

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
9 April 2009 (09.04.2009)

PCT

(10) International Publication Number
WO 2009/045324 A3

- (51) International Patent Classification:
C23C 14/35 (2006.01) F02M 61/16 (2006.01)
F02M 63/00 (2006.01)
- (21) International Application Number:
PCT/US2008/011160
- (22) International Filing Date:
26 September 2008 (26.09.2008)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
11/863,777 28 September 2007 (28.09.2007) US
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FENG, Bao [CN/US]; 1000 Shoreline Court, Dunlap, IL 61525 (US).
- (54) Title: METHOD FOR COATING FUEL SYSTEM COMPONENTS
- (57) Abstract: The present disclosure includes a method of producing a fuel system component. The method includes providing a substrate (34) and a coating (36), wherein the substrate comprises steel and the coating comprises a metal nitride. The method also includes applying the coating to at least part of the substrate using a magnetron sputtering deposition process substantially conducted at a temperature less than about 200°C.
- (74) Agents: HOUSER, Jason A. et al.; 100 N.E. Adams Street, Peoria, IL 61629-9510 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, 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),

[Continued on next page]

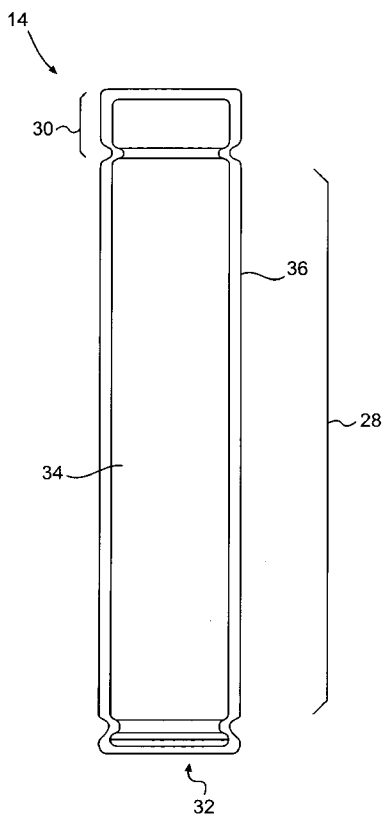


FIG. 2

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European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

Published:

— *with international search report*

(88) Date of publication of the international search report:

22 May 2009

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2008/011160

A. CLASSIFICATION OF SUBJECT MATTER

INV. C23C14/35 F02M63/00 F02M61/16

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)

C23C F02M

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.
X	US 2004/131894 A1 (ERDEMIR ALI [US] ET AL ERDEMIR ALI [US] ET AL) 8 July 2004 (2004-07-08)	1-5
Y	paragraph [25 35]	7,8
X	JP 63 295855 A (HITACHI LTD) 2 December 1988 (1988-12-02)	6,9,10
Y	the whole document	7,8
P,X	WO 2008/079199 A (CATERPILLAR INC [US]; DAVIES LUCY V [US]) 3 July 2008 (2008-07-03) claims 8-12	6-10

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.
- *&* document member of the same patent family

Date of the actual completion of the international search

13 March 2009

Date of mailing of the international search report

20/03/2009

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2008/011160

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this international search report covers allsearchable claims.
2. As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-5

A method of coating a fuel system component.

2. claims: 6-10

A fuel system assembly comprising a first component and a second component.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2008/011160

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 2004131894	A1	08-07-2004	NONE	
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			JP 7035763 B	19-04-1995
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