





EUROPEAN SEARCH REPORT

Application Number  
EP 11 18 7864

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	EP 0 875 318 A1 (YKK CORP [JP]) 4 November 1998 (1998-11-04)	1,4,6-12	INV. B22D17/20
Y	* the whole document *	2,3,5	
Y	US 5 983 977 A (NISHIMURA TAKANOBU [JP] ET AL) 16 November 1999 (1999-11-16)	2,3	
Y	* figure 2 *		
Y	EP 0 418 839 A1 (HITACHI LTD [JP]) 27 March 1991 (1991-03-27)	2,3	
Y	* figure 7 *		
Y	JP H02 160156 A (TOKYO YOGYO KK) 20 June 1990 (1990-06-20)	2,3	
Y	* abstract; figures 1-2 *		
Y	US 2004/084816 A1 (HILDRETH TERRY [US]) 6 May 2004 (2004-05-06)	5	
Y	* abstract *		
Y	WO 01/45881 A1 (STEININGER RONALD G SR [US]; JUSTIS JAMES ERIC [US]) 28 June 2001 (2001-06-28)	5	TECHNICAL FIELDS SEARCHED (IPC)
	* page 5, lines 3-5; figure 2 *		B22D
X	US 3 672 440 A (MIURA YASUSHI ET AL) 27 June 1972 (1972-06-27)	13-15	
	* figures 1,2 *		
	* column 3, lines 34-35 *		
X	JP S57 206560 A (NISSAN MOTOR) 17 December 1982 (1982-12-17)	13-15	
	* the whole document *		
X	JP S63 127748 U (NO NAME) 22 August 1988 (1988-08-22)	13-15	
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The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 16 December 2014	Examiner Scheid, Michael
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone		T : theory or principle underlying the invention	
Y : particularly relevant if combined with another document of the same category		E : earlier patent document, but published on, or after the filing date	
A : technological background		D : document cited in the application	
O : non-written disclosure		L : document cited for other reasons	
P : intermediate document		& : member of the same patent family, corresponding document	

EPO FORM 1503 03/02 (P04C01)



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**CLAIMS INCURRING FEES**

The present European patent application comprised at the time of filing claims for which payment was due.

- Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):
- No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

**LACK OF UNITY OF INVENTION**

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

- All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
- Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:
- The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).



**LACK OF UNITY OF INVENTION  
SHEET B**

Application Number  
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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

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1. claims: 1, 4, 6-12

A die casting system with a heated sleeve and a A method of die casting with a die casting system with a heated sleeve

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2. claims: 2, 3

Properties of the shot tube

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3. claim: 5

Properties of the plunger

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4. claims: 13-15

A die casting system with an inclined sleeve

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ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.  
The members are as contained in the European Patent Office EDP file on  
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16-12-2014

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EPO FORM P0458

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82