

62) Chemical Engineering TransactionsОткрытый доступ

Volume 76, 2019, Pages 151-156

Synthesis of block ceramic catalyst carriers based on natural raw materials and metallurgical slags(Article)

Utegenova, M.E.a, Sadenova, M.A.a, Klemeš, J.J.b View Correspondence (jump link)

aPriority Department Centre «Veritas», D. Serikbayev East Kazakhstan State Technical University, 19, Serikbayev str., Ust-Kamenogorsk, 070000, Kazakhstan

bSustainable Process Integration Laboratory – SPIL, NETME Centre, Faculty of Mechanical Engineering, Brno, University of Technology - VUT Brno, Technická 2896/2, Brno, 616 00, Czech Republic

Краткое описание Просмотр пристатейных ссылок (11)

For ecological catalysis, including the purification of exhaust gases, the most promising are block catalysts. The synthesis of ceramic block catalyst carrier was carried out based on classical methods of powder metallurgy, in which moulding compounds were prepared from the starting materials in the form of powders, which were then extruded with thermal training at each stage. It is proposed to use ceramic block carriers synthesized from a mixture of natural Kazakhstan aluminosilicates and metallurgical slag of lead and copper production for environmental catalysis. The obtained results prove the possibility of extruding new materials for use as ceramic carriers for catalysts from a mixture of natural Kazakhstan's aluminosilicates and metallurgical slag of lead and copper production without additional preliminary chemical treatments. In works of other authors haven't found such combinations of components for the manufacture of catalysts. Copyright © 2019, AIDIC Servizi S.r.l.