CHANGE IN THE CONSISTENCY CHARACTERISTICS OF THE WETTED LUSSIC BASES (GRUNTS) OF BUILDINGS UNDER THE INFLUENCE OF SEISMIC FORCES

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Annotation. Here are the results of the research work carried out on the change in the consistency characteristics of the soaked lyosoid bases (grunts) in relation to different factors at times when seismic forces were affected.

Keywords: wetted lucid grunt; grunt strength characteristics, seismic strength; bonding strength, internal friction angle, seismofaol area, seismomicrorization, seismic scale, deformation, vibration duration.

Introduction. In addition to the various forces and effects that are exerted on the floors of structures in seismofaol areas in static situations, seismic forces are also additionally affected.The amount of seismic forces acting on the floors of the structures will be determined by the seismomicrorization card drawn up for this territory, and it will be determined by the 12-point international seismic scale CEC-64 adopted in the CIS countries in 1964.Based on this 12-point international seismic scale, the territory of our country is small-small with 6.7.8.9 points, divided into microdistricts.This seismomicrorization card is structured by summarizing the forces of earthquakes that have occurred in the area over several centuries. When designing and building structures, of course, the seismomicrorization system card of this area is taken into account, and based on this, various additional measures are used in some seismofaol districts [1,2].

The main part. Seismic forces can cause a decrease in the strength of the floors of the structure, deforming and,ultimately, damage, destruction of the structure. Therefore,the study of the factors that contribute to the violation,decrease in strength, deformation and damage to the structure of the bath floor under the influence of dynamic, seismic forces is important in guaranteeing the strength, priority, life expectancy and reliability of the structures to be built in them.

In ensuring the strength, priority and viability of the structure's lyosimic floors when seismic forces act, the strength characteristics of the grunts play an important role. That is why the study of the change in the strength characteristics of lyosistic grunts under the influence of dynamic,seismic forces

under the influence of various factors plays an important role in ensuring the earthquake-tolerance of the floors to be built in it**.**

Studies carried out by our scientists on Lucid grunts show that the change in grunts under the influence of dynamic, seismic forces is largely due to a change in the strength of the bond(viscosity).

While the angle of internal friction of the lyosseous grunts varies in small quantities, up to a maximum of 15-20%, as a result of various dynamic, including seismic forces.That is why,in the study of the change in the strength characteristics of lucid grints under the influence of various dynamic, seismic forces, the main attention was paid to the change in the binding (viscosity) strength of the grunt.

In our research conducted, prof. N.A.Tsitovich, N.N.Maslov, X.Z.Rasulov, S.S.We used the results, conclusions, suggestions of the experiment conducted by Sayfiddinov, and others on Lucid grunts [3,4].

Below we refer to the results of the experiment, which carried out the transformation of the binding forces under the influence of various dynamic forces of natural state, lyos-shaped grunts with an intact structure. Prof for conducting the experiment:N.A.Using the method of the ball stamp proposed by Tsitovich, we carried out in the following order [3]:

- 2 samples were prepared from the excavated grunt(monolith) with one structure intact.After the samples were compacted with a pre-planned load, the initial bond strength of the grunt was determined in one of them;

-the second sample, on the other hand, was affected by dynamic forces with the previous static force unchanged, and after the vibration was completed, the binding force of the grunt was again determined.

Results. Figure 1 shows the effect of the duration of dynamic oscillation on the change in the binding force of the wetted lucid grunt.As can be seen from these graphs, the strength of dynamic oscillation, when the acceleration is α =2500 mm/s^(2) (this gives birth to an earthquake force of 8 points on the CEC-64 scale approximately) decreases in the range of 60-120 SEC to 5-15 times the bonding strength of the Lucid grunt. In this case, it turns out that the deformation begins only after 5-30 SEC has passed, without deforming at once under the influence of dynamic forces of the Lucid grunt.It can be seen from this that under the influence of dynamic forces exerted at a short time,the weak structural bonds of the lyosimic grunt are broken. When the effects of dynamic forces last long, the structure Binding of grunts is disrupted by a large amount of grunts deforming.

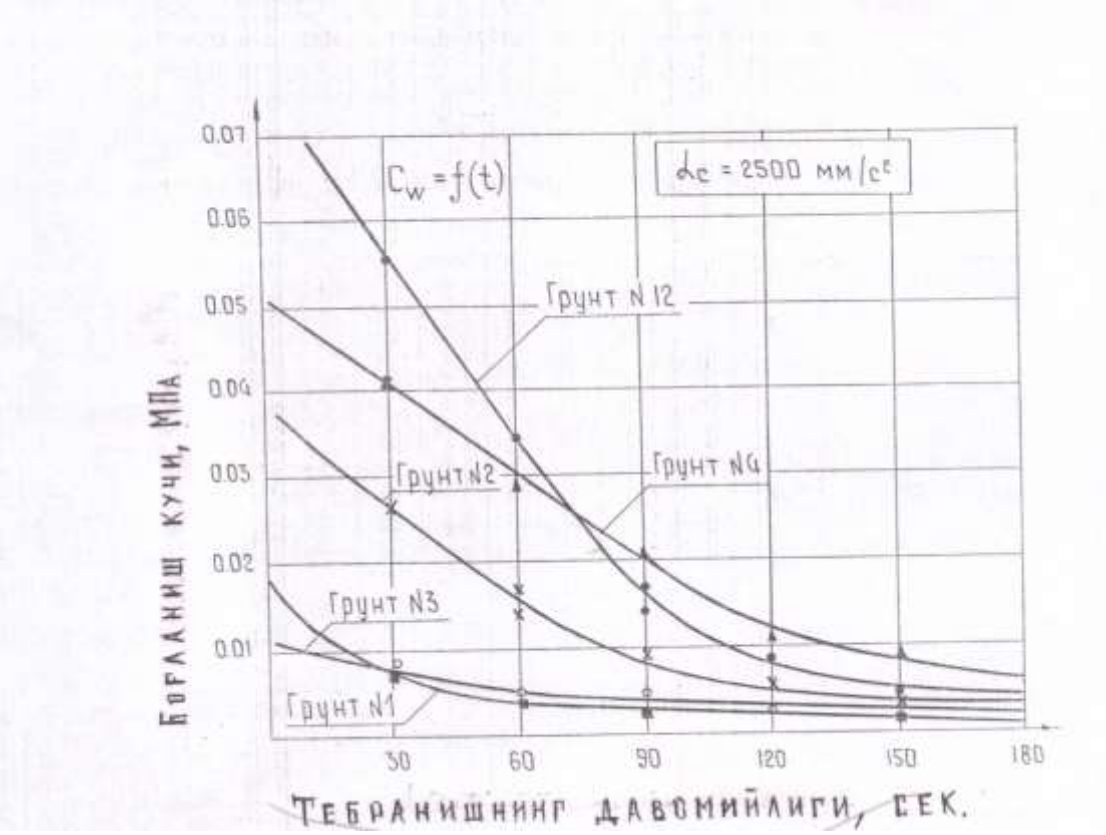

Figure 1 is the change in the binding force of a lyocular grunt soaked during the aging period over time.

Figure 2 shows graphs describing the dependence of the laussian grunts on the vertical forces acting on the binding force.This graph also describes the change in the binding force of a condensed lucid grunt depending on the dynamic vibrational force.

Figure 3 shows graphs of the reduction of the binding forces of various wetted lussic grunts with an increase in dynamic forces.

So it turns out that the change in the binding force of the wetted lussic grunts at the time of vibration depends on the density of the grunt, the duration of the vibration force and the parameters of the dynamic effect.

Now let's look at the change in the strength characteristics of the lyosic grunts, which formed the basis of buildings and structures when dynamic (seismic) forces are affected, under the influence of moisture. Because most of the buildings in the Republic of Uzbekistan are built mainly on lyossik grunts.On the territory of the Republic,land tremors often occur,as a result of the failure of water transmission networks at the time of the earthquake, the lyos-shaped foundations of buildings are moistened.

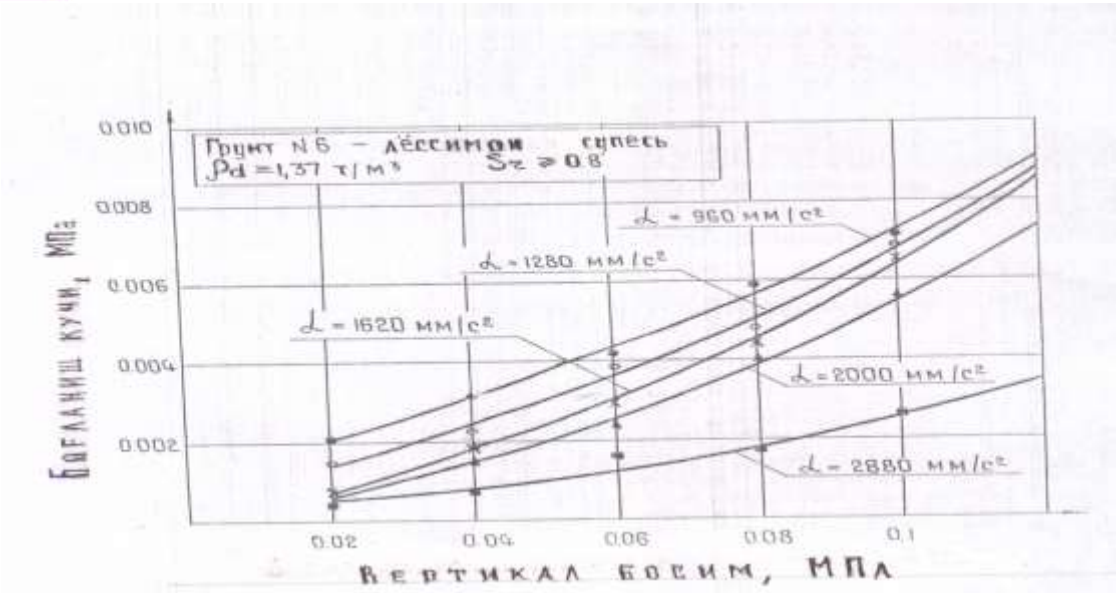

Figure 2. Variation of the binding forces of compacted lyosoid grunts depending on vibration acceleration

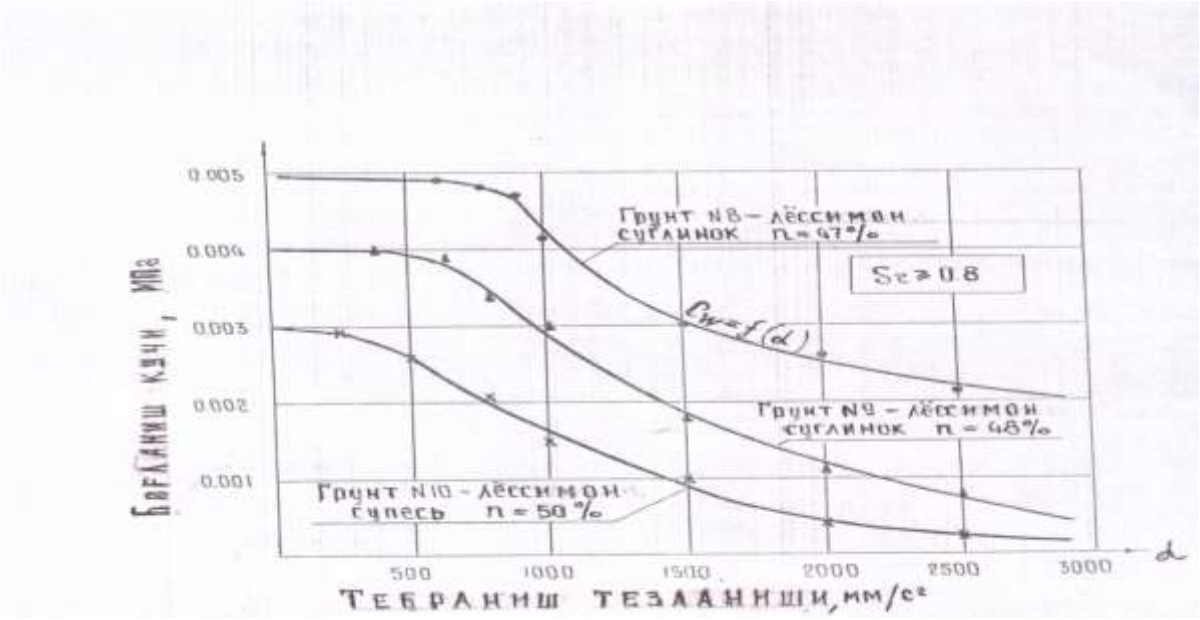

Figure 3. The dependence of the change in the binding force of a naturally soaked lucid grunt on the acceleration of vibration

Lucid grunts are dry, as well as at very low humidity,do not deform significantly under the influence of not only static forces,but also dynamic ones.A clear example of this is prof: Rasulov X.Z. students dos.S.S.Sayfiddinov, G'.A.Together with the hakimovs, we can cite the experiments in which they performed static as well as dynamic forces on the lyossoid grunts.Their experiments show that the internal bonding forces that exist,including the Lucid grunts, are solid in Judah in a dry state, which means that the internal structural bond between particles is strong. For this reason,in the experiments they conducted, even under the influence of strong dynamic forces (when a dynamic force equal to the

force of an earthquake of 9ball is affected), dry, with a humidity of 5-10%, lyosic grunts were not deformed.An increase in humidity from these indicators can cause a lucid grunt to deform not only under the influence of dynamic forces, but also by static forces [5-8].

As can be seen from our above data,even under the influence of static forces,since its consistency characteristics change due to the increased humidity of the lyosimic grunts,the internal friction angle of the chunonchi grunt decreases up to 1.2 times, and the contact end-up to 2-10 and even more times [9].

Studying the patterns of change (reduction) of internal friction angle and bond strength under the influence of hydration even in static situations,and taking into account when designing them, are important for maintaining the priority of structures.Because when the floor of any structure for some reason,the chununchi can be highly moistened due to the rise of groundwater, a violation of various water transmission systems.

Increased humidity leads to a decrease in the binding force between the particles of the lyosseous grunts.When the moisture content of the lyosseous grunts increases,the aquifers increase in size,the grunt particles move away from each other, leaving the limit of the molecular gravitational field, and as a result, the binding force between the particles decreases greatly. When the grunts are saturated with water, the bond strength between the grunt particles is greatly reduced.With the force of the bond between the lyosseous grunt particles, a change in the angle of internal friction also occurs with certain regularities when the moisture content of grutes rises in one cell.

Since the vast majority of the territory of the Republic is located in seismic districts, 7.8 even 9-point earthquakes often occur in the districts.For this reason, under the influence of seismic forces in earthquake-prone areas, lyosseous bases can be highly humidified.That is why the study of the strength characteristics of lyosseous grunts under the influence of dynamic (seismic)forces, depending on the humidity seismofaol is important in ensuring the earthquake resistance of structures to be erected in districts. The research of our scientists shows that the change in the strength characteristics of lucid grunts under the influence of moisture is largely due to the strength of the bond.

Figure 4 shows graphs that the binding force of the lyossil grunts decreases as a result of increased humidity at the time of the action of seismic forces.As can be seen from these graphs,the binding forces of natural-state lucid grunts decrease

by 10-15 or more times in exchange for increased humidity when seismic forces act.

When designing and building structures in seismofaol districts, taking into account the decrease in the strength characteristics of ground grunts under the influence of moisture serves to ensure the earthquake resistance of structures.

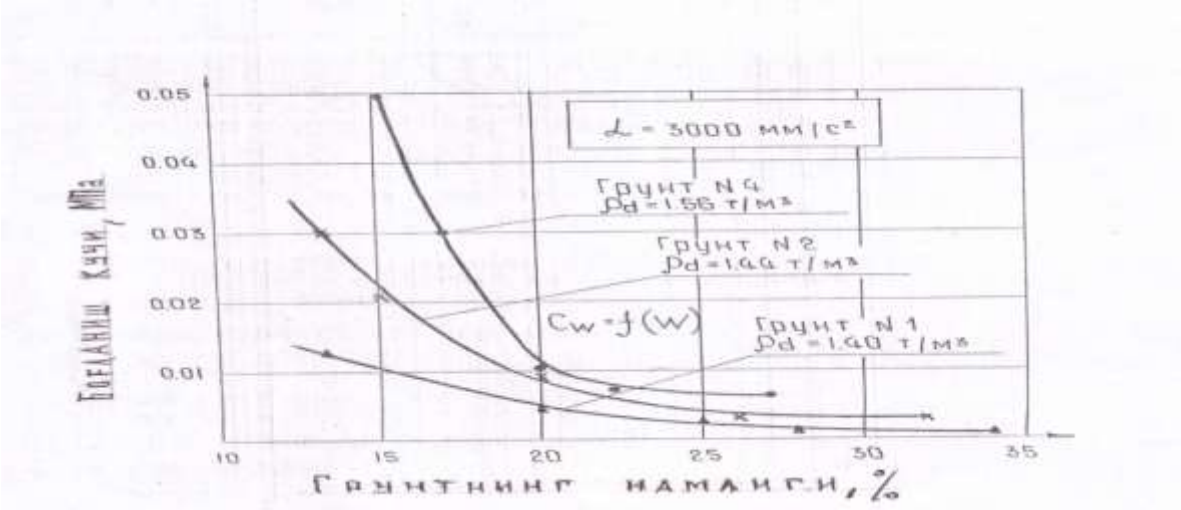

Figure 4 reduction of the binding force of lyosimic grunts as a result of increased humidity when seismic forces act

Conclusion. As a result of our research on the verification of changes in the consistency characteristics of lyosseous grunts in dynamic cases, we came to the following conclusions:

1.It would seem that the strength characteristics of lyosimic grunts under the influence of dynamic,seismic forces, including the change in the binding force, would depend on the density of the grunts,the vibration force and parameters, the type and duration of the oscillation.

2.It turns out that the change,decrease in the strength characteristics of the lyosimic grunts under the influence of dynamic,seismic forces occurs mainly at the expense of the binding force of the grunt.

3.It turns out that under the influence of dynamic,seismic forces, the binding force of the moistened lussic grunts can be reduced by 10-15 or more times.

4.The change in the strength characteristics of the basement floors of structures under the influence of various factors leads to the deformation of the structures.

5.When designing and building structures in seismofaol districts, taking into account the decrease in the strength characteristics of ground grunts under the influence of moisture is important in ensuring the earthquake resistance of structures.

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