



TECHNOLOGICAL METHODS OF INCREASING THE STRENGTH AND SERVICE OF OLD AND NEW CONCRETE CHOCKS IN CONSTRUCTIONS

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ANNOTATION

The article recommends technological methods for increasing the strength and service life of joints of concrete and reinforced concrete structures, technological joints in the construction of monolithic houses, road construction, bridge construction, as well as in the construction of irrigation and irrigation facilities.

KEY WORDS: *thermal insulation, wall construction, heat-humidity regime, vapor permeability, multilayer wall, vapor permeability resistance, closed air gap, single line, dew point.*

INTRODUCTION

Defects in the joints and technological joints of precast and monolithic concrete and reinforced concrete structures can be divided into 2 groups. The first group includes gravelly surfaces, shallow grooves, and less noticeable convex-like defects. Examples of the second group are defects such as grooves, pits, cracks, and deviations from the dimensions in the design, which go deep and even to the other side of the thickness of the structures.

The formation of such defects is caused by factors such as the use of hard concrete mixes, the mobility of which differs significantly from the design, the continuous compaction of the concrete mix in layers in the body of structures with large depths.

OBJECTIVES

To eliminate the defects characteristic of the first group, reinforced concrete structures are removed from the loose concrete layer using a metal cleaner (brush) and filled with torque concrete. Prior to this process, treatment methods can be applied to

old and new concrete joints, for example, it is recommended to coat the concrete surface with penetron, liquid glass, FREM S3 or PVA / 9 /.

Defects applicable to the second group shall be remedied in agreement with the design authority.

The strength quality of the concrete used in structural joints must be somewhat higher. The grade of Portland cement used for the concrete mix should be less than M400 and M500, and the fraction of coarse aggregate should not exceed 20 mm. Pits are more dangerous than grooves in compromising the overall strength of structures. Therefore, it is recommended to use concrete mixes made of fine-grained gravel when concreting structural joints.

METHODOLOGY

In the construction of monolithic houses, road construction and bridge construction, as well as in the construction of concrete pavements for irrigation and irrigation facilities, it is important to pay special attention to the mobility of the concrete mix, the care of concrete during hardening. The mobility of the mixture for keramzitobeton is 4-6 cm



in summer and 3-4 cm in winter; for heavy concrete should be 6-8 cm in summer and 4-6 cm in winter / 1.2 /.

When preparing, transporting and placing the concrete mix at the joints and joints, it is necessary to pay attention to the following:

- Preparation of concrete mixes indoors or in the shade;
- reduce the time between preparation and transportation of the mixture as much as possible;
- arrange for its transportation in closed metal containers;
- if possible, outdoor concreting in the evening and at night;
- check the quality of the molds before concreting and correct any defects;
- abandonment of the straight line of the joint in the joints of old and new concrete of structural importance, the use of "zig-zag" and other forms that serve to enlarge the joint surface;
- wetting the concrete mix on a sandy or gravel base before laying it;
- Pre-wetting of molds, etc.

CONCLUSION

In the process of restoration and reconstruction of buildings and structures, the molds placed on the joints of structures must be highly hermetic. If it is necessary to accelerate the hardening process of concrete, then it is necessary to use effective methods of care, in which the use of materials that penetrate into any shape and provide high tightness, forming a film on the surface of the construction seam is most effective / 3 /.

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