Title (en)

METHOD FOR PRODUCING TITANIUM DIOXIDE ACCORDING TO THE SULFATE PROCESS

Title (de)

VERFAHREN ZUR HERSTELLUNG VON TITANDIOXID NACH DEM SULFATVERFAHREN

Title (fr)

PROCEDE DE PRODUCTION DE DIOXYDE DE TITANE SELON LE PROCEDE AU SULFATE

Publication

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Application

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Abstract (en)

[origin: WO2005121026A1] The invention relates to a method for producing titanium dioxide according to the sulfate process during which a titanium-containing starting material is mixed with sulfuric acid to form a reaction mixture, and this reaction mixture, in a first decomposition step, is transformed into a solid reaction mass by adding at least one other reactant whereby forming a decomposition mixture. This solid reaction mass, after passing through a ripening phase, which is referred to as the second decomposition step, and into a third decomposition step, optionally with the subsequent separation away of solids, is processed into a solution, the so-called black solution, from which titanium dioxide is then obtained in additional method steps. In at least one of the three processing steps, a gassing medium, particularly an oxygen-containing and/or nitrogen-containing gas or gas mixture, is introduced into the respective mixture, mass or solution. The aim of the invention is to provide a solution that, with a titanium starting material provided in the form of titanium slag or a mixture containing titanium slag, makes it possible to obtain a black solution having a increased proportion/content of trivalent titanium (Ti<3+>). To this end, the invention provides that, in the first and/or second and/or third decomposition step, an inert gas or an inert gas mixture or a gas or a gas mixture having a lower oxidation potential than air, particularly an oxygen-containing and/or nitrogen-containing gas or gas mixture is, in the form of a gassing medium, introduced, preferably blown into the respective mixture, mass or solution. This gassing medium has a, in comparison to air, lower content of oxygen, particularly an oxygen content of less than 22 % by weight, preferably less than 17 % by weight.

IPC 8 full level

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