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(54) Title: METHOD AND SYSTEM FOR MANUFACTURING CUMENE HYDROPEROXIDE

(57) **Abstract:** A method for manufacturing cumene hydroperoxide comprises reacting cumene and oxygen in the presence of a water phase comprising aqueous ammonia, and in the absence of an additive comprising an alkali or alkaline earth metal, to form cumene hydroperoxide. A system for producing cumene hydroperoxide comprises a cumene feed (10) in fluid communication with a reactor (30, 32, 34, 36, 38, 40) having a cumene hydroperoxide oxidate outlet; an oxygen feed (42) in fluid communication with the reactor (30, 32, 34, 36, 38, 40); and an ammonia feed (26) in fluid communication with the cumene feed (10) and/or the reactor (30, 32, 34, 36, 38, 40), wherein the cumene feed (10), the oxygen feed (42), the ammonia feed (26), and the reactor (30, 32, 34, 36, 38, 40) are free of an additive comprising an alkali or alkaline earth metal.



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