

## **Europäisches Patentamt**

European Patent Office
Office européen des brevets



(11) **EP 0 740 055 A3** 

(12)

## **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3: 27.11.1996 Bulletin 1996/48

(51) Int. Cl.<sup>6</sup>: **F01L 3/22** 

(43) Date of publication A2: 30.10.1996 Bulletin 1996/44

(21) Application number: 96106675.0

(22) Date of filing: 26.04.1996

(84) Designated Contracting States: **DE FR GB IT** 

(30) Priority: 26.04.1995 JP 101998/95 26.04.1995 JP 102004/95

(71) Applicant: YAMAHA HATSUDOKI KABUSHIKI KAISHA Iwata-shi Shizuoka-ken, 438 (JP) (72) Inventors:

- Adachi, Shuhei Iwata-shi, Shizuoka-ken (JP)
- Inami, Junichi Iwata-shi, Shizuoka-ken (JP)
- (74) Representative: Grünecker, Kınkeldey, Stockmair & Schwanhäusser Anwaltssozietät Maximilianstrasse 58 80538 München (DE)

## (54) Method of bonding a valve seat

(57)A method for producing a valve seat (19) within a cylinder head unit (11) provided with valve openings (13a,14a) associated with respective valve guide holes (11a) for receiving valve guides (15,16) for associated intake or exhaust valves (17,18) opening and closing said valve openings (13a,14a), respectively, comprises the steps of: (a) placing a valve seat base material onto a surface of said openings of said cylinder head unit, (b) pushing an electrode against the end face of said valve seat base material opposite to said cylinder head unit (11) with a pushing direction matched with an axis (C) of said intake or exhaust valve (17,18), whereby said electrode being adapted to apply electricity to said cylinder head unit (11) through said valve seat base material, and (c) applying a finishing treatment to said bonded pieces to receive the desired valve seat (19).

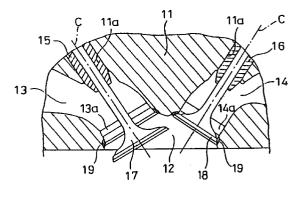


FIGURE 1



## **EUROPEAN SEARCH REPORT**

Application Number EP 96 10 6675

Category	Citation of document with it of relevant pa	ndication, where appropriate, ssages	Relevant to claim	CLASSIFICATION OF THI APPLICATION (Int.Cl.6)
Υ	EP-A-0 195 177 (TOC 1986	CO INC) 24 September	1	F01L3/22
A	* the whole document *		2-5	
Υ	PATENT ABSTRACTS OF vol. 95, no. 004 & JP-A-07 103070 (Y April 1995, * abstract *	JAPAN AMAHA MOTOR CO LTD), 18	1	
A	US-A-5 060 374 (FIN 29 October 1991 * abstract; figure	· · · · · · · · · · · · · · · · · ·	1	
Α	EP-A-0 168 130 (TOC * the whole documen	CO INC) 15 January 1986 t *	1-5	
				TECHNICAL FIELDS SEARCHED (Int.Cl.6)
				F01L
	The present search report has b	een drawn up for all claims		
Place of search		Date of completion of the search		Examiner
	THE HAGUE	13 September 1996	Was	ssenaar, G
Y: par do	CATEGORY OF CITED DOCUME ticularly relevant if taken alone ticularly relevant if combined with an ument of the same category haological background	E : earlier patent doc after the filing da other D : document cited in L : document cited fo	ument, but pub te i the application r other reasons	lished on, or n