STRUCTURE, PROPERTY AND TECHNOLOGY OF RECEPTION
ELECTROTECHNICAL PORCELAIN WITH HIGH
DIELECTRIC PROPERTIES

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On the basis of enriched kaolin and other raw components of Uzbekistan the structure of electrotechnical porcelain with high dielectric parameters is developed. On the basis of mineral raw materials and wastes of an industry burnt at various temperatures we carried out petrography and rentgenography research of skilled samples from the developed structures of compositions of electrotechnical porcelain. Rentgenography and petrography research of process of a phase organization at burning is established, that the researched sample consists from mullit, cristobollit, quartz and glassy phases. Quantity and parity of these phases in turn define basic physical -technical and dielectric properties of electrotechnical porcelain.

The interrelation between phase structure and properties of skilled samples is established. It is established physical -technical and dielectric properties developed of electroceramic porcelain meet the requirements the standard and even are much more overestimated. The material has high mechanical durability at a bend = 106,2 MPa, electrical durability = 30 kv/mm, specific volumetric electrical resistance = 8,2 . 10^{13} ohm\,cm. The technology of reception of the developed electrotechnical porcelain is characterized by the mass is grown up to the rest on a sieve № 006 - 0,5 %, duration of pounding is 12 hours, moulding humidity = 19%. Temperature of burning is reduced up to 1300 °C. at the expense of addition in structure of charge of easy melting component in quantity - 4%. The mode of burning developed of mass is established.

The received electrotechnical porcelain on the basis of local raw material has high dielectric rigidity and on the ceramic-technological properties answers by the requirement of the standard. Developed the material can be recommended as high-voltage electroisolator on lines of high-voltage electrotransfers.