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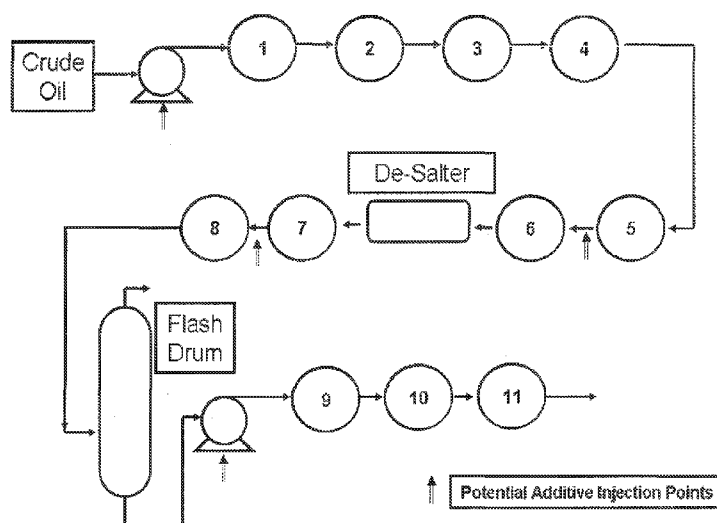
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[Continued on next page]

(54) Title: PROCESS USING POLYPROPYLENE OR POLY (ETHYLENE CO PROPYLENE) SUCCINIMIDE AS ANTI-FOULING ADDITIVE IN PETROLEUM REFINERY PROCESSES

FIGURE 1 -- Exemplary Additive Injection Points in Refinery Crude Pre-Heat Train



(57) Abstract: The present invention provides a method for reducing fouling, including particulate-induced fouling, in a hydrocarbon refining process including the steps of providing a crude hydrocarbon for a refining process; adding at least one polyalkyl succinic anhydride derivative additive disclosed herein. The additive can be complexed with a boronating agent, such as boric acid, to yield a boron-containing polyalkyl succinic anhydride derivative.



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