CMZ MICROSPHEROIDAL CRACKING CATALYSTS

Description
The Omsk Branch of the Institute of Catalysis, together with the Sibnift’-Omskii NPZ Joint-Stock Company, designed silica-alumina zeolite-containing cracking catalysts of the CMZ series, produced as CMZ-96 (CMZ-99), and CMZ-97 grades. The variety of grades allows one to choose a catalyst for specific process conditions, including feedstock quality, cracking plant design, and customer’s requirements for the final products. The catalysts are characterized by a narrow particle size distribution (the content of the fraction with a particle size of <0.100 mm amounts to 80% and the fraction with a particle size of <0.040 mm amounts to not more than 18%) and high durability.

Technical appraisal and economic benefits
- gasoline yield with an octane number of 81 (by the motor method) of up to 56%;
- light gas-oil yield of up to 15-16%;
- reduced production cost due to high catalyst activity and selectivity.

Application areas
The catalysts are used in refining various types of oilstock with allowance for the cracking plant design and customer’s requirements for the final products. CMZ-96 (CMZ-99) is used in refining heavy vacuum gas-oil with a dry point of 540-580 °C and a maximum gasoline yield (43/107 type plants and the 200 section of the KT-1/1 complex). CMZ-97 grade is used in refining mixed raw materials, including secondary products, to obtain a maximum yield of refined oils (43-107, 1A/1M, and GK-3 type plants).

Development stage
Commercial production was launched at the Sibnift’-Omskii NPZ. The catalysts have been successfully operated at oil refining plants in Russia.
**Patent situation**
A patent was granted in the Russian Federation (1998).

**Commercial offers**
Sale of catalyst production licenses.
Catalyst supply.

**Estimated cost**
Price is to be negotiated.

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