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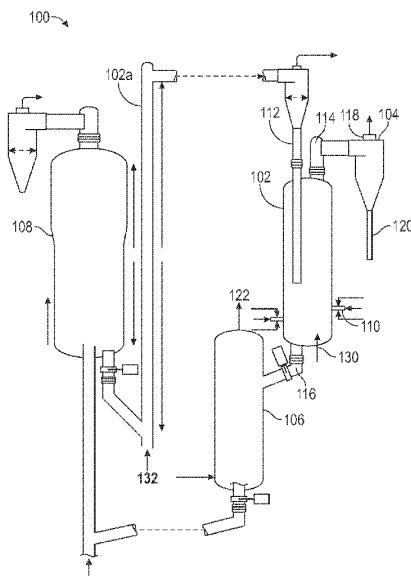


FIG. 1

(57) Abstract: The present disclosure relates to apparatus and processes for pyrolysis of feeds, such as plastic feeds. In at least one embodiment, a process includes introducing a plastic melt having a plastic component into a reactor via a nozzle coupled with the reactor. The process includes introducing a catalyst into the reactor via a first conduit coupling the reactor with a riser or regenerator. The process includes pyrolyzing the plastic component to form a pyrolysis product. The process includes removing the pyrolysis product from the reactor via a second conduit disposed at a top 1/2 height of the reactor. The process includes removing the catalyst from the reactor via a third conduit disposed at a bottom 1/2 height of the reactor.

WO 2023/279016 A1

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