

CLADDING TILE PRODUCTION USING MAGNESIUM OXYCHLORIDE CEMENT MORTAR IMPROVED BY DIFFERENT WASTES

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Abstract

The purpose. Obtaining magnesium binder and production of composite materials using binders based on production waste.

Methods. The first stage is the production of reinforced cement; The second stage is the production of external facade materials using manufactured cement and additional components; The third stage is the production of coating materials and the study of their properties [1-5].

Results. The dispersion of the binder materials and, accordingly, the reactivity of the binder on the surface area of the grains increases, and at the same time the strength properties, especially the mechanical strength, are improved [6-7]. The $MgCO_3$ used to form the solid coating is first heated at different temperatures for different times and then reacts with some MgO hydrochloric acid to form $MgCl_2$. Crushed glass (glass waste) and foundry sand (waste sand) of the metallurgical industry are used as fillers with cement paste as filler components based on silicate materials [8-9].

Summary. Cement mix (magnesium oxychloride) bulk waste, desert sand, glass waste, activated carbon, basalt fiber, polypropylene fiber, and polyethylene terephthalate waste, low density polyethylene (waste) improved with various additional materials [11]. Includes laboratory research and development of new coating material. The topic of improving cement and its properties with various additives is new, it opens up new opportunities, and the main part of the topic includes chemistry, material science and civil engineering [10].

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INTRODUCTION

It is the production of environmentally friendly coating materials using cement-related waste. In this field, there are several production methods for the production of coating materials, such as ceramic production, cement and aggregated pple, natural stone production, polymer tile materials, etc. However, most of these production methods are high-energy and resource-intensive processes for their implementation [13]. Therefore, in order to reduce the use of scarce resources, it is necessary to develop

new production methods using different types of waste. It is known that raw materials based on coal, aluminum oxide, silicon oxide and calcium are baked at a temperature of approximately 1600°C in the production of cement [12]. Thus, cement and binders emit a large amount of anthropogenic CO₂ into the atmosphere. Similarly, the production of ceramic wall tiles requires high temperatures and energy around 1250°C. Other coating materials, such as natural stones and polymers, have limited properties [14]. All coating materials have sufficient abrasion resistance and limited resistance to high temperatures. Cement is a special cement that can be used in the defense industry, with abrasion resistance, high initial strength and high heat resistance. At the same time, cement can be used as a binder in the production of tiles, so alternative tiles can be produced with a lower heating process [15].

Results. Activated carbon is used for coating tiles and its effect on mechanical and strength properties of cement binders is studied.

The influence of glass quartz casting waste sands, low density polyethylene cement binders on the mechanical and strength properties is studied. The effect of basalt fiber waste, red desert sand, and polyethylene terephthalate waste on the mechanical and strength properties of cement binders is studied.

cement facade tiles are produced with an optimized mixture.

Discussions. On the other hand, it has been shown several times by researchers that it is necessary to seriously clean the rotating additives from the small particles separated. The product their presence in the conditions of abrasive tools, especially fine-grained tools very dangerous in terms of settling down [12]. If the large sludge discharge filter and if it can be done with the help of centrifugation devices, small, removal of non-ferromagnetic slurries using this method is ineffective.

Summaries. Before it goes into production, there will be big changes in many areas. It is unrealistic to make such calculations in advance. We are sure that the need for it will be fully satisfied by the production of products using this technology. Currently, it is not possible to reflect the needs in numbers, because it may remain an unconfirmed dry number.

REFERENCES

1. Khakimovich R. A., Dusmuratovich N. S., Jalilov R. R. DEVELOPMENT OF THERMAL TREATMENT WITH DOUBLE-PHASE RECRYSTALLIZATION OF THE COMPOSITE OF HIGH-CUTTING STEEL P6M5 WITH CONSTRUCTION STEEL 35ГЛІ //CENTRAL ASIAN JOURNAL OF THEORETICAL & APPLIED SCIENCES. – 2021. – Т. 2. №. 5. – С. 101-107
2. Жалилов Р. Р. Ў., Абдуғаниева Х. Р. Қ. ИССЛЕДОВАНИЕ МОРФОЛОГИИ И РАЗМЕРОВ УЛЬТРАДИСПЕРСНЫХ ПОРОШКОВ ВОЛЬФРАМА КРИСТАЛЛООПТИЧЕСКИМИ МЕТОДАМИ //Academic research in educational sciences. – 2021. – Т. 2. – №. 11. – С. 633- 640.
3. Tojiboyev, B. M., Muhiddinov, N. Z., Karimov, R. I., & Jalilov, R. R. O. G. L. (2021). IKKILAMCHI TERMOPLAST POLIMERLAR ASOSIDA QURILISH SANOATI UCHUN POLIMERKERAMIK KOMPOZITSION MATERIALLARNI OLISH JARAYONINI TAKOMILLASHTIRISH. *Oriental renaissance: Innovative, educational, natural and social sciences*, 1(9), 386-392.
4. Mamirov A.M, THERMOELECTRIC, RESISTANCE, PHOTO ELECTRIC DETECTORS AND ANALYSIS OF SPECTRAL CHARACTERISTICS OF MATERIALS IN THEM //Web of Scientist: International Scientific Research Journal. – 2021. – Т. 2. – №. 12. – С. 172-180.
5. Mamirov A.M, Anvar o'g'li K. S. Production of micro-and nanoscale silicon granules using powder technology //Texas Journal of Multidisciplinary Studies. – 2022. – Т. 5. – С. 175-179.
6. Mamirov A.M, Umidjon Turg'unboy o'gli X. Determine the amount of heat accumulated at the focal point of the solar oven //Texas Journal of Multidisciplinary Studies. – 2022. – Т. 5. – С. 161-

164.

7. Umarova M. N., To'ychiev A. T. STRUCTURAL CLASSIFICATION AND ANALYSIS OF CORROSION OF METALS //Theoretical & Applied Science. – 2020. – №. 12. – С. 330-334.
8. Atakhanova S. K. et al. IMPROVING THE WEAR RESISTANCE OF MINING EXCAVATOR //Web of Scientist: International Scientific Research Journal. – 2021. – Т. 2. – №. 05. – С. 417- 421.
9. Жалилов, Рахимжон, Охунжонов Анваржон, and Рустамжон Каримов. "МЕХАНИК ИШЛОВ БЕРИШ ЖАРАЁНЛАРИГА МСТВ (МОЙЛАШ-СОВУТИШ ТЕХНОЛОГИК ВОСИТАСИ) НИНГ УМУМИЙ ТАЪСИР КЎРСАТИШ ХУСУСИЯТЛАРИ." *Involta Scientific Journal* 2.4 (2023): 78-85.
10. Alijanov D.D., Topvoldiyev N.A. (2021). SOLAR TRACKER SYSTEM USING ARDUINO. *Theoretical & Applied Science*, 249-253.
11. Alijanov D.D., Topvoldiyev N.A. (2022). PHYSICAL AND TECHNICAL FUNDAMENTALS OF PHOTOELECTRIC SOLAR PANELS ENERGY. *Theoretical & Applied Science*, 501-505.
12. Topvoldiyev N.A, Komilov M.M. (2022). DETERMINING THE TIME DEPENDENCE OF THE CURRENT POWER AND STRENGTH OF SOLAR PANELS BASED ON THE EDIBON SCADA DEVICE. *Web of Scientist: International Scientific Research Journal*, 1902-1906.
13. Topvoldiyev N.A., Komilov M.M. (2022). Stirling's Engine. *Texas Journal of Multidisciplinary Studies*, 95-97.
14. Abdulhamid o'g'li, T. N., Maribjon o'g'li, H. M., & Baxodirjon o'g'li, H. I. (2022). BIPOLYAR TRANZISTORLAR. *E Conference Zone*, 150–152.
15. Topvoldiyev Nodirbek Abdulhamid o'g'li. (2023). PROSPECTS OF AUTOMATED SYSTEMS OF MONITORING AND METERING OF ELECTRICITY IN UZBEKISTAN. *Journal of Integrated Education and Research*, 2(3), 43–48. Retrieved from <https://ojs.rmasav.com/index.php/ojs/article/view/884>