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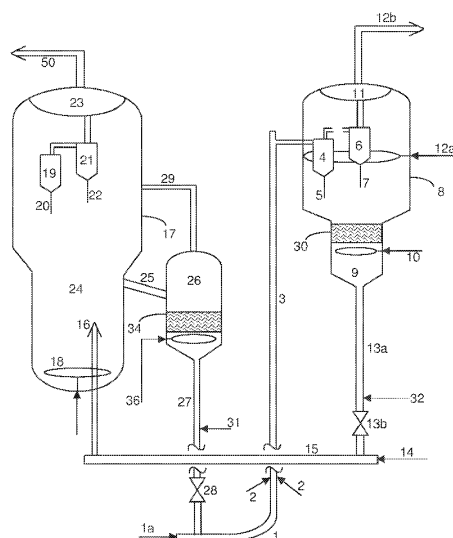
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(54) Title: METHOD AND APPARATUS FOR STRIPPING NOX, OXYGEN, CO, AND CO2 FROM FCC REGENERATED CATALYST FOR IMPROVING THE SAFETY AND RELIABILITY OF PRODUCT RECOVERY SECTION



(57) Abstract: Processes for cracking hydrocarbons include contacting hydrocarbon feedstocks with conditioned cracking catalyst in a riser reactor to recover an effluent. The effluent is separated to recover a cracked hydrocarbon stream and a spent catalyst. The spent catalyst is contacted with steam, stripping residual hydrocarbons from the spent catalyst, and the stripped catalyst is fed to a catalyst regenerator and regenerated via combustion of coke contained in the spent catalyst, forming a regenerated catalyst and combustion products. The regenerated catalyst, containing entrained combustion products (e.g., NO_x, SO_x, and CO_x) including nitrogen from the regenerator, is fed to a catalyst standpipe hopper. The regenerated catalyst containing entrained combustion products is conditioned in the catalyst standpipe hopper by contacting the regenerated catalyst with steam to recover the conditioned catalyst and a vapor stream comprising steam and the combustion products. The conditioned catalyst, depleted of combustion products, is then fed to the riser reactor.

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