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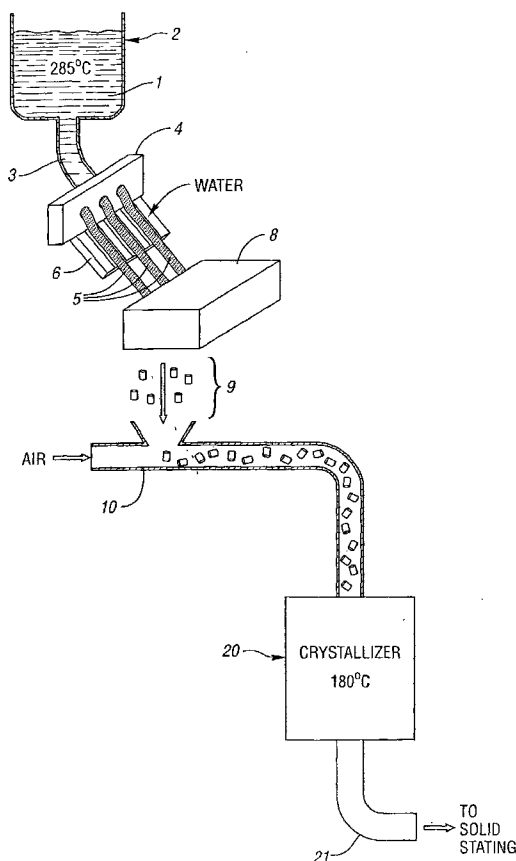
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(54) Title: DIRECT COUPLING OF MELT POLYMERIZATION AND SOLID STATE PROCESSING FOR PET



(57) Abstract: Strands (5) of molten polyethylene terephthalate (PET) from a PET polycondensation reactor (4) are solidified, pelletized, and cooled only to a temperature in the range of 50°C to a temperature near the polymer T_g by contact with water. The still hot pellets (9) are conveyed, optionally followed by drying to remove water, to a PET crystallizer (20). By avoiding cooling the amorphous pellets (9) to room temperature with water and cool air, significant savings of energy are realized.

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