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(54) Title: PRODUCTION OF HIGH PURITY ALUMINA AND/OR SMELTER-GRADE ALUMINA

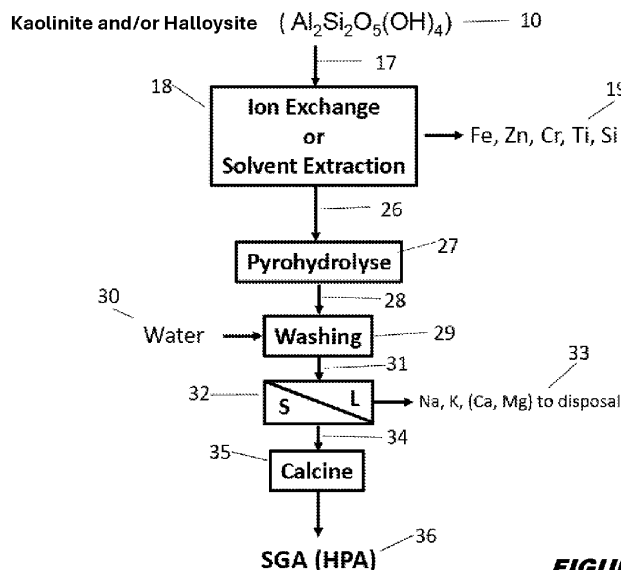


FIGURE 1

(57) Abstract: A method is described for the recovery of high-grade alumina products (HPA and/or SGA) from an aluminous material feedstock, such as from kaolinite or halloysite. The process comprises leaching the calcined material in recycled 18 % hydrochloric acid, removal of anionic impurities such as iron and zinc via ion exchange, a novel removal step for magnesium and calcium, pyrohydrolysing the resultant solution, and washing followed by calcining of the crude alumina solids. Optionally, a final purification step is introduced via caustic leaching of the washed solids, followed by hydrolysis to gibbsite.

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