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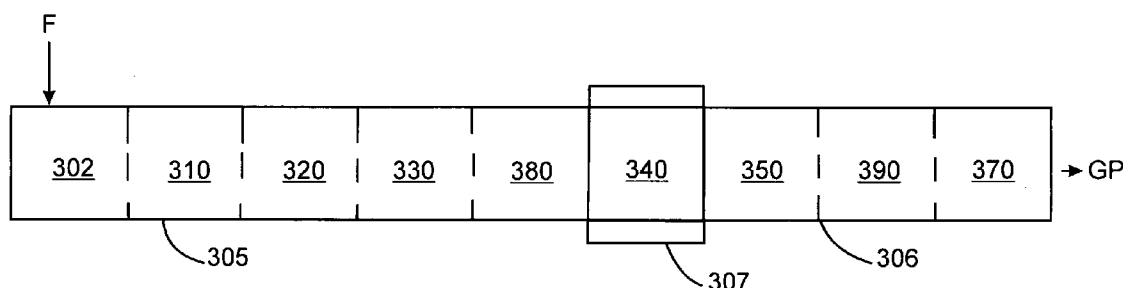
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(54) Title: CONTINUOUS EXTRUSION PROCESS FOR PRODUCING GRAFTED POLYMERS



(57) Abstract: A continuous extrusion process for the functionalization of polymers through reactive extrusion. The process uses a continuous extrusion reactor comprising at least two sequential, very closely-coupled, independently driven screw extruders having a total effective length to diameter ratio greater than 60 to 1 and as high as 112 to 1 and providing greatly extended reaction times for efficiently producing a grafted polymer having a high level of functionalization. Drying of the polymer feed is performed in the continuous extrusion reactor. Multiple injections of reactants may be provided. Shear modification of the molecular weight of the grafted polymer is performed in the continuous extrusion reactor after the functionalization reactions. A continuous extrusion reactor and a grafted polymer having a high level of functionalization are also disclosed.

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