Brief information about the project

Title	AP22686318 «Development of rubber compounds formulations based on synthetic rubbers with the addition of waste from Kazakhstan's MMC».
Relevance	The idea of the project is to develop rubber compounds using domestic carbon-mineral raw materials – shungite (Bakyrchik deposit, Abai region) as a filler for the production of rubber products (RP) with high resistance in aggressive environments, increased impact resistance and wear resistance. The introduction of shungite, the proportion of which in the formulation of rubber compounds is up to 40 wt.% allows for more efficient processing of rubber compounds, reduces import dependence and the cost of manufactured products.
Goal	Effective use of MMC waste – shungite in the development of new formulations of rubber compounds with specified physical and mechanical properties
Tasks	1) sample preparation and production of shungite materials from the ores of the Bakyrchik deposit; 2) optimization of the technology for producing rubber compounds using shungite materials; 3) determination of the basic physical and mechanical parameters of rubber compounds on standard samples; 4) determination of radio-shielding properties of rubber compounds using shungite materials; 5) development of a basic technological scheme for the production of rubber compounds using shungite materials.
Expected and Achieved Results	• new formulations of rubber compounds using shungite materials will be developed and obtained; • existing formulations of rubber compounds will be optimized; • standard test samples will be received; • the physical and mechanical characteristics of the obtained standard samples will be studied according to GOST-methods; • pilot-industrial tests will be conducted on the basis of the partner company of the Project; • a basic technological scheme for the production of rubber compounds using shungite materials will be developed.
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