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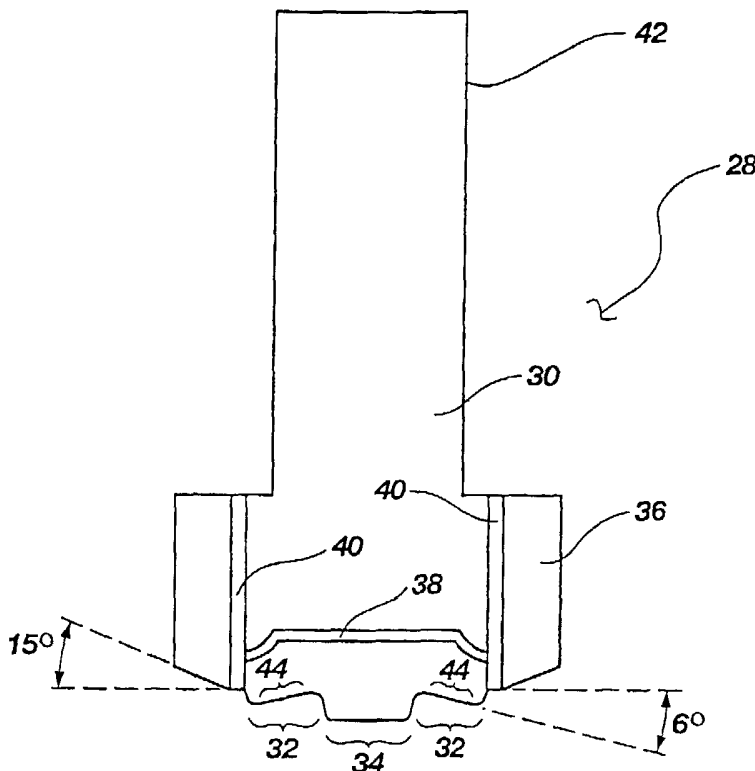
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[Continued on next page]

(54) Title: APPLICATIONS OF FRICTION STIR WELDING USING A SUPERABRASIVE TOOL



(57) Abstract: The present invention relates to a method of joining segments of high melting temperature materials, that includes frictionally heating a first high melting temperature material and a second high melting temperature material wherein the first high melting temperature material and second high melting temperature material are welded together, without substantially changing the macrostructure and/or the microstructure of the first high melting temperature material and the second high melting temperature material, after application of a frictional force.

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**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
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Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X, E	JP 2002-035965 A (AOKI et al.) 5 February 2002, (05.02.2002), abstract.	1-17
A,P	US 6779707 B2 (DRACUP et al.) 24 August 2004 (08.08.2004), entire document	background all
X,P	US 6669075 B2 (COLLIGAN et al.) 13 November 2003, (13.11.2003), col. 1 lines 10-59 and col. 4 lines 35-59.	1-17
X,P	US 6793118 B2 (PALM) 5 February 2004 (05.02.2004), fig. 1, col. 1 lines 5-24 and col 3 line 61 - col 4 line 20.	1-17
X,P	US 6726084 B2 (DUNCAN, JR.) 27 APRIL 2004 (27.04.2004), figs. 3-7 and col. 7 lines 1-49.	1-17
X	US 6227432 B1 (ENOMOTO et al) 8 May 2001 (08.05.2001), figs. 8 and 8A, col. 1 lines 25-50, col. 2 lines 29-45, col 6 lines 51-59 and col 8 lines 3-24.	1-17
X	US 5794835 A (COLLIGAN et al) 18 August 1998 (18.08.1998), fig. 1 and col. 3 line 48 - col 4 line 31)	1-17

Further documents are listed in the continuation of Box C.       See patent family annex.

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