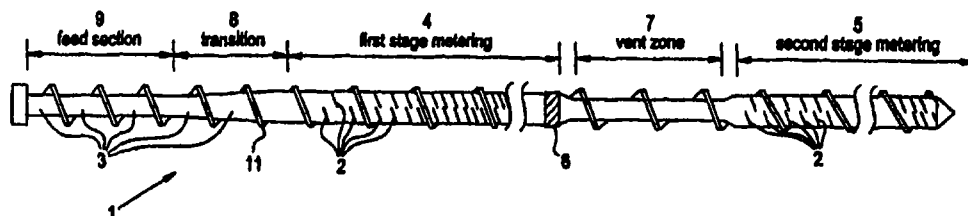




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(54) Title: SINGLE EXTRUDER SCREW FOR EFFICIENT BLENDING OF IMMISCIBLE POLYMERIC MATERIALS



(57) Abstract

A single extruder screw (1) is presented which includes a plurality of undercut barriers (2) in a preselected pattern within the channel (3) of an extrusion screw (1). The undercut barriers (2) are disposed in the first metering stage (4) and the second metering stage (5) and provide increased dispersive and distributed mixing for highly viscous difficult to blend materials. In another embodiment the single extruder (1) includes a slotted blister ring (6), having slots and lands disposed thereon, positioned between the first metering stage (4) and the vent zone (7) to further increase the amount of mixing.