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(54) **Continuous catalyst /wax separation method**

(57) An improved Method for the separation of catalyst particles and the wax product from the output slurry of a Fischer-Tropsch bubble column reactor comprising the contact of a hydrocarbon solvent from a cyclic solvent stream with the slurry, wherein the solvent is a hydrocarbon fraction which is pressurized and heated to its supercritical state and the temperature and the pressure of the solvent at the supercritical state are similar to those of the F-T reactor. After the separating of the catalyst

from the hydrocarbon mixture of the solvent and the slurry in a catalyst separation section the hydrocarbon solvent and the wax product are separated, whereby the recovered solvent phase is lead to the cyclic solvent stream; which is used after re-pressurizing and re-heating in a supercritical solvent supply module to recycling the hydrocarbon solvent for the contact step. A system for carrying out the method is also disclosed.

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