MONITORING AND ANALYSIS OF GEODETIC VISUAL DEFORMATION.

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Abstract: This article presents the rules of procedure for using the visual monitoring method used when conducting technical inspection of buildings and structures.
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Visual deformation monitoring is a visual technical inspection of buildings and structures using the necessary tools. Its purpose is to ensure the safe operation of structures by detecting negative changes in the state of tension deformation at an early stage and taking quick measures to localize it.

At the first stage of work, the following is carried out:

* Technical inspection of the building, familiarization with its planning and design solutions

* Analysis of existing technical documentation

• The presence of visible defects, deformations and cracks, Cracking of the stone, violation of compounds between individual elements, etc.are detected.

• The nature and amount of damage caused is determined.

• A list of defects identified in the building is compiled with the indication of the name, description, photofixing of the structures and the schemes of these defects.

• If necessary, plate beacons are installed in the cracks (the device designed to track cracks has reference points and a string grid), using an electronic caliper, the starting value between the reference points, the installation date is set. beacons are recorded, photographic fixation is carried out.

• In addition, if necessary, slits are made at the ends of the cracks and the date of installation of the seams is set. When the cracks are opened lightly, recesses are made on them to determine the width of the hole using a special optical microscope, which makes it possible to further assess the dynamics of the development of cracks and draw appropriate conclusions. The soil

around the object is checked for cracks, malfunctions and irregularities, if found, they are photographed.

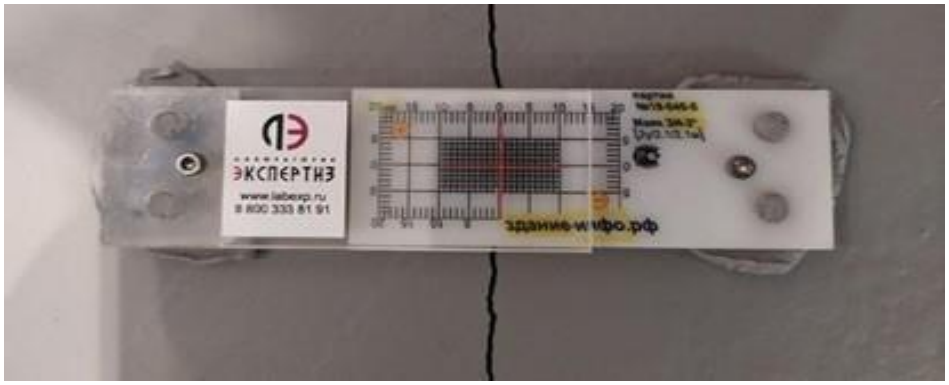
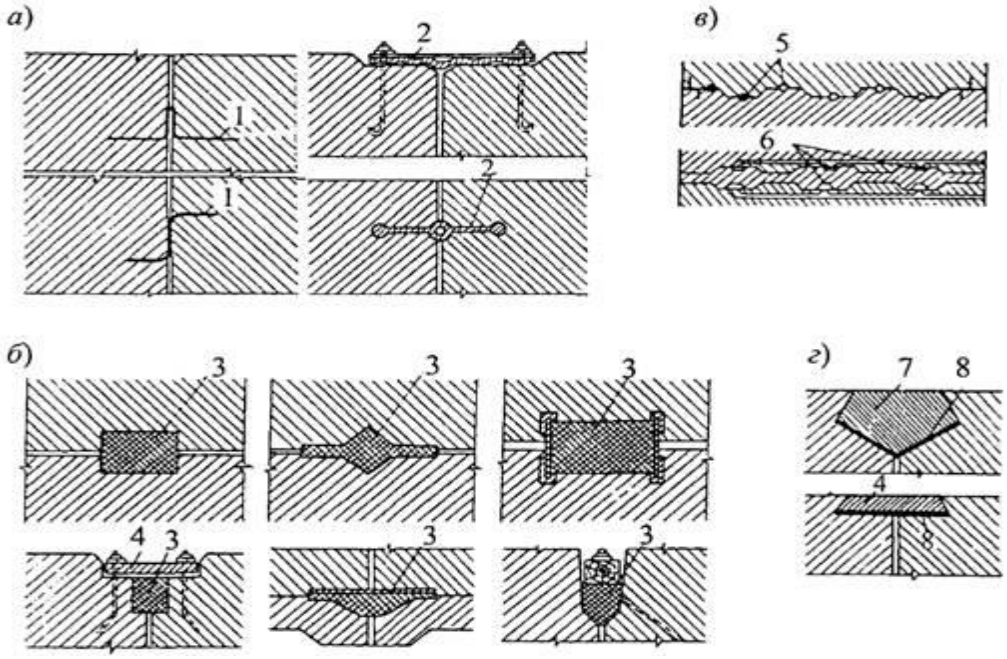


Plate Beacon

During further observations, readings are taken from the plate beacons, and the width of the cracks is measured again - you need to pay attention to the development of cracks and whether they protrude beyond the previously installed depths. A technical examination is carried out for photofixing and the presence of new defects.



With the production of each cycle, the list of defects is updated, if necessary, plate beacons can be additionally installed. The crack opening values obtained by Instrumental comparison are compared with the initial values and the values obtained in the previous cycle. The data is entered on the appropriate sheet. Pictures are compared. All information obtained is analyzed and relevant conclusions are drawn. If, within the framework of visual deformation monitoring, serious changes in the state of the object are detected, this is immediately reported to the client before a full report is made.

Do not neglect the observation of visual deformation.It is included in the complex of work on geotechnical monitoring, allows you to draw the right conclusions, supplement and strengthen the picture of ongoing deformation processes, identify irreversible breakdown processes in time and give impetus to actions to prevent these processes. Apparently, it can be said that the introduction of this practice even in regions and remote areas is relevant today.

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