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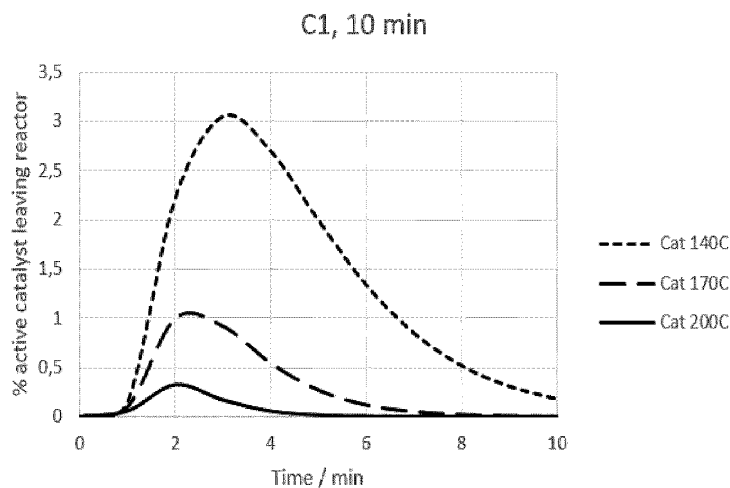
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(54) Title: PROCESS FOR THE POLYMERIZATION OF OLEFINS IN SOLUTION WITH CONTROLLED ACTIVITY OF CATALYST IN REACTOR OUTLET STREAM

Fig. 1



(57) Abstract: The present invention relates to a polymerisation process, comprising: a) supplying a feed containing ethylene and at least one alpha-olefin having 3 to 12 carbon atoms in a hydrocarbon solvent to a polymerisation reactor, b) contacting the feed of step a) in the reactor with a catalyst to form a reaction mixture containing an ethylene-alpha-olefin co-polymer, whereby the average residence time in the reactor is chosen to be between 0.5 and 30 minutes, c) withdrawing the reaction mixture from the polymerisation reactor as a reactor outlet stream which comprises the ethylene-alpha-olefin co-polymer, unreacted monomer, catalyst, and hydrocarbon solvent, and d) separating hydrocarbon solvent, monomer and comonomer from the reactor outlet stream and recycling it back to the polymerisation reactor without further purification steps, wherein in step c) no more than 5 wt.% of catalyst in an active state is leaving the reactor.

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