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Development of alumina washcoating technology upon the surface of monolith non-porous support

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Abstract

The covering of alumina layer upon the nonporous monolith support is discussed. The task is complicated by the external diffusion of deposited components inside the monolith support and by the low reactivity of the primary carrier surface. The technology base is the bayerite precipitation from supersaturated solutions of sodium aluminate upon the surface of the monolith support. Aluminum hydroxide precipitation upon the heterogeneous support from supersaturated sodium aluminate solution is selective and no precipitate in the solution is observed. Consumable components are the aluminum metal and water. The coatings have high uniformity and activity.