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With amended claims.

(54) Title: CONTINUOUS NON-POLLUTING LIQUID PHASE TITANIUM DIOXIDE PROCESS

(57) Abstract

A process and apparatus for producing titanium dioxide from titanium ore or slag is disclosed. The ore or slag (2) is reacted with sulfuric acid (3) in a reactor (1) in which hot gas for agitation (4) is used. Makeup acid from line (6) is fed to line (3). Together with recovered acid from the spray evaporator (34) reacted product overflows from the reactor to rotary filter (8). The filter cake is washed in the rotary filter whose water comes in through line (14). The washed filter cake is delivered to dissolving tank (10). Concentrated acid together with wash water is returned to the reactor through line (3). Filtrate is hydrolyzed in hydrolysis tank (21) to form titanium dioxide hydrate which is then calcined in a fluid bed calciner (30) to form titanium dioxide.

