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(54) Title: CATALYTIC CRACKING PROCESS FOR A TRUE CIRCULAR SOLUTION FOR CONVERTING PYROLYSIS OIL PRODUCED FROM RECYCLED WASTE PLASTIC INTO VIRGIN OLEFINS AND PETROCHEMICAL INTERMEDIATES

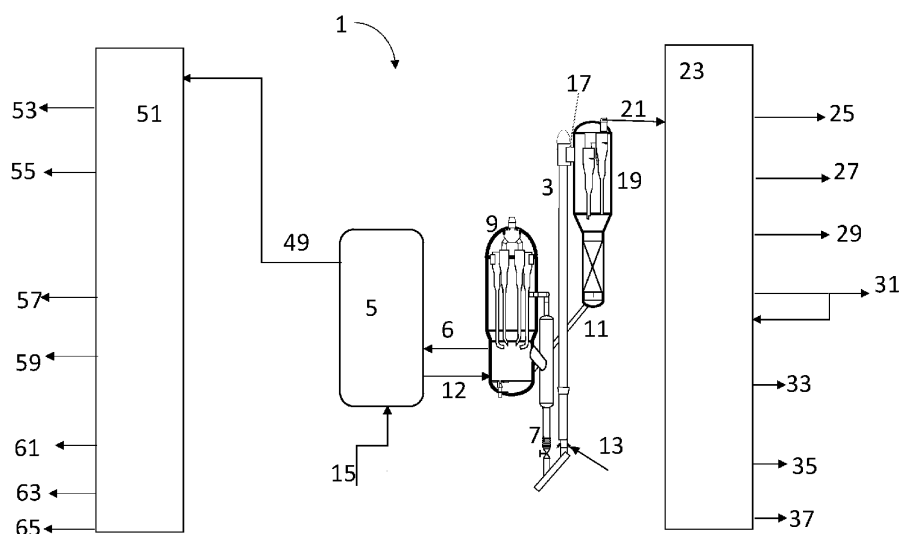


Figure 1

(57) Abstract: Processes and systems for producing raw materials and for producing truly circular polymers. The systems and processes may include processing a waste-derived hydrocarbon stream, such as a waste plastic pyrolysis oil, in a first reactor system with a catalyst mixture, and processing a fossil-based feedstock in a second reactor system with the catalyst mixture. The catalyst mixture may be supplied to each of the first and second reactor systems from a common catalyst regenerator. An effluent comprising fossil-based hydrocarbon products may be recovered from the second reactor system, and an effluent comprising waste-derived hydrocarbon products may be recovered from the first reactor system. Following separations, spent catalyst from each of the first and second reactor systems may be returned to the common catalyst regenerator.

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