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## ISPITIVANJE INTEGRITETA ŠIPOVA METODOM SONIC INTEGRITY TEST (PILE INTEGRITY TEST)

### **Sažetak:**

*U građevinskom konstrukterstvu često se primjenjuje duboko fundiranje kao jedan od sigurnijih načina za prenos sila sa konstrukcije u temeljno tlo. Postoji širi izbor načina izrade šipova koji zavise od zahtjeva interakcije objekta i tla, raspoložive tehnike i tehnologije te u konačnom, od materijalizacije samog šipa. Često primjenjivana tehnologija izrade šipa je metoda bušenja koja je jednostavna sa stanovišta tehnološkog postupka i potrebne tehnike za izradu. Nakon izrade šipova neophodno je da imamo informaciju o kvalitetu izvedenog šipa, odnosno o njegovoj neprekinutosti (integritetu). Na raspolaganju postoji nekoliko metoda a jedna od njih je ispitivanje sonic integrity testom. Ova metoda mjeri odziv šipa, kao funkciju vremena, na pobudu izazvanu udarom čekića. Podaci se ocjenjuju obično u frekventnom domenu. Metoda ima ograničenje u pogledu detekcije samo određenih defekata nastalih u toku izrade šipa. U radu je dat prikaz rezultata dobijenih ispitivanjima šipova za mostove na Autoputu Banja Luka-Doboj, dionica Prnjavor-Doboj (Johovac 1) km 49+945,00 km - 71+909,72 km izvedenih tokom 2015. god.*

### **Glavne riječi:**

*Šipovi, integritet šipova, defekti, akcelerometar*

## PILE INTEGRITY TESTING USING THE SONIS INTEGRITY TEST (PILE INTEGRITY TEST)

### **Summary:**

*In civil engineering constructing deep foundation is often used as one of the safer ways to transfer forces from constructions to subsoil. There is a wider range of choices for creating piles that depend upon the interaction requirements between the construction and the ground, available techniques and technologies, and ultimately, of the pile materialization itself. Frequently applied technology in pile production is the drilling method. The drilling method is a pile creation method with both simple technological process and simple development technique. Upon the creation of piles, it is necessary to have information about quality of the produced pile in regards to its integrity. There are several pile integrity testing methods, one of which is a sonic testing integrity test. This method measures the pile response, as a function of time, to the shock caused by a hammer excitation. The data is usually evaluated in the domain of frequency. This method has a limit due to its detection of only certain defects generated during the pile creation. This paper presents the results of pile testing for bridges on the highway Banja Luka-Doboj, section Prnjavor-Doboj (Johovac 1) km 49 + 945.00 km - 71 + 909.72 kilometers performed during 2015.*

### **Key words:**

*Pile, pile integrity, defects, accelerometer*

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