

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
18 November 2004 (18.11.2004)

PCT

(10) International Publication Number  
**WO 2004/099480 A3**

(51) International Patent Classification<sup>7</sup>: **D04H 1/00**,  
B29C 45/56, 45/14, 45/16

(21) International Application Number:  
PCT/NL2004/000310

(22) International Filing Date: 10 May 2004 (10.05.2004)

(25) Filing Language: Dutch

(26) Publication Language: English

(30) Priority Data:  
1023365 8 May 2003 (08.05.2003) NL

(71) Applicant (for all designated States except US): **FOUN-  
TAIN PATENTS B.V.** [NL/NL]; Rivium Quadrant 90,  
NL-2909 LC Capelle a/d IJssel (NL).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **HOOGLAND, Hen-  
dricus, Antonius** [NL/NL]; Hofstee 2, NL-1531 SZ  
Wormer (NL).

(74) Agent: **WINCKELS, J., H., F.**; Nieuwe Parklaan 97,  
NL-2587 BN Den Haag (NL).

(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, 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, 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, IT, 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).

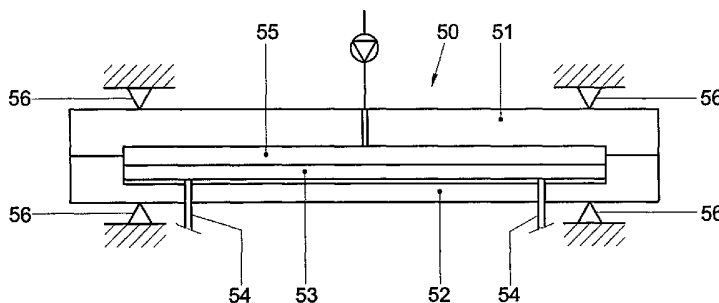
**Published:**

- 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:  
20 January 2005

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: METHOD AND APPARATUS FOR MANUFACTURING VEHICLE PARTS



(57) Abstract: The invention relates to a method for manufacturing at least partly plastic vehicle parts in a mold (50) with at least one mold cavity (55), comprising the steps of: at least partly closing the mold, wherein the at least one mold cavity is brought in a first position by means of at least one movable wall part (53) of the at least one mold cavity; introducing plastic into the at least one mold cavity; upon complete closure of the mold and/or movement of the at least one movable wall part, bringing the at least one mold cavity in a second position, the at least one mold cavity in the second position having a different volume than in the first position; all this in such a manner that by bringing the at least one mold cavity from the first into the second position, the plastic fills the respective mold cavity completely.

WO 2004/099480 A3

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/NL2004/000310

**A. CLASSIFICATION OF SUBJECT MATTER**  
 IPC 7 D04H1/00 B29C45/56 B29C45/14 B29C45/16

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)  
 IPC 7 B29C

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 Y	EP 0 999 023 A (IDEMITSU PETROCHEMICAL CO) 10 May 2000 (2000-05-10) figures 17a-c paragraphs [0116] - [0118] figures 18a-c paragraph [0119] - paragraph [0121]	1,6,7, 13,14,20 2-5,8-10
Y	WO 02/00413 A (OKAMOTO AKIO ;UBE MACHINERY CORP LTD (JP)) 3 January 2002 (2002-01-03) claim 1 page 1, line 14	2-5, 10
A	NL 1 019 320 C (NOVEM INTERNAT B V) 28 April 2003 (2003-04-28) page 10, line 5 - line 17 page 11, line 3 - line 19	1
	-/--	

Further documents are listed in the continuation of box C.       Patent family members are listed in annex.

° Special categories of cited documents :

<p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"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)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p>	<p>"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</p> <p>"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</p> <p>"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.</p> <p>"&amp;" document member of the same patent family</p>
--	--

Date of the actual completion of the international search  <p style="text-align: center; font-size: 1.2em;">31 August 2004</p>	Date of mailing of the international search report  <p style="text-align: center; font-size: 1.2em;">18. 11. 2004</p>
--	---

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  <p style="text-align: center; font-size: 1.2em;">Alink, M</p>
--	---

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/NL2004/000310

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,A	-& WO 03/039838 A (HOOGLAND HENDRICUS ANTONIUS ; NOVEM INTERNAT B V (NL)) 15 May 2003 (2003-05-15) -----	1
A	US 4 522 778 A (BACIU ANTOINE ET AL) 11 June 1985 (1985-06-11) the whole document -----	1
Y	EP 0 795 386 A (KOMATSU MFG CO LTD) 17 September 1997 (1997-09-17) figures 3A-3H column 6, line 1 - column 7, line 16 -----	8,9
Y	US 6 500 376 B1 (PACK CRAIG WILLIAM ET AL) 31 December 2002 (2002-12-31) column 1, line 15 - line 18 column 3, line 61 - column 4, line 13 column 4, line 58 - column 5, line 64 -----	8,9
X	EP 0 692 362 A (SUMITOMO CHEMICAL CO) 17 January 1996 (1996-01-17) page 2, column 1, line 5 - line 10 column 14, line 41 - line 49 -----	15-18
X	DE 195 31 143 A (HAPPICH GMBH GEBR ;KRAUSS MAFFEI AG (DE)) 27 February 1997 (1997-02-27) column 1, line 44 - line 45 column 1 -----	15-18
A	US 6 524 511 B1 (MATSUKI MASAMITSU ET AL) 25 February 2003 (2003-02-25) the whole document -----	1
A	EP 0 703 307 A (SARL A D N) 27 March 1996 (1996-03-27) the whole document -----	1

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/NL2004/000310

## Box 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.: **11, 12, 21**  
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:  
**see FURTHER INFORMATION sheet PCT/ISA/210**
  
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 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 all searchable claims.
  
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
  
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.:  
**1-10, 13-18, 20**

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

Continuation of Box II.2

Claims Nos.: 11, 12, 21

The feature of claim 12 "flow paths are provided with match the melt-flow index of the respective plastic" is not clear in the sense of Article 6 PCT. The concept "match the melt-flow index" can be interpreted in various ways. The scope of the subject matter of claim 12 is therefore unclear and a meaningful search cannot be carried out.

Claim 21 searches protection for a mould. The feature of claim 21 however refers to the material properties of the plastic which is being used in combination with said mold (cf. "thereby generating adiabatic heat development in the plastic"). The plastic is however not a part of said mold and can therefore never be used to characterize said mold. It is for the skilled man therefore not clear what kind of mold features are required to achieve said effect. A meaningful search can therefore not be carried out. This objection also applies to claim 11 whereby the as such unclear mold is being applied in a method claim.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

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

1. claims: 1-10, 13-18, 20

Method for manufacturing a plastic part whereby a movable mould wall part is brought from a first position into a second position

---

2. claim: 19

Textile provided with a plastic backing

---

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/NL2004/000310

Patent document cited in search report	Publication date	Patent family member(s)	Publication date	
EP 0999023	A	10-05-2000	JP 2000006213 A	11-01-2000
			CA 2295121 A1	04-11-1999
			EP 0999023 A1	10-05-2000
			US 6440351 B1	27-08-2002
			WO 9955509 A1	04-11-1999
-----				
WO 0200413	A	03-01-2002	JP 2002011771 A	15-01-2002
			CA 2411419 A1	03-01-2002
			DE 10196392 T0	15-05-2003
			GB 2381496 A ,B	07-05-2003
			WO 0200413 A1	03-01-2002
			US 2003098525 A1	29-05-2003
-----				
NL 1019320	C	28-04-2003	NL 1019320 C2	28-04-2003
			EP 1467851 A1	20-10-2004
			WO 03039838 A1	15-05-2003
			TW 568822 B	01-01-2004
-----				
WO 03039838	A	15-05-2003	NL 1019235 C2	28-04-2003
			NL 1019320 C2	28-04-2003
			EP 1467851 A1	20-10-2004
			WO 03039838 A1	15-05-2003
			TW 568822 B	01-01-2004
-----				
US 4522778	A	11-06-1985	FR 2545033 A1	02-11-1984
			BR 8401967 A	04-12-1984
			DE 3414101 A1	31-10-1984
			ES 8504015 A1	01-07-1985
			GB 2138737 A ,B	31-10-1984
			IT 1173610 B	24-06-1987
			JP 59220340 A	11-12-1984
			SE 8402324 A	29-10-1984
-----				
EP 0795386	A	17-09-1997	JP 8150645 A	11-06-1996
			EP 0795386 A1	17-09-1997
			US 6143226 A	07-11-2000
			CA 2204250 A1	06-06-1996
			WO 9616785 A1	06-06-1996
-----				
US 6500376	B1	31-12-2002	NONE	
-----				
EP 0692362	A	17-01-1996	JP 8025407 A	30-01-1996
			JP 8025438 A	30-01-1996
			CA 2154435 A1	12-01-1996
			CN 1118734 A ,B	20-03-1996
			DE 69524488 D1	24-01-2002
			DE 69524488 T2	23-05-2002
			EP 0692362 A1	17-01-1996
			ES 2169096 T3	01-07-2002
-----				
DE 19531143	A	27-02-1997	DE 19531143 A1	27-02-1997
-----				
US 6524511	B1	25-02-2003	JP 4249118 A	04-09-1992
			JP 7088019 B	27-09-1995
-----				
EP 0703307	A	27-03-1996	FR 2724667 A1	22-03-1996
			EP 0703307 A1	27-03-1996
-----				