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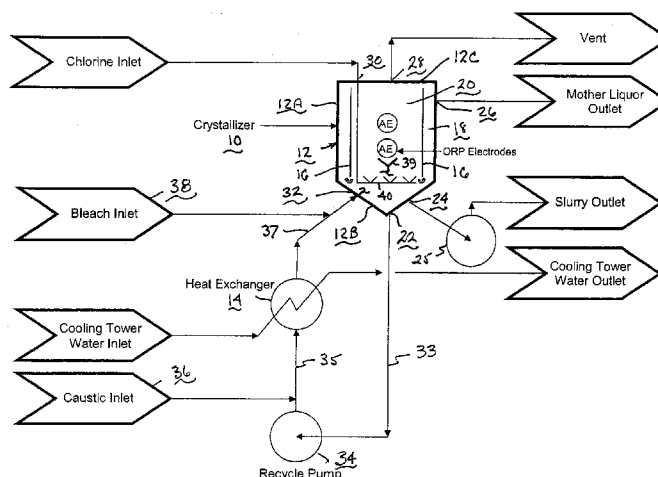
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(54) Title: MANUFACTURE OF HIGH-STRENGTH, LOW-SALT HYPOCHLORITE BLEACH

LOW SALT BLEACH PROCESS DIAGRAM



(57) Abstract: A process and apparatus for the manufacture of high-strength, low-salt hypochlorite, especially sodium hypochlorite. An aqueous solution that comprises certain weight percentages of sodium hypochlorite and sodium hydroxide and that is essentially free of sodium chloride (salt) crystals (38), an aqueous solution that comprises a certain percentage of sodium hydroxide (36), and chlorine in gas and/or liquid phase (30) that may or may not include inerts are reacted in a tank (10). This creates a solution having a precipitation zone (20) where salt crystals are precipitating out of solution and falling downward to form a slurry, some of which is withdrawn (33), then cooled, and then re-introduced into the precipitation zone. Above the precipitation zone is a crystal-free mother liquor zone consisting essentially of crystal-free mother liquor (26) containing a weight percentage of sodium hypochlorite greater than that of the lower strength aqueous sodium hypochlorite bleach being reacted.



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