ABSTRACT

Research work contains: 83 pages, 16 drawings, 8 tables, 58 sources of literature.

Purpose: identify the effect of temperature on the rheological properties and viscosity pastes in the form nanocomposites with the composition of 10 wt. % $BaTiO_3$, 3 wt. % EC and 87 wt. % terpineol solvent.

Research methods: determining of structural and mechanical properties was performed by obtaining rheological curves of paste flow at temperatures of 5 to 45 ° C in increments of 5 ° C.

Subject of research: identify the effect of temperature on the viscosity and rheology paste based on nanopowder $BaTiO_3$.

The Object of research: pastes for screen printing method based on $BaTiO_3$ nanopowders,

Scientific novelty: the influence of temperature on the rheological properties of the paste used for screen printing was found. Also found that in the interval of temperatures from 35 to 45 ° C rheopecty phenomenon appears, i.e the destruction of the structure is slower than its recovery. Analyzed the processes which occur in the structure. The appearance of rheopexy is explained.

Practical meaning: the obtained scientific and practical research results are important contribution to improvement of storage technology and implementation of screen printing pastes based on nanopowder $BaTiO_3$.

Key words: NANOPOWDERS, DIELECTRIC PASTES, RHEOLOGICAL PROPERTIES, THIXOTROPY, RHEOPEXY.