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Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

[Continued on next page]

(54) Title: ZONE-DELINEATED PYROLYSIS APPARATUS FOR CONVERSION OF POLYMER WASTE

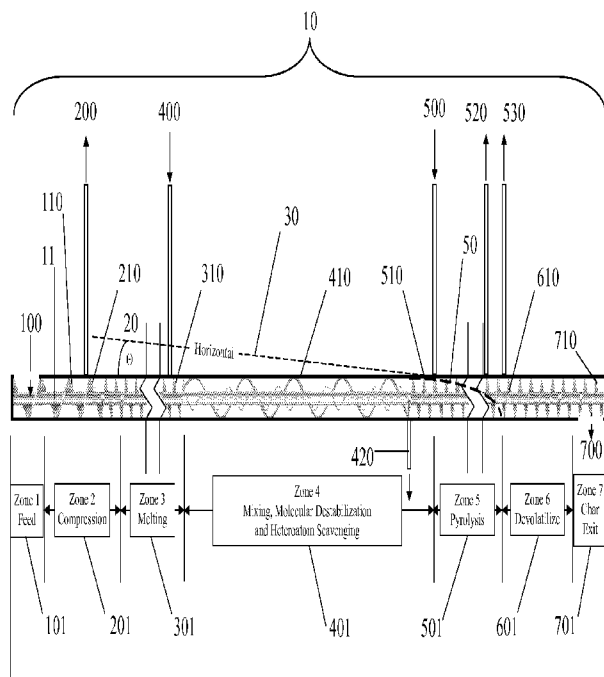


FIG. 1

(57) Abstract: Apparatus and method for pyrolyzing hydro carbonaceous materials to produce useful vapor and solid products comprising a generally cylindrical, linear reactor having a screw means for transporting hydro carbonaceous materials through said reactor, means for feeding and heating said hydro carbonaceous materials whereby they are processed and pyrolyzed to produce vapor and solid products; means for removing vapor products from said processed hydro carbonaceous materials, means for removing solid products, means whereby said hydrocarbonaceous material is maintained within a zone for a range of defined residence times, means for rotating said screw, which has a plurality of flight configurations for compressing, and for melting said hydro carbonaceous materials to convert them from a solid to a liquid, for mixing, destabilizing and dehalogenating said hydro carbonaceous materials, for pyrolyzing said hydro carbonaceous materials, for devolatilizing the pyrolyzed hydrocarbonaceous materials, and for discharging solid products.



— *of inventorship (Rule 4.17(iv))*

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