

FLEXIBLE HEAT TEMPERATURE INSULATION FOR NUCLEAR POWER

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The offered paper bases on long-term authors' experience on creation of thin heat-temperature electric insulating glass-ceramic coatings by means of a sol-gel method. The features of sol-gel systems based on tetraethoxysilane (TEOS) used for formation of coatings on metals and alloys are considered. Two variants of coatings preparation which are developed to increase their flexibility without deterioration of electrical parameters are described. The physical and chemical processes during high-temperature treatment are analyzed. The results of the tests of electro-physical parameters of the coatings and the perspective of their use for flexible heat temperature electric insulation of wires are discussed, including needs of nuclear power.