

TESTING CENTRE

UralstroITest

Accreditation Certificate No. POCC RU 0001.21CA04

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APPROVED

Head of UralstroITest Testing Centre

 A.I. Shestakov

December 18, 2013

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Stamp: Limited Liability Company "UralstroITest", Russian Federation, Yekaterinburg city, Primary State Registration Number (OGRN) 1056602745506.



Specimen products proof test report No. 1946

of December 18, 2013

Basis for carrying out of testing / Agreement No. 1477 of 28.10.2013

Product description: Test cubes of Penekrit mortar with a dimension of 70 x 70 x 70 mm (supplied by the customer); radiation-exposed test cubes of Penekrit mortar (supplied by the customer) with a dimension of 70 x 70 x 70 mm (test cubes were exposed to gamma-radiation (^{60}Co . radionuclide) under standard conditions within the period from 12.04.2013 to 07.10.2013 at the branch of the Federal State-owned Unitary Enterprise "Karpov Institute of Physical Chemistry" with the use of KCB-500 radiation plant. The absorbed dose is $1000 \pm 10\%$ mrad).

Customer: ZAO "Group of companies "Penetron-Russia", 1, Zhukovsky Square, Yekaterinburg, 620076, Russia.

Date of specimen acquisition: October 28, 2013. Date of Sampling report – October 21, 2013. Laboratory No. K-229/13.

Testing procedure: GOST 5802-86.

Date of specimen testing: November 18, 2013.

Test conditions: Tests were performed under standard climatic conditions – at an air temperature of 20 ± 5 °C and a relative humidity not less than 55%.

Tests were performed with the use of hydraulic press PGM-1000MG4 (ПГМ-1000МГ4) No. 231. Range of measurement – 100 t. Accuracy of measurements does not exceed $\pm 1\%$.

Testing results: Results of testing are given on page 1. Total number of pages is 1.

Test cube crushing strength, MPa	Radiation-exposed test cube crushing strength, MPa
52,07; 40,60; 53,10	42,90; 48,30; 46,90
Average value – 48,6	Average value – 46,0

Conclusion: After gamma-radiation with a dose of 1000 mrad crushing strength of group B specimens is less than that of test cubes by 2,56 MPa (5,3%).

Note: Testing results refer to tested specimens only. Full or partial reproduction of the report requires the permission of UralstroITest Testing Centre head.

Specialist responsible for testing:



E.N. Vlasova