

METHOD FOR PRODUCING STABLE GEOECOLOGICALLY STABLE SOIL MIXTURES
BASED ON DRILLING.

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Keywords: drilling , induction coupled plasma , atomic emission spectrometry, IR spectrometry, titration, precipitation , density , pycnometry method , compression method , deformation modulus , chemical , toxicological and physics features .

Annotation : drilling in vain and drilling trails do not do through natural geosystems pollution problems gift situation showing scientific, technical and patent literature analysis was carried out and analytical commentary prepared, studied the raw subject matter features, as well as research methods and experience to perform methods description considering _ Research chemical methods (inductive coupled plasma with atom emission spectrometry, IR spectrometry, titration, precipitation), X-ray phase, microstructure analysis and physics and mechanical (moisture, liquid and rolling on the moisture boundary) determination methods using increased _ K shear ring methods used without density, pycnometric method, compression compression method with deformation modulus) and toxicological characteristics (aqueous extracts toxicity scientific level and daphnia in performance change and chlorophyll fluorescence level change according to the definition of methods using biotest. water herb cell number) . Experimental information mathematician again work special software supply using , basic statistics methods and from laws used without done increased _

Drilling trails based on earth mixtures moisture engineering convenience elements Create and environment protection make events transmission for artificial to soils be placed requirements meet give need _

Constructiveness to provide for important parameters

drilling trails based on earth mixtures stability consistency properties (modulus of deformation).

drilling a trail and sand in a mixture of earth the optimal ratio of the stabilizer determination because in this stable in terms of performance was the earth mixture to receive power, experience

Polybond ground stabilizer other dose drilling to trails entrance in accordance with . The strength of the characteristic to increase the time to pass with happen to be and stabilizer one part was and small dust of particles large to adhere to particles and gypsum crystals appear to be help to give the surface of the active substance due to the granulometric content to change with the dependence was determined .

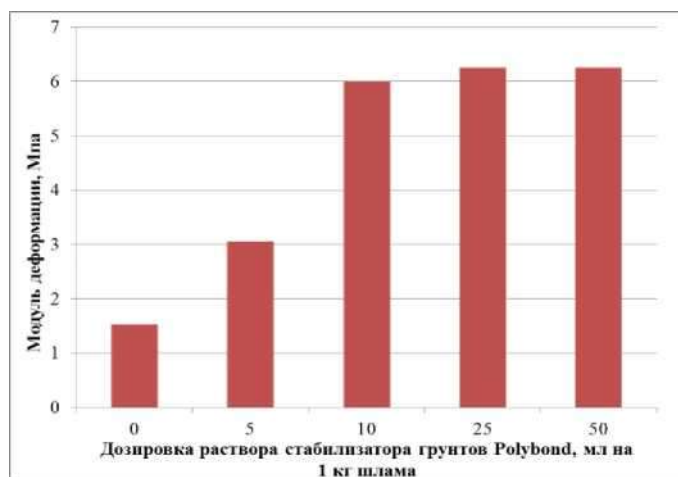


Рисунок 1 - Исследование деформационных характеристик бурового шлама при различных дозировках стабилизатора грунтов

Particles themselves with the connection of sulfate acid existence due to drilling trails based on geocologically stable earth mixtures to obtain for the requirements are listed in Table 2.

Table 1

Drilling trails based on earth mixtures parameters for boundary conditions

No. p /	Parameter	Limitation
1	Dirt particle ratio	< 15%
2	Dust particles share	< 35%
3	Sand particle ratio	> 20%
4	Earth type	Sand or light sand
5	Moisture	engineering convenience elements create and environment protection make events transmission for artificial soils to be accommodated from low requirements did not happen
6	deformation modulus	convenience engineering and elements To create for the earth as used artificial to soils to be placed not below the requirements. Wednesday protection do measures
7	Water in the extract of the dry residue composition	< 20 g/kg
8	Oil content_	< 5 g/kg
9	pH extract water	6.0-8.8 units pH
10	Heavy metal composition	< MPC on soil (MPC).
11	Toxicity	Test objects show no acute toxic effect

To achieve these requirements for soil mixtures based on drill cuttings, the following optimal proportions of the initial components - drill cuttings are established: sand: soil stabilizer (concentrate) = 1: 0.7-3.5: 0.0002-0.0004 (in volume fractions) .

The results of experimental studies on the assessment of the geocological stability of soil mixtures using the recommended requirements and the optimal composition and technical solutions for the development of the main technological scheme for the production of geocologically sustainable soil mixtures based on drill cuttings are presented.

Earth mixtures geo-environmental stability assessment for recommendation made requirements compatibility and optimal composition verified. Drilling trails of optimal content based on land mixture training based on Risk Class IV (Table 2), a recommendation made from the requirements used without received do not interfere geocological in terms of a stable matter in what was determined.

Earth mixture environmentally friendly will need _ _ physical and mechanic to the parameters to respond gives , the necessary strength of the function has _ this is their natural building materials

partially replacement for the component how to use the opportunity gives _

table 2

Earth Mixture Geocological Stability Evaluation Results

indicator name	The optimal composition of the dirt earth mixture: sand: stabilizer (solution) - 1: 0.80: 0.045
Ph	8.7 units pH
Oil products	520 mg/kg
Dry residual (soluble salts to the composition is typical)	350 mg/kg
Heavy metals (mobile form) Copper Zinc News cobalt Chromium Manganese nickel	0.87 mg / kg (MPC = 3.0 mg / kg) 2.6 mg / kg (MPC = 23.0 mg / kg) 1.4 mg / kg (MPC = 6.0 mg / kg) 0, 89 mg/kg (MPC=5.0 mg/kg) 0.82 mg/kg (MPC=6.0 mg/kg) 90 mg/kg (MPC=100.0 mg/kg) 2.6 mg/kg (MAC=4.0 mg/kg)
Toxicity	Daphnia test to object acute toxic effect does not show Magna Strauss
Moisture	8.7%
Dirt particles composition	8.73%
Dust particle composition	24.52%
Sand particle composition	66.73%
Earth type	heavy hard Sandy Earth
Compress study to results according to modulus of deformation	6.5 MPa

To ensure the required parameters of soil mixtures, the following technological operations are proposed: dosage of components (drill cuttings, sand, stabilizer), trail drilling and sand mixing , mixture drying , waste gases cleaning , mixture earth stabilizer with treatment _

The proposal made by the technical solution TU TG571100-001-860306391880-2017 tech. descriptions and inert construction materials and artificial soil work release process technological regulations work output is used . The earth mixes the work of releasing the process of mathematician description and its basic parameters to consider made increases. drilling trails based on earth mixture work release to the environment effect assessment made increased _ Work developed technology in accordance with drilling handles based on earth mixture work release during husband under water , atmosphere , soil , vegetation and animal to the world effect acceptable to be determined . State ecological expertise positive conclusion received _

39762.345 thousand rubles capital do not put and 7600.0 _ thousand rubles benefit from 40 thousand tons per year dominate have drilling trails based on land mix work release build for feasibility justification work developed _ technologies environmental economic efficiency 1 ruble capital deposits

for 1.5 _ ruble organize makes _ Work developed technology in accordance with drilling from trails land mixtures work in the release of an environmental object as in the soil delivery prevention receive about 15 million rubles organize makes _ in . With this together, from 2 hectares more than the field of land economy to the deal will be returned.

Used books list

1. Shaimanova R.S., Urazov M.K., Yuldosheva D.N., Shaimanova N.Kh. Development of drilling technology with hydraulic motors in salt blood conditions. Multidisciplinary Journal of Science Oath No. 1. C. Technology. 5-6.
2. Shaimanova R.S., Urazov M.K., Yuldosheva D.N., Shaimanova N.Kh. Development of drilling technology with hydraulic motors in salt blood conditions. Multidisciplinary Journal of Science and Technology. No. 1. S. 20-22.
3. Shaimanova R.S., Urazov M.K., Yuldosheva D.N., Shaimanova N.Kh. Development of drilling technology with hydraulic motors in salt blood conditions. Multidisciplinary Journal of Science and Technology. No. 1. S. 23-25.
4. Shaimanova R.S., Urazov M.K., Yuldosheva D.N., Shaimanova N.Kh. Development of drilling technology with hydraulic motors in salt blood conditions. Multidisciplinary Journal of Science and Technology. No. 1. S. 26-29.
5. Shaimanova R.S., Urazov M.K., Yuldosheva D.N. Shaimanova N.Kh. development of drilling technology with hydromotors and salt blood conditions is a multidisciplinary Journal of Science and Technology. No. 1. S. 5-6.
6. Murodov MM, Mukhitdinov UD, Urozov MK, Khudoyorov XO. Comparative studies of the composition and properties of CMC at different degrees of polymerization. // Scientific and technical practical journal of composite materials 2018 No. 1 - p. 57-58 (02.00.00 №4)
7. Mukhitdinov Yu.D., Murodov M.M., Urozov M.K. Technology for obtaining high-quality cellulose from sunflower stalks and fiber waste from textile enterprises. //Composite materials Scientific and technical practical journal 2018 No. 1.- P. 65-66 (02.00.00 No. 4)
8. Turdiboeva N.Yu., Murodov M.M., Urozov M.K. Development of technology for obtaining cellulose from plants and production of Na - carboxymethyl cellulose on its basis . Scientific, technical and practical journal of composite materials. - Tashkent, 2018. - No. 3. P.36 (02.00.00 No. 4)
9. Urozov M.K., Turdiboeva N.Yu., Murodov M.M. Development of technology for obtaining cellulose from safflower plants and obtaining carboxymethylcellulose on its basis . //Scientific-technical and practical journal of composite materials. - Tashkent, 2018.- No. 3. p.58 (02.00.00 #4)