

Title (en)

IMPROVED SYNTHETIC RUTILE PROCESS A

Title (de)

VERBESSERTES VERFAHREN A FÜR SYNTHETISCHES RUTIL

Title (fr)

PROCÉDÉ A PERFECTIONNÉ POUR LA PRODUCTION DE RUTILE SYNTHÉTIQUE

Publication

EP 2556026 A1 20130213 (EN)

Application

EP 11764945 A 20110406

Priority

- AU 2010901439 A 20100406
- AU 2011000390 W 20110406

Abstract (en)

[origin: WO2011123888A1] A process for recovering titanium as synthetic rutile from an ilmenite unsuited to the standard Becher process includes the steps of treating the ilmenite unsuited to the standard Becher process in a reducing atmosphere in the presence of a carbonaceous reductant whereby to convert the ilmenite to reduced ilmenite in which iron oxides in the ilmenite have been reduced to metallic iron, and separating out the metallic iron so as to obtain a synthetic rutile product. The treatment of the ilmenite is at an elevated temperature lower than that for which the TiO₂ content of the synthetic rutile product is highest but at which there is substantially no reoxidation of the metallic iron. The carbonaceous reductant comprises coal selected for a gasification reactivity that results in an increased rate of reduction of iron oxides and titanium species effective to at least partly offset the lowered TiO₂ content of the synthetic rutile product resulting from the lower elevated temperature, and to achieve a TiO₂ content of 90% or greater in the synthetic rutile product.

IPC 8 full level

C01G 23/047 (2006.01)

CPC (source: EP US)

C01G 23/047 (2013.01 - EP US); **C22B 5/10** (2013.01 - EP US); **C22B 34/1209** (2013.01 - EP US)

Citation (search report)

See references of WO 2011123888A1

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