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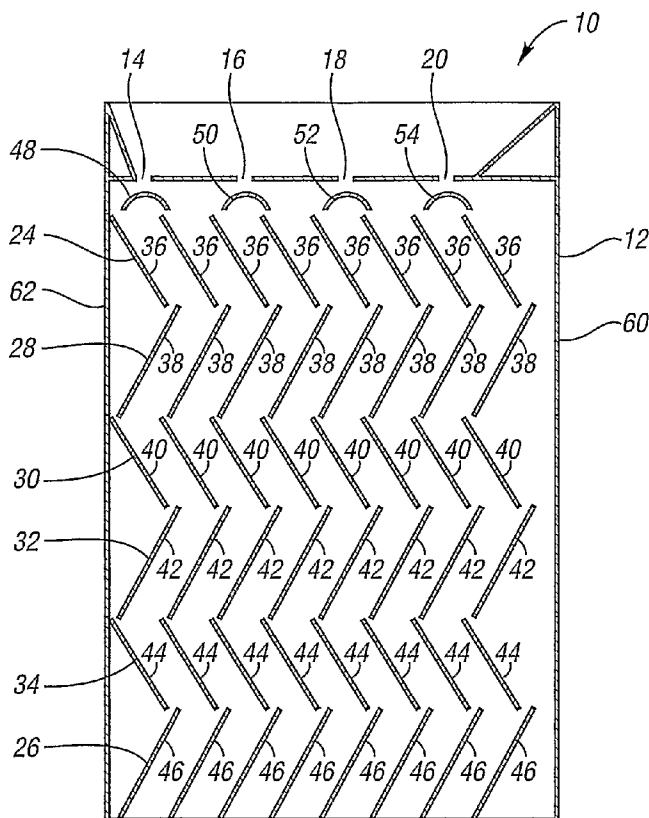
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(54) Title: BAFFLE ASSEMBLY MODULE FOR VERTICAL STAGED POLYMERIZATION REACTORS



(57) Abstract: The present invention provides an assembly for use in vertical, gravity flow driven polymerization reactors for combinations of high viscosity, high throughput, and shallow polymer depths. The baffle assembly module of the invention includes a support structure having a plurality of side openings. The side openings allow the escape of vapor liberated from the polymeric melt. The assembly further includes a feed splitter followed by two or more vertically arranged rows of baffle plates with the feed splitter and baffles sequentially positioned in the support structure. The plurality of parallel baffles in a row are angled such that when a polymeric melt contacts a given baffle the polymeric melt moves in a downward direction under the force of gravity. The arrangement of the rows is such that each row (except the lowest row) transfers the polymeric melt to a lower vertically adjacent row until reaching the last row of baffles in the module. According to the vertical arrangement of the components in the baffle assembly module and by stacking additional baffle assembly modules if needed within the reactor, the polymeric melt cascades down the vertical length of the reaction vessel interior. The present invention also provides a polymerization reactor that incorporates the assembly of the invention and a method of increasing the degree of polymerization of a polymer melt by using the assembly of the invention.



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