

## Резиме

U specijalističkom radu data je tehnologija proizvodnje betona. Opis kompleksa i postrojenja betonske baze. Osnovna oprema betonske baze. Osnovne i pomoćne sirovine za proizvodnju betona. Agregat-rečni šljunak. Komponente betona. Agregat kao komponenta betona. Vlažnost agregata i njeno određivanje. Cement kao komponenta betona. Način proizvodnje cementa. Vrsta cementa i njihov sastav. Mehanička svojstva betona i zahtevi kvaliteta. Najvažnija fizička svojstva cementa. Voda kao komponenta betona. Aditivi kao komponenta betona. Materijali za izradu betona. Svojstva svežeg betona. Struktura svežeg betona. Viskozimetri. Tehnološka svojstva betona. Metode ispitivanja konzistencije svežeg betona. Faktori uticaja na tehnološkičnost svežeg betona. Zavisnost čvrstoće svežih i "mladih" betona od vodocementnog faktora. Vreme vezivanja (obradivosti) betonskih smeša. Mleveni i drobljeni kamen, cement, voda, aditivi, boje za beton, kontrola kvaliteta betona. Datisu konkretni primeri projektovanog sastava betona marke MB40 sa recepturama za neke standardne elemente određenih proizvođača betonskih elemenata, sa podacima o sastavu betona, vodonepropustivosti betona, учешћу агрегата по фракцијама за 1m<sup>3</sup> бетона, уčešću cementa za 1m<sup>3</sup> betona, vodocementni faktor, masa vode za 1m<sup>3</sup> betona, masa aditiva za 1m<sup>3</sup> betona, zapreminska masa svežeg betona, podaci o svežem betonu, podaci o očvrslom betonu. Ispitivanje otpornosti cevi na temeni pritisak. Fizičko - mehanička svojstva betona (Osnovni zakoni čvrstoće betona). Projekat betonske mešavine-određivanje potrebnog vodocementnog faktora. Uticaj režima očvršćavanja na rast čvrstoće . Mehanizam loma betona. Čvrstoća pri pritisku – Uticaj oblika i veličine uzorka. Marke betona. Čvrstoća pri zatezanju-pritisku. Vodonepropustljivost betona –VDP. Osnovni faktori uticaja. Promena nepropusnosti betona u funkciji starosti i dela jednog od mogućih postupaka ispitivanja. Ispitivanje na uređaju VDP. Ispitivanje na presi. Merenje visine penjanja vode nakog završenog opita.

*Кључне речу: tehnologija betona, komponente betona, vodonepropustnost betona, proizvodnja cementa, granulat.*

## Abstract

The specialist paper presents the technology of concrete . Description of complex systems and concrete base. Basic equipment concrete bases. Primary and secondary raw materials for the production of concrete. Aggregate - river gravel. The components of concrete. Aggregate as komponenta concrete. Humidity generator and its determination . Cement as a component of concrete. Method of manufacture of cement. Types of cement and their composition . The mechanical properties of concrete and quality requirements . The most important physical the properties of cement. Water as a component of concrete. Additives as a component of concrete. Materials for concrete. Properties of fresh concrete . The structure of fresh concrete . Viscometers . Technological properties of concrete. Methods of testing the consistency of fresh concrete. Factors influencing technologicality fresh concrete . The dependence of the strength of fresh and " youth " of concrete water-cement ratio . Setting time ( workability ) of concrete mixtures. Ground and crushed stone , cement , water, additives , color concrete , quality control of concrete. DATIS specific examples of the projected composition of concrete, MB40 with recipes for some standard elements of certain manufacturers of concrete elements , with data on the composition of concrete watertightness of concrete participation units in fractions of 1m<sup>3</sup> of concrete , the share of cement for 1m<sup>3</sup> of concrete , water-cement ratio , the mass of water to 1m<sup>3</sup> of concrete , mass additives for 1m<sup>3</sup> of concrete density of fresh concrete data on fresh concrete data on hardened concrete.

Resistance test tubes scalp pressure . Physical - mechanical properties of concrete (Basic Laws strength of concrete ) . Concrete mix design - determining the required water-cement ratio . The influence of curing on the strength of growth . The mechanism of fracture of concrete. Compressive Strength - The impact of the shape and size of the sample. The concrete . Tensile - pressure. Waterproof concrete - VDP . The main influencing factors . Change impermeability of concrete as a function of age and part of one of the possible testing procedures. Testing the unit VDP . Examination of the press. Measuring the amount of climbing water since completes the experience.

**Keywords :** *concrete technology , components of concrete Waterproof concrete , cement , granulated .*