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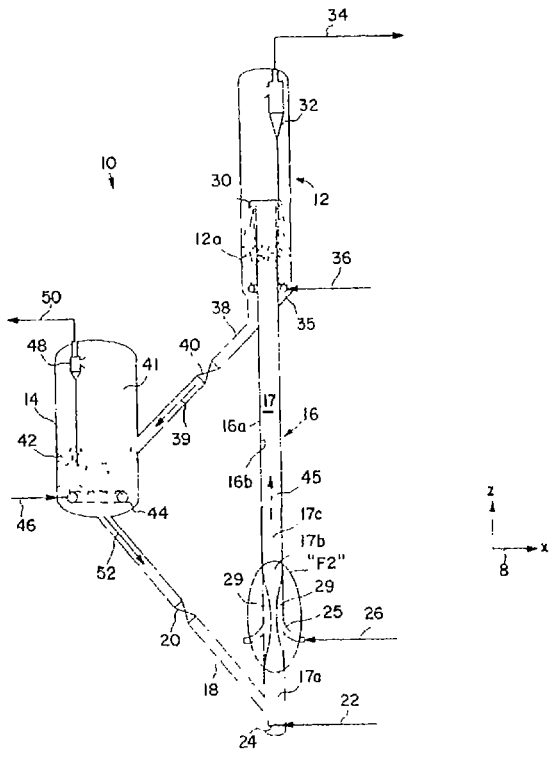
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(54) Title: IMPROVED SYSTEM FOR FLUIDIZED CATALYTIC CRACKING OF HYDROCARBON MOLECULES



(57) Abstract: A fluidized catalytic cracking system (10) includes a riser (16) for contacting catalyst and hydrocarbon feedstock. The riser (16) has an inner surface that defines a central passage (17). The central passage (17) acts as a flow path for the catalyst and the hydrocarbon feedstock. A plurality of ribs (29) are disposed on the riser inner surface. The ribs (29) increase the degree of mixing that occurs between the catalyst and the hydrocarbon feedstock within the central passage (17). In particular, each rib (29) has a contoured inner wall (29a). The contour of the inner wall (29a) forces a portion of the catalyst flow inward, toward the hydrocarbon-rich center of the central passage (17).

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