

## The group of companies "Penetron Russia"

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APPROVED BY:
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Recommendations for manufacture and preparation of concrete samples for testing concrete additive "Penetron Admix" (The basis is TU TU 5745-001-77921756-2006)

- 1. Concrete samples (control samples and the samples with the additive) of the required grade and conditions of hardening, in the amount according to GOST.
- 2. The additive Penetron Admix is dosed in the amount of 1 % from the weight of the cement.
- 3. Design amount of dry additive "Penetron Admix" shall be dissolved in design amount of make-up water, and then the obtained solution of "Penetron Admix" shall be added in the course of preparation into concrete mixture and mixed within 1-2 minutes.
- 4. The samples (control samples and the samples with the additive) shall be conditioned in the chamber of normal hardening for 12 days.
- 5. Then the surface of the samples is cleaned from the dust, dirt and the traces of lubricant by means of wire brush or abrasive stone. The samples (control samples and the samples with the additive) are put into the container with water on the supports so that about 3/4 of sample height was covered with water (For example: if sample height is 150 mm, then water height is 112,5 mm). The samples are stuck on the pallets so that the distance between the samples and also between the samples and chamber walls was not less than 5 mm. The area of contact of the sample with the pallets, on which it is established, shall not exceed 30 % of the area of bearing face of the sample. The samples are conditioned for 3 days. This stage shall provide capillary rising of water into uncovered parts of the samples and water saturation of bottom (water-covered) part of the sample which provides the process of growth of new crystal formations in the body of concrete sample. If capillary aspiration it is not observed in one day, then the height of uncovered part of the sample shall be reduced to 15 mm.
- 6. Then the samples are taken out of the water and conditioned at the temperature (20 $\pm$ 2) °C and air humidity 55  $\pm$  5 % within 13 days.
- 7. The tests according to GOST are to be conducted at the age of 28 days.