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on using Isollat heat insulating (energy saving) coating at heat renovation of buildings

Scientific-Technical Center of GlavStroyProekt Association carried out a comprehensive study of properties of Isollat liquid-ceramic coating (Coating) produced by Special Technologies company, Ekaterinburg, in 2003-2006.

The aim of the study was to confirm the declared properties of the Coating and include it into the list of materials recommended for use at construction enterprises and housing & communal services of the Russian Federation.

Based on the analysis of experimental data obtained in laboratory studies and in the monitoring of objects where the Coating was used in regions with different climatic conditions, the following conclusion was made:

- Isollat significantly reduces the radiation component of the heat flow from its surface due to reflection and scattering of infrared radiation; in numerical terms heat loss is reduced up to 40-45%.

- Isollat has a strong ability to reflect visible (solar) radiation, the quantitative expression of the reflected energy is in the range of 93-95%.

- Tests made for the Coatings confirm that it is a waterproof material providing stable corrosion protection. At that vapor permeability of the Coatings is found to be in the range of 70-120 g/m²/24 hours.

- Accelerated life test carried out on the basis of laboratory equipment show high durability of Isollat - at least 20 years - without any significant change in physical and mechanical properties.

- Isollat has good adhesion to almost all materials used in construction, has a wide color range.

Taking into account the range of own properties of the Coatings confirmed by the results of special laboratory tests (Minutes of Meeting No.36/BC of 23.03.04, No. 110/BC-1 of 14.07.05), as well as positive results of heat renovation of block and panel buildings using Isollat in Tyumen, Nefteyugansk, Nyagan, Kazan, Zheleznogorsk (Technical Reports for the period of 12.04-02.06), the Scientific and Technical Council of ARA GlavStroyProekt has decided the following: to recommend Isollat liquid-ceramic coating for use in the following cases:

1. During thermal rehabilitation by applying to the outer surface of the fencing structures in construction objects;
2. When repairing fencing structures of buildings and structures, including during energy renovation of fencing structures and roofs of modular and prefabricated buildings built in 50th-70th.
3. To be applied to the inner surfaces of fencing structures of residential and utility rooms, as well as big production premises - shops, warehouses, outlets, concert halls, sports facilities, etc. - in order to reduce heat loss and to ensure uniform temperature.
4. For coating of tanks and reservoirs to protect the contents from heating (evaporation) and to prevent metal corrosion.
5. At the facilities of housing & utilities and industrial enterprises as an alternative to traditional means of thermal and corrosion protection.

Deputy Director of the Association

Chairman of the Scientific and Technical Council

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