عنوان مقاله:

Pulse Velocity and Rebound Hammer Test on Reinforced Concrete Slab in the Former Civil Engineering Laboratory Building

محل انتشار:

ششمین کنفرانس بین المللی پیشرفتهای علوم و تکنولوژی (سال: 1391)

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نویسندگان:

Fadhluhartini Muftah - *Faculty of Civil Engineering, Universiti Teknologi Mara Pahang, Malaysia*

Mohd Syahrul Hisyam Mohd Sani

خلاصه مقاله:

Reinforced concrete slab is an important structure component in a building. Reinforced concrete that has been used for long time should be evaluated to determine the current strength, durability and to know how long it can be stand. Poor quality of reinforced concrete will cause discomfort to customers, safety will be affected and strength will be reduced. If the problem is not monitored properly and no improvement is made, the reinforced concrete will fail and eventually it will collapse. The former building of civil engineering laboratory that was used for 12 years from 2000 to 2012 was being investigated their strength and crack percentage. In this study, six laboratories are been prepared and assessed. Equipments that used in this study are rebound hammer test and pundit test. The rebound hammer test is used to determine the current strength while the pundit test is used to investigate the pulse velocity, presence of crack and also properties of concrete. From the data, it was found that the laboratory achieve 30-40 MPa in current compressive strength. While in Pundit Test, it was showed that the quality of concrete in the laboratory is still having a good condition but doubtful in concrete quality. Finally reinforced concrete slab for this laboratory showed the consistent strength and no large or medium crack were detected. Thus, the reinforced concrete slab at former civil engineering laboratory is still safe and meets moderate quality

کلمات کلیدی:

Pulse Velocity, Rebound Hammer, Non-destructive Test, Reinforced Concrete Slab, Laboratory