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(54) Title: APPARATUS AND PROCESS FOR SEPARATING COMPONENTS OF A MULTIPHASE HYDROCARBON STREAM

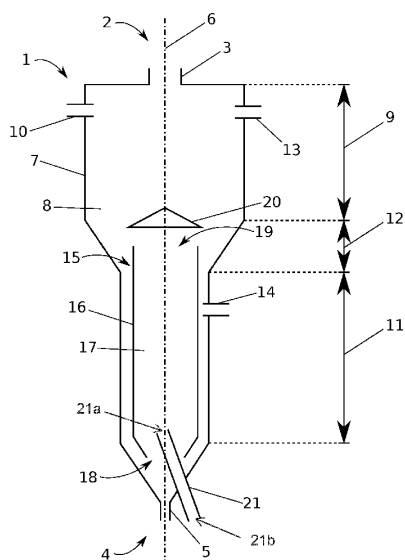


Fig.1

(57) Abstract: The invention relates to an apparatus and a process for separating components of a multiphase hydrocarbon stream (27), the apparatus comprising: - an outer vessel (1) having a top end (2) comprising a top outlet (3), a bottom end (4) comprising a bottom outlet (5), with a longitudinal axis (6) extending between the top end (2) and the bottom end (4) and an outer vessel body (7) disposed between the top end (2) and the bottom end (4) and having an outer vessel internal volume (8) in fluid communication with the top outlet (3) and the bottom outlet (5); wherein the outer vessel body (7) comprises: - a first section (9) comprising a tangential inlet (10) arranged to introduce the multiphase hydrocarbon stream (27) tangentially into the outer vessel internal volume (8) to create a vortex flow, and - a second section (11) arranged closer to the bottom end (4) than the first section (9), wherein the outer vessel internal volume (8) has a smaller cross-sectional circumference in the second section (11) than in the first section (9); an inner vessel (15) disposed within the outer vessel body (7), said inner vessel (15) comprising: - an inner vessel body (16) having an inner vessel internal volume (17), and - an inner bottom inlet (18) oriented toward the bottom end (4) of the outer vessel (1) and in fluid communication with the inner vessel internal volume (17) and with the outer vessel internal volume (8); and - a traversing conduit (21) in fluid communication with the inner vessel internal volume (17) and traversing the outer vessel body (7).

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