international search report: 17 SEP 2012

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Form PCT/ISA/2.10 (second sheet) (July 2009)