

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
1 June 2006 (01.06.2006)

PCT

(10) International Publication Number  
WO 2006/057657 A3

- (51) International Patent Classification:  
*B65D 59/04* (2006.01)    *B65H 75/18* (2006.01)  
*B65D 3/04* (2006.01)
- (21) International Application Number:  
PCT/US2005/011448
- (22) International Filing Date: 4 April 2005 (04.04.2005)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
10/818,124                      5 April 2004 (05.04.2004)    US
- (71) Applicant (for all designated States except US):  
**SONOCO DEVELOPMENT, INC.** [US/US]; North  
Second Street, Hartsville, SC 29550 (US).

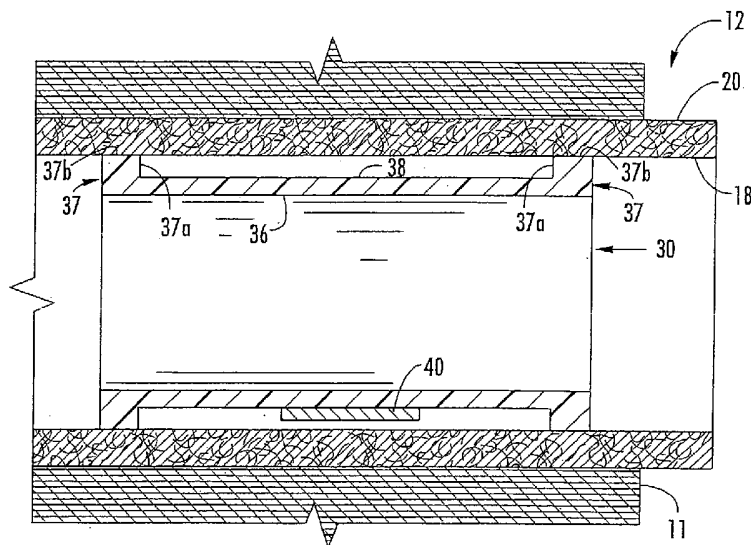
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **BELLUM, Cliff** [US/US]; 307 Warner Drive, Hartsville, SC 29550 (US).  
**LOWRY, James** [US/US]; 405 Treeshore Lane, Franklin, TN 31069 (US).
- (74) Agents: **HILL, Donald, M., Jr.** et al.; Alston & Bird LLP, Bank of America Plaza, 101 South Tryon Street, Suite 4000, Charlotte, NC 28280-4000 (US).

- Published:  
— with international search report
- (88) Date of publication of the international search report:  
26 October 2006

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.

(54) Title: REMOVABLE IDENTIFICATION DEVICE FOR MULTILAYER TUBULAR STRUCTURES



(57) Abstract: A multilayer tubular structure (10) for products with an identification device (40) is disclosed. In one embodiment, a resiliently flexible band is biased with respect to the tubular structure, and the identification device, such as a radio frequency identification device, is interposed therebetween.

WO 2006/057657 A3

## INTERNATIONAL SEARCH REPORT

PCT/US2005/011448

## A. CLASSIFICATION OF SUBJECT MATTER

INV. B65D59/04 B65D3/04 B65H75/18  
 ADD. B65D85/672 B65D85/676

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)  
 B65D B65H

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 practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6 481 631 B1 (POUSTIS JOEL) 19 November 2002 (2002-11-19) column 7, lines 38-49; figure 5 -----	1-26
A	US 6 488 212 B1 (MAEDER CARL CONRAD) 3 December 2002 (2002-12-03) column 3, lines 21-36; figure 1 -----	1-26
A	GB 2 333 207 A (PETER GEORGE * MILTON) 14 July 1999 (1999-07-14) the whole document -----	1-26



Further documents are listed in the continuation of Box C.



See patent family annex.

\* 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 document 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

- \*T\* 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
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*Z\* document member of the same patent family

Date of the actual completion of the international search

4 July 2006

Date of mailing of the international search report

13/07/2006

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2  
 NL - 2280 HV Rijswijk  
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
 Fax: (+31-70) 340-3016

Authorized officer

Balz, O

## INTERNATIONAL SEARCH REPORT

Information on patent family members

PCT/US2005/011448

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6481631	B1	19-11-2002	AT 239271 T 15-05-2003
			AU 1440299 A 05-07-1999
			DE 69814153 D1 05-06-2003
			DE 69814153 T2 08-04-2004
			EP 1038264 A1 27-09-2000
			ES 2198775 T3 01-02-2004
			FR 2772529 A1 18-06-1999
			WO 9931626 A1 24-06-1999
US 6488212	B1	03-12-2002	NONE
GB 2333207	A	14-07-1999	NONE