

Properties of Modified Dry Masonry Mixtures for Effective Masonry Units

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Abstract : The paper is devoted to the problem of the development of dry light-weight mixtures with hollow ceramics microspheres (CMS) for masonry works. For the one-layer fencing structures including effective masonry units, the use of “warm” masonry mortars is necessary. The used light-weight masonry mortars do not provide the brand strength and thermal uniformity of the fencing structures because of high average density. The CMS are effective light-weight aggregate for such mortars. The influence of the dosage of CMS on the physics-and-mechanics parameters and the technological properties of the masonry mortars were studied. The optimal mixture compositions have been obtained and their main properties have been determined. The influence of an air-entraining admixture and redispersible polymer powders on the average density and physics-and-mechanics parameters of the masonry mortars were studied. The optimal compositions of light-weight dry masonry mixtures with CMS have been suggested.

Keywords : dry mortar mixtures, light-weight dry mixtures, hollow ceramics microspheres, masonry mortars, “warm” mortars, air-entraining admixture, redispersible polymer powders

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