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The article presents the methodology and results of comparative testing for leaks and corrosion compounds used in the removal of cracks in the cast iron body parts. The study was conducted to determine the necessary parameters using kleyezvarnyh, welding and adhesive joints.

## Kleyezvaryuvannya, welding, adhesive, connection, integrity, corrosion resistance, testing, research results.

In Article pryvedenы methodology and results sravnytelnыh trials for tightness and corrosion joints stoykost USED Elimination at treschyn chuhunnыh korpusnыh in detail. Research conducted for definitions neobhodymыh indicators s Using kleesvarnыh, and kleevыh welded joints.

Kleesvarka, welding, adhesive, Connection, integrity, corrosion, stoykost, trials, Studies, results.

UDC 538.21.3

## EFFECTIVE steel concrete Ceiling KRUPNOPANELNOHO FOR CONSTRUCTION

## MO Davydenko, Ph.D.

The article presents suggestions for creating steel concrete floor in

the form of cavities in the latch

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stretched zone, upper and porozhnystorebrystyh nadopornoyu reinforcement plates.

Strength, element, reinforcement, basalt, fiber.

**Formulation of the problem.** Recently, much attention is paid to the program "affordable housing" is not excluded that in the near future the technology panel house building domestic and foreign will use in Ukraine [1], which provide the necessary pace of construction of affordable, shvydkobuduyemoho and, if possible, comfortable accommodation.

**Analysis of recent research.** Just remember that in the 70's, 80's of last century the proportion krupnopanelnoho construction in cities was 60-70% of the total construction of residential and civil buildings. On the downside panel houses usually referred exclude open-plan interior, low comfort, aesthetics, high cost that needs to be addressed. For example, an increase in area, volume space can be achieved by installing steel concrete beams with subsequent installation on beam hollow plates, Fig. 1.



Fig. 1. Installation of steel concrete beams in buildings with further krupnopanelniy mounting plates for hollow beam [1].

There is another problem. In Ukraine territories with difficult engineering and geological conditions make up more than 70% (landslides, flooding, undermining etc.), 40% are covered by the direct influence of dangerous seismic phenomena. Therefore, the construction of prefabricated houses need additional measures to ensure the safety of buildings according to the norms of DBN V.1.1-12-2006 [2]: the device hard disks overlap, increasing units and ceiling mount panels and others. Panel houses the old buildings, especially with the three-layer wall panels, for example, a series of panels overlap 1-464A concluded dry, according to this series, can not cope with dynamic load (Fig. 2).



Fig. 2. Deviations from the project location and the collapse of sandwich wall panels and floor slabs in the panel house series 1-464 A.

The purpose of research is to create an efficient steel concrete floor.

**Results.** Analysis of recent research in the field of precastmonolithic slabs [3, 4] allows us to offer prefabricated steel concrete girders (Fig. 3) with overlapping plates in a porozhnystorebrystyh produced both on site and in the factory.



Fig. 3. monolithic ceilings with porozhnystorebrystymy plates.

When you create a constructive solution crossbar steel concrete ceiling on foundation adopted a system of collective ceiling "Delta Beam" [5]. The main disadvantages of "Delta Beam" is a one-way connection seam wall and bottom shelf upon which bahatoporozhnysti concrete slabs, increased consumption of steel in the upper zone of considerable thickness, filling the space between the concrete walls in a stretched zone, which leads to weight gain "Delta Beams".

Unlike structural system [5] proposed a variant of steel concrete ceiling Fig. 3 used: the steel girders vertical wall with holes, cavities in the tension zone of concrete bolts, instead of the top steel belt upper bolt used nadoporna valves, which takes place in holes in the walls and beams stretched perceives efforts; as the plates taken effective for intensive weight bearing capacity and labor manufacturing porozhnystorebrysti plates, instead of skeletons, which are installed in the joints between bahatoporozhnystymy plates in the "Delta - beam" used reinforcing loop wound in cavity plates and holes perforated walls bolts, to fixing cardboard bolt-forming cavities in the concrete and increase the rigidity of the connection.

Porozhnystorebrysti plate size mm 1000h6000 shown in Fig. 4. slabs as the creator of the cavities used cardboard tube. Industrial tests conducted on slabs porozhnystorebrystyh certified equipment in SE EKB NIISK. Designed constructive solution bahatoporozhnystoyi ribbed plate Ukraine declarative patent protected [6].



Fig. 4. Porozhnystorebrysta plate size mm 1000h6000 after manufacturing and stripping.

### Conclusions

Proposed solutions pins and plates with cavities in stretched zone has high specific load capacity compared to the "Delta Beam" by reducing their weight and reduced cost of steel.

For the construction of new prefabricated houses in Ukraine not excluding foreign technology necessary to develop a series of measures that take into account complex engineering-geological conditions and seismic activity Ukraine.

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In Article pryvedenы proposals on creation эffektyvnoho steel concrete perekrыtyya a video crossbar with voids in rastyanutoy zone, upper nadopornoy armaturoy and pustotnorebrystыmy plates. **Prochnost, element, armyrovanyya, basalt, Fibro.** 

The paper presents the proposal to establish an effective reinforced concrete slab as bolt from the voids in tension zone, the upper superbasic fittings and voids-ribbed slabs.

Strength, element, reinforcement, basalt, fiber.

UDC 631.55

## INVESTIGATION OF PHYSICAL AND MECHANICAL PROPERTIES HEMP STALKS

### VA Hrydyakin, PhD\* Glukhiv National Pedagogical University Alexander Dovzhenko

A study of the physical and mechanical properties such as obliquity, length, diameter stalks of hemp, to study the structural and geometric parameters of the working machine designed collection of hemp.

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# Physical and mechanical properties obliquity, length, diameter stalks of hemp.

**Formulation of the problem.** Physical and mechanical properties of hemp stems are output data for justification of parameters of working bodies of machines for harvesting hemp. Investigations of physical and