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Abstract

Water. When uttering this magic word, different images would come to each of us. No doubt, water is one of the most important things for life. For humankind water is essential as a biological aspect, but long term humidity of the environment or short term excess of water quantity could be rather unpleasant.

Since ancient history people have paid attention to protection against leaking water or dampness in their inhabitation using various technology. The very first technologies were based upon natural principles such as ventilation, clay, stonework, etc. Current rapid progress of science, technology and chemistry particularly, provide new methods and solutions for dampness treatment. However, it would be rather imprudent to leave out the experience of our ancestors and give up the old technologies and approved methods of the treatment according these conditions:

- efficiency of the treatment method,
- protection of the historical and technical value of the structure,
- reduction of deterioration of the structure,
- durability of the treatment.

In spite of intensive interest from the general public, experts or scientists in this field, none of the common treatment method meets all the criteria. For the successful solution of the problem, causes of dampness need to be eliminated before any treatment is applied. Many widely-used treatment methods ignoring the cause of dampness lead to imperfect and temporary results. The current trend in dampness treatment focuses on non-destructive methods. One of the common non-destructive methods is grouting. The advantages of grouting, a comparison of grouting materials, availability on the market and efficiency of the grouting method is the main content of this thesis.