

(88) Date of publication of the international search report: 7 April 2016

(54) Title: MICROBOT PIGGING SYSTEM AND METHOD

(57) Abstract: A self-adjusting microbot pigging system for cleaning the interior of a pipe, the system comprises a plurality of microbots, each microbot comprises a propulsion device and a programmable computer processor operatively associated with the propulsion device, each of said processors programmed to instruct its associated propulsion device to operate in cooperation with one or more of the other microbot propulsion devices of said plurality of microbots to form a pig in the pipe.
INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 15/37700

A. CLASSIFICATION OF SUBJECT MATTER
IPC (8) - F16L 55/26 (2015.01)
CPC - F16L 55/26

B. FIELDS SEARCHED
Minimum documentation searched (classification system followed by classification symbols)
IPC(8) - F16L 55/26 (2015.01)
CPC - F16L 55/26

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
IPC(8) - F16L 55/26, 55/00, B08B 9/00, 9/02, 9/027, 9/04, 9/043, 9/045, 9/047, 9/049, 9/051, 9/055, 9/057 (2015.01)
CPC - F16L 55/00, 55/26, 55/265, 55/28, 55/30, B08B 9/00, 9/02, 9/027, 9/04, 9/043, 9/0436 (Search Terms Limited, See Below)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
PatBase, Google Patents, Google Scholar. Search Terms Included: microscopic robots for pigging pipes; interconnected micro robots; releasable attachment for micro robot; pig* AND clean*; robot* or bot% or microbot% OR micro-bot%; processor%; computer processor%; processor% OR computer; pig*; attach* OR fasten* OR join* OR connect*; microbot;

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>
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</thead>
<tbody>
<tr>
<td>Y</td>
<td>US 8,210,289 B1 (Lu et al.) 03 July 2012 (03.07.2012), entire document, especially Fig 1-2; Col 4, In 54-65; Col 5, In 5-7, 14-18</td>
<td>15-16, 18-19</td>
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<tr>
<td>A</td>
<td>US 4,895,602 A (Sagawa) 23 January 1990 (23.01.1990), entire document, especially Fig 1; Col 2, In 49-55</td>
<td>15-16, 18-19</td>
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<tr>
<td>A</td>
<td>US 2011/0203676 A1 (Been et al.) 25 August 2011 (25.08.2011), entire document, especially Fig 2, 5</td>
<td>16</td>
</tr>
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<td>A</td>
<td>US 2011/0214872 A1 (Crawford et al.) 08 September 2011 (08.09.2011), entire document</td>
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<td>A</td>
<td>US 2004/01 11184 A1 (Chiappetta et al.) 10 June 2004 (10.06.2004), entire document</td>
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<td>A</td>
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<td>1, 15, 25</td>
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* Special categories of cited documents.
** later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

Further documents are listed in the continuation of Box C.

Date of the actual completion of the international search
27 August 2015 (27.08.2015)

Date of mailing of the international search report
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