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(54) Title: PROCESS FOR POLYMERIZING OLEFIN-BASED POLYMERS CONTAINING HIGH MOLECULAR WEIGHT FRACTIONS IN CONDENSED AND SUPER-CONDENSED MODE

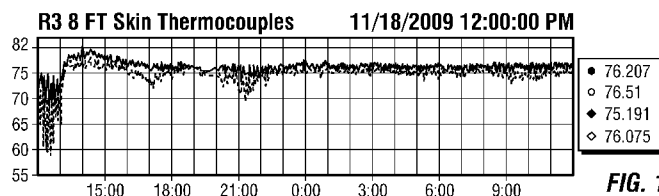


FIG. 1

(57) Abstract: A process for producing an olefin-based polymer in a polymerization reactor including a fluidized bed, a disengaging section and a neck connecting the bed and disengaging section, at least one monomer, in the gas phase, in the presence of at least one catalyst containing at least two transition metals, one of the at least two transition metals being Ti, at least one cocatalyst, a composition having at least one compound selected from formula (I), and/or at least one compound selected from formula (II): $(R_1CO_2)_2 AlOH$ (I), $(R_2)_x N(R_{30H})_y$ (II); wherein R_1 is a hydrocarbon radical containing from 13 to 25 carbons; R_2 is a hydrocarbon radical containing from 14 to 26 carbons; R_3 is a hydrocarbon radical containing from 1 to 4 carbons; and $x + y = 3$, and x has a value of 1 or 2; and wherein the reactor is operated in a condensed mode and the average height of the fluidized bed is maintained above the neck of the polymerization reactor is provided. The reaction product of the process is also provided.