

HYDROEFFECT

Hydrophobisator - Hydro-barrier as water isolating means

Hydro-barrier - a quick set means referring to materials of penetrating action withstands high hydrostatic pressure and is designed for deep and superficial waterproofing of concrete, brick and other moist (as well as under negative water pressure) building structures under construction, repair and restoration work.

Principle of operation: the means applied on the surface or introduced in the holes under the action of water migrates into the pores and capillaries of the material, whereby forming an **insoluble amorphous mass** which "clog" the pores, micro-cracks displacing concrete moisture, thereby completing volumetric waterproofing. Crystal growth is stopped at zero water and restarted on emersion.

Hydro-barrier is a multifunctional composition using nanotechnology with synthesized elements of organic compounds with high physical and chemical characteristics.

The means is produced from domestic raw materials, chemically neutral, belonging to a class of complex (composite) materials.

Manner apx.:

- 1. Surface treatment:** is carried out by coating the materials surface with the means.

The means applied on the surface or introduced in the holes under the action of water migrates into the pores and capillaries of the material, whereby forming **insoluble crystals** which "clog" the pores, micro-cracks displacing concrete moisture, thereby completing volumetric waterproofing. Crystal growth is stopped at zero water and restarted on emersion.

- 2. Depth:** by means of injection into boreholes (wells).

1. Holes are staggering drilled (unstressed manner) with a diameter of 15-32 mm at an angle of 15°-45° to the horizontal. The distance between holes is 100-300 mm horizontally and 100-200 mm

vertically (depending on the material porosity). Boring depth is $\frac{2}{3}$ of the wall thickness.

2. Remove the dust from the holes.

3. Hydrophobic agent is to be injected into the wall through the flowing well by gravity as long as the wall material absorbs. The next day this procedure shall be done one more time if necessary.

4. If the wall thickness is bigger than one meter, make injection under the pressure to 5 kg/cm^2 . In this case the distance between holes should be between 5 and 20 cm and holes should "not reach" the end of the wall being in the distance of 10 cm.

5. Finally injection holes are to be stemmed with the solution.

Recommendation: to determine the distance between the holes (i.e. the radius of a hole cover depends on the material, its density and water pressure) it is recommended to make the check boring.

Application: tanks, foundations, swimming pools, earth dams, dams, basements, tunnels, sewers, bridges, utility bridges, elevated roads, piers, docks, wells, and etc.