(11) Publication number:

0 210 464

A3

(12)

EUROPEAN PATENT APPLICATION

(21) Application number: 86109097.5

(51) Int. Cl.³: **B** 21 **D** 11/02 B 21 D 25/02

(22) Date of filing: 03.07.86

30 Priority: 23.07.85 GB 8518567

(43) Date of publication of application: 04.02.87 Bulletin 87/6

88) Date of deferred publication of search report: 07.10.87

(84) Designated Contracting States: AT BE CH DE FR GB IT LI LU NL SE (71) Applicant: TKR International Ltd. Watchmead Welwyn Garden City Herts. AL7 1LT(GB)

(72) Inventor: Green, Anthony The Glebe House Old Knebworth Stevenage Herts(GB)

(74) Representative: Jack, Bruce James et al, FORRESTER & BOEHMERT Widenmayerstrasse 4/l D-8000 Munchen 22(DE)

(54) Forming contoured shapes.

(57) Contoured shapes, especially elongated saddle-section shapes such as helicopter rotor blade erosion shields, are formed from a sheet metal workpiece by providing the workpiece with lateral flange portions that are engaged with respective lateral tools movable in synchronism adjacent to the flanks of an elongate male tool so as to draw the workpiece, by its flange portions, over the male tool and into contiguity therewith. The lateral tools may cooperate with gripper means to grip the flange portions and facilitate stretchforming. Apparatus for performing this method is also disclosed.





EUROPEAN SEARCH REPORT

EP 86 10 9097

DOCUMENTS CONSIDERED TO BE RELEVANT Catagonia Citation of document with indication, where appropriate, Relevant					
ategory	of relevant passages		Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)	
	FR-A-1 036 632 AERONAUTIQUES DU * Figures penultimate para paragraph 3 *	SUD-OUEST) 1-3; page 3.	1-6	B 21 D 11/02 B 21 D 25/02	
х	US-A-1 811 259 * Figures 1,4,5	- (CURTIS) *	5-10		
A			1-4	,	
х	US-A-2 339 032 * Figures 4,8 *	- (SCHLENZIG)	1-6		
A			7-9		
	US-A-1 880 454 * Figures 1-3; p page 2, line 6 *	(KLOCKE) page 1, line 88 -	6-10	B 21 D	
		-			
	•				
	,				
	The present search report has b	een drawn up for all claims			
Place of search THE HAGUE Date of completion 23-07-19		Date of completion of the search 23-07-1987	ASH	Examiner	
Y: par doo A: tec O: nor	CATEGORY OF CITED DOCU ticularly relevant if taken alone ticularly relevant if combined wi current of the same category hnological background n-written disclosure ermediate document	E : earlier p after the th another D : docume L : docume	patent document, I of filing date ent cited in the app ent cited for other of the same pate	ying the invention but published on, or plication reasons nt family, corresponding	