ORDER OF INSTALLATION OF ELEMENTS OF ASSEMBLY-MONOLITHIC FLOORS AND COVERINGS

A.S.Nazirov, assistant,
ayubkhon_nazirov-1993@mail.ru
Fergana Polytechnic Institute
Z.A.Mirzayeva, assistant,
zarnigormirzayeva070992@gmail.com
Fergana Polytechnic Institute

Annotation: The article discusses the possibilities and advantages of the technology of prefabricated monolithic frame construction. The technology of building a prefabricated monolithic frame using various elements in areas with seismic activity is described. Reasons are given why priority should be given to this particular construction technology. The prefabricated-monolithic frame of the building, which works as a frame-and-frame system, has such positive qualities as a fully prefabricated frame, as well as many advantages of monolithic structures. At the moment, one of the urgent tasks is to reduce the cost of construction. When using monolithic construction, the construction time of the structure is doubled in comparison with prefabricated or precast-monolithic construction. The topicality of widespread use of prefabricated monolithic structures under seismic impacts is substantiated.

Keywords: Prefabricated, monolithic, prefabricated-monolithic, frame construction, industrial technology, frame-braced system.

In the present, we present the technological sequence for the installation of prefabricated monolithic floors and coatings, developed in the process of their construction on the experimental base of the Department of Construction of Buildings and Structures. The following technological sequence of work has been established:

beams are laid on the cleaned and previously leveled horizontal surface of the walls (crossbars) with a pitch of 600 ± 2 mm, with a length of the supporting surface of at least 120 mm. The distance between the I-beams does not exceed 1.5 m, and the distance between the uprights is 2 m. During installation and concreting, the beams are supported by a fixing system, which includes horizontal supports and vertical uprights. As horizontal supports, I-beams are used, installed with a step of ~ 1 m. Racks can be telescopic or voluminous. The distance between the racks is not more than 2 meters. The distance between horizontal supports does not exceed 1.2 m, and the distance between vertical posts is 1 m. The posts are installed on pads laid on solid ground, preventing possible subsidence of the posts. To improve the operational and architectural qualities of beams with a length of more than 5 m, a construction lift is organized (a slight bulge with a bulge upwards). Depending on the length of the beams, the construction rise varies between 10-20 mm [1-3].

When installing racks of the fixing system on an existing ceiling, the bearing capacity of the latter is not lower than 400 kg / m^2. When using wooden support posts, the height of the wooden posts can be achieved using wedges.When mounted in closed plinths with a ground base, the vertical posts are installed on a wooden base laid on pre-compacted ground. When installing racks of the fixing system on an existing ceiling, the bearing capacity of the latter is not lower than 400 kg / m^2. When using wooden support posts, the height of the wooden posts can be achieved using wedges.When mounted in closed plinths with a ground base, the vertical posts are installed on a wooden base laid on pre-compacted ground. When installing racks of the fixing system on an existing ceiling, the bearing capacity of the latter is not lower than 400 kg / m^2. When using wooden support posts, the height of the wooden posts can be achieved using wedges.When mounted in closed plinths with a ground base, the vertical posts are installed on a wooden base laid on pre-compacted ground [4-5].

A monolithic floor belt is an element that connects weakly bearing walls. The belt fixes the entire structure of the building.

The range of reinforcement of a monolithic belt is at least three longitudinal rods Ø 10 mm in ceilings up to 6 m long and four longitudinal rods Ø 12 mm in ceilings of greater length. The diameter of the wire for the clamps and the distance between the clamps in the first case

is 4.5 mm and 250 mm, in the second - 5.5 mm and 300 mm, respectively.

To ensure an even layer of concrete during concreting, it is necessary to install beacons, which are guides. They will allow a worker to move the rule (or screed) to remove excess concrete. Lighthouses should be installed perpendicular to the beams. In the ceilings during the installation process, engineering communications can be laid [6-8].

Concreting of the ceiling is carried out with fine-grained heavy concrete of class not lower than B20 using a concrete pump, a crane with a bucket (conveyor) or trolleys. When concreting, it is necessary to avoid supplying an excess volume of concrete mixture to one place of overlap, which can lead to overloading of the assembled structure. During the concreting process, it is necessary to use a vibrator to remove possible air voids in the concrete mass and ensure the integrity of the concrete core of the floor. In the event of a visual deflection of the beams or deformation of the elements of the fixing system, concreting in this area must be stopped immediately [9]. Further work is allowed to be carried out only after clarification and elimination of the causes of deformation. If the supply of concrete is carried out in several stages, then the concreting must be carried out with grippers. The width of the grip is a multiple of 600 mm, the length is determined by the size of the overlapped span. The edges of one grip should be located at a distance of 300 mm from the axis of the beams. Concreting of the grip should be carried out in one work shift. During the setting period, the laid concrete mixture must be protected from drying out and periodically moistened. Removal of additional supports is allowed only if the concrete has gained 70% of the design strength. At an average ambient temperature above 10˚, the supports can be removed after 10 days [10-12]. At an average temperature of 5 to 10˚ - after 20 days. When removing the supports, it is necessary to ensure that individual fragments of the floors, especially hollow blocks, are not damaged. The normative strength of the overlap is achieved after 28 days after the completion of concreting.

LITERATURE

1. V.A. Shembakov. Technology of prefabricated-monolithic housing construction... Zhurn.Large-panel housing construction, 2013, No. 3.

2. E.S. Nedviga, N.A. Vinogradov, Systems of prefabricated monolithic floors, Zhurn.- Construction of unique buildings and structures, 2016, No. 4.

3. Кодиров Г. М. и др. Микроклимат В Помещениях Общественных Зданиях //Таълим ва Ривожланиш Таҳлили онлайн илмий журнали. – 2021. – Т. 1. – №. 6. – С. 36-39.

4. Мирзаева З. А. К., Рахмонов У. Ж. Пути развития инженерного образования в Узбекистане //Достижения науки и образования. – 2018. – Т. 2. – №. 8 (30). – С. 18-19.

5. Zarnigor M., Ulug‘bek T. HUDUDNI VERTIKAL REJALASHTIRISH LOYIHASINI ISHLASHDA TABIIY SHART-SHAROITLARNI INOBATGA OLISH MASALALARI //INTERNATIONAL CONFERENCES ON LEARNING AND TEACHING. – 2022. – Т. 1. – №. 1.

6. Мирзаахмедова Ў. А., қизи Мирзаева З. А. ЭНЕРГОТЕЖАМКОР БИНО ВА ИНШООТЛАРНИ ҚАЙТА ТАЪМИРЛАШ ИШЛАРИ //INTERNATIONAL CONFERENCES ON LEARNING AND TEACHING. – 2022. – Т. 1. – №. 6. – С. 126-130.

7. Abdukhalimjohnovna M. U. Failure Mechanism Of Bending Reinforced Concrete Elements Under The Action Of Transverse Forces //The American Journal of Applied sciences. – 2020. – Т. 2. – №. 12. – С. 36-43.

8. Abdukhalimjohnovna M. U. Technology Of Elimination Damage And Deformation In Construction Structures //The American Journal of Applied sciences. – 2021. – Т. 3. – №. 05. – С. 224-228.

9. Абобакирова З. А., угли Содиков С. С. СВОЙСТВА ЦЕМЕНТНОГО КАМНЯ ОПТИМАЛЬНОГО СОСТАВА С ДОБАВКАМИ В УСЛОВИЯХ СУХОГО ЖАРКОГО КЛИМАТА //INTERNATIONAL CONFERENCES ON LEARNING AND TEACHING. – 2022. – Т. 1. – №. 6. – С. 81-85.

10. Mahkamov Y. M., Mirzababaeva S. M. Strength of bending reinforced concrete elements under action of transverse forces under influence of high temperatures

//Academicia: An International Multidisciplinary Research Journal. – 2020. – Т. 10. – №. 5. – С. 618-624.

11. Махкамов Й. М., Мирзабабаева С. М. Температурные прогибы железобетонных балок в условиях воздействия технологических температур //Проблемы современной науки и образования. – 2019. – №. 11-1 (144). – С. 45-48.

12. O‘gli Y.S.S., o‘g‘li A.P.A. KOSMIK MA'LUMOTLAR YORDAMIDA YER TUZISH LOYIHA ISHLARINI OLIB BORISH //Ta’lim fidoyilari. – 2022. – Т. 25. – №. 5. – С. 23-25.