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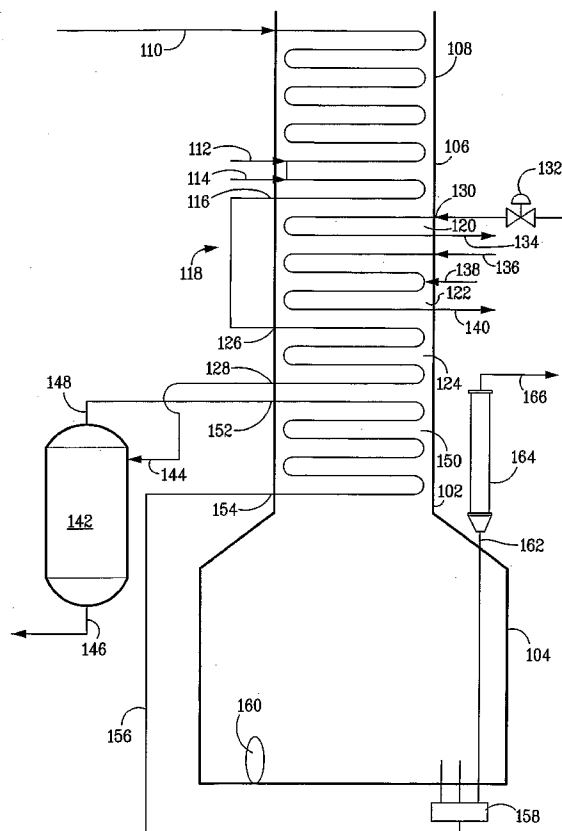
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[Continued on next page]

(54) Title: APPARATUS AND PROCESS FOR CONTROLLING TEMPERATURE OF HEATED FEED DIRECTED TO A FLASH DRUM WHOSE OVERHEAD PROVIDES FEED FOR CRACKING



(57) Abstract: An apparatus and process are provided for cracking hydrocarbonaceous feed, wherein the temperature of heated effluent directed to a vapor/liquid separator, e.g., flash drum, whose overhead is subsequently cracked, can be controlled within a range sufficient so the heated effluent is partially liquid, such as from about 260 to about 540°C (500 to 1000°F). This permits processing of a variety of feeds containing resid with greatly differing volatilities, e.g., atmospheric resid and crude at higher temperature and dirty liquid condensates, at lower temperatures. The temperature can be lowered as needed by (i) providing one or more additional downstream feed inlets to a convection section, (ii) increasing the ratio of water/steam mixture added to the hydrocarbonaceous feed, (iii) using a high pressure boiler feed water economizer to remove heat; (iv) heating high pressure steam to remove heat, (v) bypassing an intermediate portion of the convection section used, e.g., preheat rows of tube banks, and/or (vi) reducing excess oxygen content of the flue gas providing convection heat.



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