



Donka Würth<sup>1</sup>

Jure Galić<sup>2</sup>

Martina Huljev<sup>3</sup>

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## PROJEKTIRANJE I IZVOĐENJE „BIJELIH KADA“

### Sažetak:

Pojam "bijeke kade" (Weiße Wanne) podrazumijeva da vanjski/obodni zidovi imaju funkciju hidroizolacije i funkciju nosivosti. Tako objekti koji su djelomično ili potpuno uronjeni u podzemne vode moraju imati hidroizolaciju zbog ulaska tlačne vode ili obrnuto, kod spremnika, bazena i pročistača otpadnih voda, ne smije doći do ispuštanja vode. Kod sistema "bijeke kade" nema vanjske hidroizolacije u obliku filma ili krute hidroizolacije, već sami zidovi koji moraju biti vodonepropusni preuzimaju ulogu hidrozolacije. U Hrvatskoj je veliki trend projektiranja ove vrste podzemnih građevina, no međutim u jedini dokument tehničkoj regulativi su austrijske smjernice, koje nisu u Hrvatskoj prihvaćene. Austrijsko udruženje za beton za ovaj način izvođenja konstrukcije izdala je smjernice Vodonepropusni betonski objekti. U ovom radu dat će se osvrt na najvažnije detalje, koji su obavezni tijekom projektiranja i gradnje. Projektant koji projektira podzemne građevine bez hidroizolacije, mora poznavati tehnologiju izvedbe, vrstu betona i vrstu sredstava za brtvljenje, kako bi projekt bio uspješan. Na izvođaču je velika odgovornost da izvede prema projektu i poznaje smjernice za izvođenje ove vrste objekata. I na kraju betoni koji se ugrađuju moraju imati posebna svojstva kako bi se osiguralo da u AB elementima nema pukotina i procurivanja okolne podzemne vode.

### Ključne riječi:

Vodonepropusni betonski elementi, brtve, beton niske topline hidratacije

## DESIGNING AND PERFORMING „WHITE TUBS“

### Summary:

Under the term „white tubs“ it is assumed that the outer circumferential walls beside bearing and support capacity functions have a function of waterproofing. Structures that are partly or completely submersed in ground water must have insulation to prevent water leakage under pressure, or as well as tanks, pools or sewerage treatment plants to prevent bleeding. So, the walls of the facility must be watertight without the use of additional waterproofing, and it is necessary to apply sealant to joints structural elements. In the performance of this type of object it is necessary to pay attention to the use of the building and the amount of groundwater. To ensure that building is watertight it is important to properly select the type of concrete, the dimensions of elements, the length of concrete parts, and execution and way of sealing. Execution of watertight reinforced concrete structure in the underground parts of buildings, the use of which permits it has advantages compared to traditional waterproofing as financially more favorable and faster performance, and to reduce the impact of time on construction. It is necessary that objects are built as designed and according to the guidelines for execution of this type of structures. Nowadays in Croatia lots of structures are designed this way, but only technical paper is Austrian guidelines "Watertight concrete objects" which are not officially accepted in Croatia. In this paper major rules for design and execution will be presented.

### Key words:

waterproof elements, seals, concrete low heat hydration

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<sup>1</sup> MSc. Donka Würth, CEng., Zagreb University of Applied Science, Department of Civil Engineering, Av.V. Holjevcina 15, Zagreb, dwurth2@tvz.hr

<sup>2</sup> MSc Jure Galić, CEng., Zagreb University of Applied Science, Department of Civil Engineering, Av.V. Holjevcina 15, Zagreb, Croatia, jgalic@tvz.hr

<sup>3</sup> Martina Huljev, MCEng., Zagreb University of Applied Science, Department of Civil Engineering, Av.V. Holjevcina 15, Zagreb, Croatia, mhuljev@tvz.hr.