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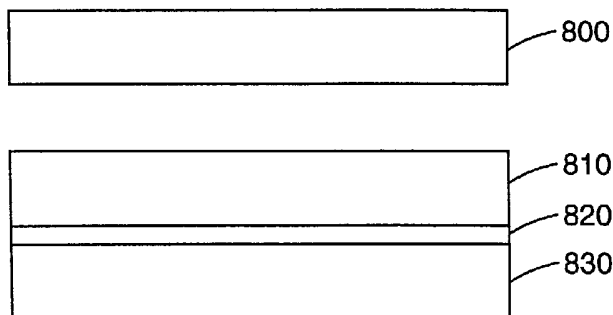
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(54) Title: GLAZING PRELAMINATES, GLAZING LAMINATES, AND METHODS OF MAKING SAME



(57) Abstract: Glazing prelaminate and glazing laminates for vehicular and architectural applications are described. The glazing prelaminate includes a functional film (830) adhered to a shock dissipating layer (810) with an adhesive region (820) between the functional film (830) and the shock dissipating layer (810). The adhesive region contains a reacted organic titanate primer. The glazing prelaminate can be prepared at temperatures lower than about 120 °F (49 °C). Methods of preparing the glazing prelaminate and the glazing laminate are provided.



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

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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 B32B

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, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6 180 246 B1 (HOLMES PAUL A ET AL) 30 January 2001 (2001-01-30) claim 1 column 2, line 9 - line 14 column 2, line 35 - line 48 column 5, line 66 -column 7, line 9 example 1 ---	1-39
A	EP 0 319 911 A (NIPPON SHEET GLASS CO LTD) 14 June 1989 (1989-06-14) claims 1,17 page 4, line 3 - line 49 page 6, line 8 - line 11 --- -/--	1-39



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	PATENT ABSTRACTS OF JAPAN vol. 1996, no. 07, 31 July 1996 (1996-07-31) & JP 08 066986 A (SEKISUI CHEM CO LTD), 12 March 1996 (1996-03-12) abstract -----	1-39

INTERNATIONAL SEARCH REPORT

Internat pplication No

PCT/US 02/25837

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6180246	B1	30-01-2001	AT 216315 T 15-05-2002
		AU 686735 B2 12-02-1998	
		AU 1570095 A 01-08-1995	
		BR 9505852 A 09-04-1996	
		CA 2157189 A1 20-07-1995	
		CN 1124017 A 05-06-1996	
		DE 69526461 D1 23-05-2002	
		EP 0689502 A1 03-01-1996	
		EP 1008444 A1 14-06-2000	
		FI 954382 A 18-09-1995	
		JP 8507986 T 27-08-1996	
		NZ 279158 A 19-12-1997	
		PL 310622 A1 27-12-1995	
		WO 9519261 A1 20-07-1995	
		US 6001462 A 14-12-1999	
		ZA 9500213 A 18-10-1995	
EP 0319911	A	14-06-1989	DE 3888940 D1 11-05-1994
			EP 0319911 A2 14-06-1989
			JP 1253444 A 09-10-1989
			US 4925737 A 15-05-1990
JP 08066986	A	12-03-1996	NONE