POTASSIUM CHLORIDE PRODUCTION PROCESS FROM SILVINITE ORE

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ANNOTATSIYA

Bugungi kunda ko’plab rivojlangan va jahon iqtisodiyotida yetakchi o’rin tutadigan mamlakatlar tajribasi shuni so’zsiz isbotlab bermoqdaki, raqobatdoshlikka erishish va dunyo bozorlariga chiqish, birinchi navbatda, iqtisodiyotni izchil islox etish, tarkibiy jihatdan o’zgartirish va diversifikatsiya qilishni chuqurlashtirish, yuqori texnologiyalarga asoslangan yangi korxona va ishlab chiqarish tarmoqlarining jadal rivojlanishini ta’minlash, faoliyat ko’rsatayotgan quvvatlarni modernizatsiya qilish va texnik yangilash jarayonlarini tezlashtirish hisobidan amalga oshirilishi mumkin.

Kalit so‘zlar: *Silvinit, shlam chiqindisiz, mineral o‘g‘it, flotatsiya, Galurgik usul, NaCl birikmasi, Dehqonobod kaliy zavodi silvinit rudasi.*

ABSTRACT

Nowadays, many people who occupy the place of the market in the world economy and production prove this without words, that to reach the health and the world, first of all, the production reform of the economy, production support, training and diversification, to high technology. it is possible to ensure rapid production of effective new production and production processes, modernization of operating capacities and acceleration of technical renewal processes.

Key words: *Sylvinite, without sludge waste, mineral fertilizer, flotation, Galurgic method, NaCl compound, sylvinite ore of Dehkhanabad potash plant.*

INTRODUCTION.

It is known that while the potassium fertilizer processing complex is being built near the Dehkhanabad railway station, the construction of the underground and surface facilities of the mining complex was completed 46 kilometers away from it - directly at the Tyubegatan mine. Among them, the most important and rare ones - the inclined lahms dug underground have already reached the sylvinite layer, and this event is recognized as a great achievement by experts of the world chemical industry. In recent years, the separation of KCl from sylvinite by the flotation method has become widespread. Also, gravity (a method of separating KCl and NaCl using the difference in density), electrostatic separation (a method based on the separation of oppositely charged particles in an electric field) are promising methods. Chlorine-free potassium fertilizer, for example, K2SO4, is obtained in Ukraine mainly from chloride-sulfate potassium minerals in the Prikarpatsky mine (reserves of 2.5 billion t.), by gallurgy and flotation methods [1]. Currently, the Dehqonabad potash plant in Uzbekistan separates the potassium chloride compound by flotation processing of sylvinite ore. The flotation method cannot obtain a high-quality concentrate with a KCl content of 95-96% from low-grade potash ores. In addition, thin sylvinite fractions do not give effective results. The most effective way to improve the quality of potassium fertilizers is to remove the 0.2 mm class from the flotation feed and send it to gallurgic processing. The use of the galurgical beneficiation method allows to significantly increase the efficiency of processing of low-grade potash ores in most cases. [1].

DISCUSSION.

Potassium chloride is approved for use in all types of soil. It dissolves well in the soil solution. The main entrance is in the autumn period. The initial planting in May and during the growing season, between June and August, is best done as dressing. Application should be made after heavy watering or rain. A filter is a device that separates liquids, gases, or solids by passing them through a porous barrier. Inorganic substances have different structures in production technology floats are used. These include drum, disk, belt and carousel vacuum filters, leaf, frame filter presses and

MMAKM type automatic filters, notch filters. Such a variety of the structure of filters is connected with the difference between the properties of suspensions and the purpose of the swimming process. One of the main elements of filters is the filter barrier. The efficiency of the filters, the purity of the filtered liquid (filtrate), the service life of the barriers and the economy of the filtering process largely depend on the choice of filter barriers. Basically, they should meet the following requirements: - resistant to environmental influences; — sufficiently mechanically robust; — heat resistant; — good retention of solid particles; - should have low hydraulic resistance to sedimentation and low adhesion. Usually, different fabrics are used as filter barriers.

RESULTS.

Drum dryers: 1) direct heat exchanger, i.e. direct collision of the product being dried and hot gas (product and gas in one direction and in the opposite direction). 2) indirect heat exchanger, i.e. heat is supplied to the product to be dried through a metal wall (fence) for dryers. The first type of dryers are used to dry concentrate and mineral raw materials. The second type of dryers are used to prevent environmental pollution and to change the color of the product being dried. The direct hot exchange drum dryer consists of a rotating drum installed at an angle of 1-5 (toward the direction of product discharge), the drum consists of two bandages (belts) and a toothed ring of the transmission.

CONCLUSION.

Any new technological process is first tested in laboratories and test facilities before being applied to industrial enterprises. It is determined that the process inspected in these devices is technically perfect and socially economical. In accordance with the conditions of uniformity of the processes, the shape and dimensions of the device, the conditions of conducting the process, the critical constants of the substances involved in it, the output of the product, the ratio of raw materials and energy cost and other issues will be resolved. Comparison of the obtained results for that they are tested in the studied industrial devices. For the design of new devices, the laws of calculation equations and uniformity conditions obtained from laboratory and experimental

conditions are of great importance. Various heat exchangers are used in industry. In this course work, we will use the "abstract hot bed" type of dryer construction. Dryer devices differ from each other in different characteristics. From the science of chemical production processes and devices, process types are studied, namely, mechanical, hydromechanical, drying, heating of the product in the process of mass exchange, the principle of operation of dryer devices during drying, the disadvantages and advantages, and the use in production areas. I studied and analyzed the heat, material balances, hydraulic, and mechanical calculations of the construction of the plant. At the same time, the heat load of the pipe, the temperature surface for the heat load between the temperatures, the flow of heat in the pipes, the volume consumption of the auxiliary equipment pump and the stability calculation of the device were studied.

REFERENCES

1. Файзуллаев О. Аналитик кимё асослари. Тошкент, А.кодирий нашриёти. 2003.
2. Миркомилова М.С., Аналитик кимё, Тошкент, “Ўзбекистон”, 2003.
3. Алексеев В.Н. Количественный анализ: Учебн. М.: Химия, 1972.
4. Васильев В.П. Аналитик кимё. 1-кисм. Тошкент, Узбекистон. 1999.
5. Бобоев Н.Б., Турабов Н.Т., Ибраимов Ч.И. Титриметрик анализ методлари. Методик қўлланма. Тошкент. Университет. 1994.
6. Толипов Ш.Т., Хусаинов Х. Аналитик кимёдан масалалар туплами. Тошкент. Ўқитувчи, 1983.