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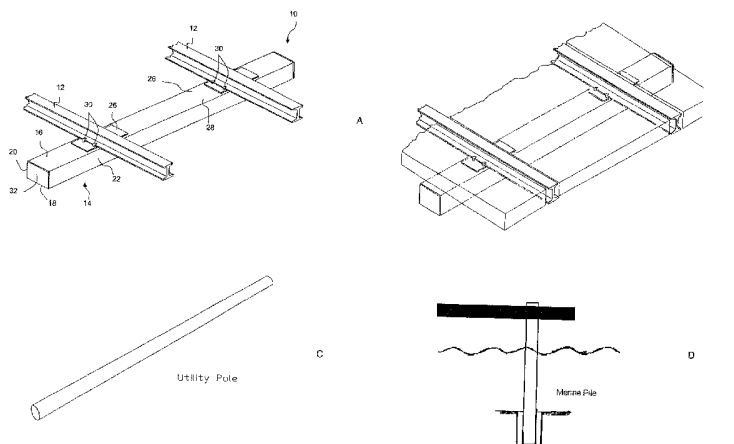
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(54) Title: RECYCLE POLYMERIC COMPOSITE CROSSTIES AND METHODS OF MANUFACTURE



(57) Abstract: A polymeric composite useful for producing large shaped articles such as railroad crossties comprises a filler component having minimal reinforcing/structural characteristics; and a polymer blend including at least one polymeric stiffening component, at least one polymeric density component, and at least one polymeric flexibility component. The polymer blend can include post-consumer recycled thermoplastic polymers. To produce the composite, a multistage extruder brings a blend of polymer and filler materials to an extrudable threshold without completely liquefying the polymer blend. The extruded blend is cooled within a mold to form a shaped article such as a recycled composite crosstie. Exemplary recycled composite mixtures may include composite polymer materials, such as, polypropylene, High Density Polyethylene (HDPE), High Molecular Weight Polyethylene (HMW), Low Density Polyethylene (LDPE), ABS, Ethylene Vinyl Acetate (EVA), Linear Low Density Polyethylene (LLDPE), and combinations of these polymers. The filler may include talc, fly ash, potash, and combinations of these or other mineral powder products.

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<p>C. DOCUMENTS CONSIDERED TO BE RELEVANT</p> <table border="1"> <thead> <tr> <th>Category *</th> <th>Citation of document, with indication, where appropriate, of the relevant passages</th> <th>Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>US 5,804,116 A (SCHMID et al) 08 September 1998 (08.09.1998).</td> <td>1-42</td> </tr> <tr> <td>A</td> <td>US 6,228,479 B1 (ZEGLER et al) 08 May 2001 (08.05.2001).</td> <td>1-42</td> </tr> <tr> <td>A</td> <td>US 6,247,651 B1 (MARINELLI) 19 June 2001 (19.06.2001).</td> <td>1-42</td> </tr> <tr> <td>A</td> <td>US 6,322,863 B1 (KUBICKY) 27 November 2001 (27.11.2001).</td> <td>1-42</td> </tr> </tbody> </table>			Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	A	US 5,804,116 A (SCHMID et al) 08 September 1998 (08.09.1998).	1-42	A	US 6,228,479 B1 (ZEGLER et al) 08 May 2001 (08.05.2001).	1-42	A	US 6,247,651 B1 (MARINELLI) 19 June 2001 (19.06.2001).	1-42	A	US 6,322,863 B1 (KUBICKY) 27 November 2001 (27.11.2001).	1-42			
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