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OBTAINING A NEW TYPE OF COMPLEX-ACTING DEFOLIANTS BASED ON CALCIUM CHLORIDE, SODIUM HYPOCHLORIDE AND SFMS

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Annotation: In this article, the soda plant uses a chlorinated mixture of distiller waste the process of obtaining two aqueous calcium chlorates by conversion with sodium chlorate returns cyclically,"P100-1"-"R100(P20)"-"R20(R110, P20-1)"-" M20 " according to the scheme it has been shown to be feasible.

Keywords: cotton, defoliation, distiller liquid, chlorination, conversion, Eneke index, chlorates.

Introduction

Currently, our country is also deeply structural in agriculture changes are being made. Despite the complex weather conditions, this year 2020 due to the selfless work and factor of our farmers and farmers in 1 million 78 thousand hectares of irrigated area according to the Republic grain, cotton was grown on an area of 1 million 33 thousand 629 hectares.

Carrying out the process of defoliation of the grown crop without Frost ensures timely, fast and high-quality harvesting before. From defoliation then light falls between the row, heat and air circulation are improved, as a result, the formation and opening of the breasts is accelerated. Defoliation-induced harvest the productivity of the term work improves. However, local in our Republic production of high-efficiency defoliants, which can be obtained on the basis of raw materials does not exist, and this problem is currently very relevant.

Widely produced in our country and in agriculture effect up to 42% in the composition of magnesium chlorate defoliant applied on a scale "Economics I sosium" №12(79) 2020 www.iupr.ru 225 the causative agent as well as a small amount of physiologically inactive magnesium and sodium holds chlorides. Another representative of chlorate group defoliants is calcium is chlorate. This defoliant was previously brought from Russia and our Republic widely used in agriculture. Liquid calcium chlorate-chloride defoliant production performed at the Production Association" Khimprom " in Usolsk increased. Physico-chemical properties of liquid calcium chlorate-chloride defoliant was unsatisfactory. The product contains 28.0 calcium chlorate, the acting substance% no more than, calcium chloride was 25-26%.

Many in the process of production of calcined soda in the ammonia method harmful waste – distiller fluid appears in the amount. Every ton of soda in production, 8÷10 m3 distiller liquid is formed. Distiller liquid – captured calcium and sodium chlorides, calcium sulfate and calcium hydroxides being a solution, the total amount of components is 15-16%. One promising way to process Distiller fluid is to make it high concentrated calcium is used to obtain chlorate defoliant.

It is worth noting that the environmental problems in the production of soda one of the promising solutions is high-quality by recycling waste high used for products including cotton

defoliation the effective calcium is the production of chlorate defoliant. Chlorinated mixture and obtained when researching the conversion process of sodium chlorate in aqueous muxite results [2] calcium chlorate defoliant containing chlorinated mixture chloride and sodium chlorate in a ratio of 1:2, at a temperature of 100oC, together with vaporization indicates that the conversion process to be carried out is expedient. Chlorinated mixture of calcium chlorate defoliant in liquid and solid Chol and sodium we cite the characteristics of the process of converting chlorate.

Justification of the process of conversion of chlorinated mixture and sodium chlorate diagram picture 1.listed at. 100oc contains sodium chloratin in the structure with a chlorinated mixture containing equimolar amounts of calcium chloride composition when mixing 4.4 pulp, which is determined by the point "P100" in the figure dressing is. Pulp coordinate "P100" by Eneke index to 1 mole of salts in ion-equivalent, 2Na+is as follows 0.4852; Ca2+- 0.5148; 2Cl-- 0.4853; 2ClO3-- 0.5147; H2O - 6.6731.

Solving the equations we get: a=0.6551; x=0.3449; z = 3.4552. Thus, 3.4525 water evaporates, 0.3449 mol when we filter the pulp " P100 sodium chloride is excreted and dressing 0,6551 ME "R100" solution. "R100" solutes The sodium chlorate precipitate is 0.6551 me "P20" pulp dressing when 20oC is cooled. This pulp coordinate corresponds to the solution coordinate" R100". Khosil the lead solution composition NaClO3 – "R100" continued on the line to "R20". converges to the point The solution coorditanas " R20 " are as follows for 1 mole of salt in ion-equivalent 2Na+- 0.0595; Ca2+- 0.9405; 2Cl-- 0.2565; 2ClO3-- 0.7435; H2O - 5.8796.

Hence, 0.6551 "R100" solution is 0.6551 when cooled from 100os to 20os Me" P20 " is the pulp dressing, 0.10776 moles of sodium when we filter this solution chlorate and 0,5473 me " R20 " solution is dressing. This solution contains 53.25% calcium chlorate, 7.58% calcium chloride, 2.41% sodium chloride and 36.75% water hold. The resulting solution is a light yellowish solution with crystallization kharorat +8oc the ready-made calcium chloride defoliant is obtained.

0.5473 ME "R20"to obtain two aqueous calcium chlorates in Crystal Hall a part of the solution is required to evaporate water. Therefore, boiling water from solution 0.5473 ME "R20" depending on the condition and time the steaming process was researched.

The data obtained show that " R20 " evaporates water from the solution, increasing the boiling temperature of the solution by increasing the concentration of the solution goes. 0.5473 ME "R20" 0.5473 ME when 41.98-42.12% water evaporates from the solution "R100" is soluble in solution. Erythna boiling harate 100os to 110oc rises. The time for evaporation of water is 23-25 minutes.

Solve private equations for cations, anions and water a=0.5473; we get values z = 1.3550. So, 0,5473 me " R20 " 1,3550 moles of solution we evaporate the water and dressing 0.5473 me "R110" solution, making it from 110oc "P20-1" pulp caught by two aqueous calcium chlorate precipitates when cooled to 20oC dressing is.

Draw up private equations on an ion of water and Har and make them when we solve, a=0.2907; X = 0.2566. Thus, 0.5473 ME "R110" solutes 0.5473 me "P20-1", which is characteristic when we cool, 0.2566 mol if we filter the pulp two aqueous calcium chlorates and 0.2907 ME "M20" are soluble in circulating solution. For the conversion process carried out using the " M20 " circulating solution we determine the amounts of chlorinated mixture and

sodium chlorate to be consumed. Sodium chloride pulp to keep the conversion cycle in balance after separation, 0.6551 ME "R110" solution should be dressing. Xisob the results show that the coorditas in the conversion are 2na+-0,4354; SA2+-0,5646; Cl--0,4354; ClO3--0,5645; N2O-4,8456 is 0,9117 me pulp dressing be must.

Solving the private equations we get the following results x=0.2566; y=0.3644. So 0,9117 me "P100-1"to get the pulp 0,2907 ME "M20" adding 0.3644 moles of sodium chlorate and 0.2566 moles of chlorinated mixture to the solution required. 0.9117 me "P100-1" when we separate the pulp 0.6551 me "R100" solution and 0.2566 (m) mol is soluble in narium chloride. Where 3,14369 moles (z) of water evaporate must.

So, soda plant distiller waste chlorinated mixture the process of obtaining two aqueous calcium chlorates by conversion with sodium chlorate returns cyclically, the image is 3.see in "P100-1" - "R100 (P20)" - " R20 (R110, P20-1)" - " M20 it turns out that it is possible to do according to the scheme.

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