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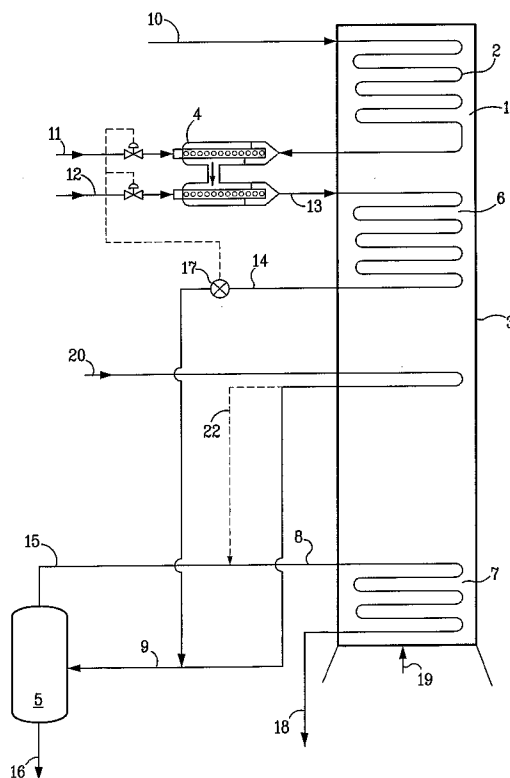
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(54) Title: VAPOR/LIQUID SEPARATION APPARATUS FOR USE IN CRACKING HYDROCARBON FEEDSTOCK CONTAINING RESID



(57) Abstract: A highly efficient vapor/liquid separation apparatus for treating a flow of vapor/liquid mixtures of hydrocarbons and steam comprises a substantially cylindrical vertical drum having an upper cap section, a middle section comprising a circular wall, a lower cap section, a tangential inlet to introduce hydrocarbon/steam mixtures, an overhead vapor outlet, and a bottom outlet for liquid. The vessel also comprises an annular structure located in the middle section comprising (i) an annular ceiling section extending from the circular wall and (ii) a concentric internal vertical side wall to which the ceiling section extends. The annular structure blocks upward passage of vapor/liquid mixtures along the circular wall beyond the ceiling section and surrounds an open core having sufficient cross-sectional area to permit vapor velocity low enough to avoid significant entrainment of liquid.



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