NONPLATINUM CATALYSTS FOR THE SECOND STAGE OF AMMONIA OXIDATION IN PRODUCTION OF DILUTE NITRIC ACID

Description
Blocked oxide catalysts of the IK-42-1 type were designed jointly with the GIAP Company and Moscow State University (Moscow) to replace part of platinum gauzes in ammonia oxidation reactors used in the production of dilute nitric acid. The catalysts do not require special cages and a special reactor design and provide for a uniform distribution of the gas stream in the reactor and the absence of ammonia break.

Technical Specifications

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<tbody>
<tr>
<td>Length of base sides of blocks [mm]</td>
<td>70 - 80</td>
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<tr>
<td>Height of blocks [mm]</td>
<td>45 - 55</td>
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<tr>
<td>Channel wall thickness [mm]</td>
<td>1.8 – 2.2; 1.4 – 1.8</td>
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Blocked catalysts for ammonia oxidation

Technical appraisal and economic benefits
• A 30 - 40% decrease in precious metal load;
• a 25% decrease in platinum losses;
• increased operation time of the gauzes without a decrease in the degree of conversion.

Application areas
For production of dilute nitric acid in UKL-7 and AK-72 apparatuses.

Development stage
Since 1996, the catalyst has been loaded at 17 plants in Russia.

Patent situation
The development was patented in the Russian Federation (1997 and 1998).
An international patent application was published (1998).

Commercial offers
Catalyst supply. The time of delivery is one month from the moment of contract signing.
Technical support for using IK-42-1 catalysts
Estimated cost
To be negotiated

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