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Galinsky A.M. / Selection of the composition of the hardening solution for the device horizontal impervious screen // Building materials and products, 2015, №3-4, pp. 24-29.- Fig .: 7 – Tabl.: 4. -Bibliography: 12 titles.

The Research Institute of Building Production (Kiev, Ukraine) develops the technology of horizontal impervious screens (HIS) construction under existing buildings, using method of horizontally directed wells’ drilling. Between two parallel horizontal wells, where limiters of grabs are tightened to prevent caving, HIS from hardening impervious material (IM) is constructed using special working body. To define composition of hardening IM, we conducted lab researches on a large-scale modeling bench. Researches were conducted using experiment planning method. As a result of experiments we defined the compound of hardening clay-cement-sand solution which allows to obtain the least impermeability of a screen with filtration coefficient К = 4,7\*10-7 sm/s. Physical and mechanical indicators both for liquid and hardened solution were defined. Also we determined the influence of quantity of components on the properties of liquid solution and hardened IM.

Keywords: experiment, horizontal impervious screen, well, drilling, composition, clay, cement-sand mortar.