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MANUFACTURING METHOD OF GEOGRID

ABSTRACT OF THE DISCLOSURE

An improved method for manufacturing polymeric geogrids is disclosed. The method comprises the steps of: (a) combining at least one high-melting point filament yarn with at least one low-melting point filament yarn to form a hybrid yarn bundle, the low-melting point filament yarn has a melting point that is at least 10 ~ 20 °C lower than the melting point of the high-melting point filament yarn; (b) weaving the hybrid yarn bundle to form a net structure; © heating the net structure causing the low-melting point fiber to melt and form a binder composition enclosing the high-melting point fiber; and (d) cooling the net structure to form a geogrid. One of the main advantages of this process is that it does not require the coating step (with molten PVC or asphalt), as do the prior art processes. Thus, the geogrids can be manufactured in a more cost-effective and environmentally compatible manner. Furthermore, with this process, the individual fibers are ubiquitously covered with a protective binder resin, which is formed by the melting of the low-melting point fiber, resulting in substantially enhanced junction as well as the overall strengths of the geogrid so manufactured.

FIGURE 2

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