(54) Title: METHOD AND APPARATUS FOR REINFORCING A SEALING COLLAR

(57) Abstract: A method and apparatus for reinforcing a tubular-shaped sealing collar, extending from a filter cartridge are provided, by embedding, or substantially encapsulating, a reinforcement element within the tubular-shaped sealing collar, for resisting a change in circumference of at least a portion of the tubular-shaped collar. The collar may be formed from a resiliently compressible foam material, and the reinforcement element may be formed from a substantially non-compressible material.

Published:
— with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report: 6 December 2007

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.
# INTERNATIONAL SEARCH REPORT

**International application No.**
PCT/US 07/01393

## A. CLASSIFICATION OF SUBJECT MATTER

<table>
<thead>
<tr>
<th>IPC(8) -</th>
<th>B01D 35/28 (2007.01)</th>
</tr>
</thead>
<tbody>
<tr>
<td>USPC -</td>
<td>210/445, 455</td>
</tr>
</tbody>
</table>

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)
USPC: 210/445, 455

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
www.Answers.com, Google, USPTO, PubWEST

Electronic database consulted during the international search (name of data base and, where practicable, search terms used)
Databases: USPTO (Patents and Published Applications), PubWEST: DB = PGPB, USPT, USOC, EPAB, JPAB; PLUR=NO; OP=ADJ
Search terms: Collar, reinforce, tubular, plastic, foam, seal, embedded, filter cartridge

## 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>Y</td>
<td>US 2002/0040569 A1 (REINHOLD) 11 April 2002 (11.04.2002) para [0004], [0009]-[0016], [0022], [0023] and [0025]; See Claims 1, 3, 6-8 and 13; See Abstract</td>
<td>1-25</td>
</tr>
<tr>
<td>Y</td>
<td>US 2004/0104576 A1 (KRAUSZ et al.) 03 June 2004 (03.06.2004) para [0013]-[0015], [0019], [0033], [0034] and [0036]</td>
<td>1-25</td>
</tr>
</tbody>
</table>

Further documents are listed in the continuation of Box C.

---

**Date of the actual completion of the international search**
08 August 2007 (08.08.2007)

**Date of mailing of the international search report**
01 OCT 2007

**Name and mailing address of the ISA/US**
Mail Stop PCT, Attn: ISA/US, Commissioner for Patents
P.O. Box 1450, Alexandria, Virginia 22313-1450
Facsimile No. 571-273-3201

**Authorized officer:**
Lee W. Young
PCT Helpdesk: 571-272-4300
PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (April 2007)