

## ABSTRAK

Besi tulangan merupakan besi yang digunakan untuk konstruksi beton atau yang lebih dikenal dengan beton bertulang. Kuat lekat adalah kemampuan besi tulangan dan beton yang menyelimuti dalam menahan gaya dari luar. Tegangan lekat memegang peranan penting dalam mencegah beton tergelincir (slip). Dalam praktek, metode desain yang akan digunakan adalah metode eksperimental laboratorium. Dengan benda uji masing-masing berjumlah 4 buah dengan variasi setiap 5 sampel deteliti pada umur 28 hari. Dimana mutu beton yang digunakan f'c 20 MPa. sampel untuk kontrol mutu beton, Sampel uji kuat lekat beton tanpa kait dan kait 135° metode *cast in place*, dan tanpa kait metode *post installed*. Setelah dilakukan penelitian didapatkan hasil pengujian *pull-out test* pada beton umur 28 hari metode (*post installed*) dengan lubang grouting 16 mm sedalam 150 mm yang diperkuat Sika *Anchorfix-2* menggunakan besi tulangan D10 didapat nilai kuat lekat rata-rata sebesar 6.752 Mpa. Metode (*cast in place*) tanpa kait didapat nilai rata-rata sebesar 8.493 Mpa dan kait 135° didapat nilai rata-rata sebesar 8.747 Mpa. Pada metode (*post installed*) mengalami pengaruh pada lubang grouting yang halus sehingga tidak terjadi kerjasama antara bahan Sika *Anchorfix-2* pada beton, kegagalan terjadi berupa tulangan tercabut beton utuh. Dari hasil pengujian metode (*cast in place*) menggunakan kait 135° mengalami kenaikan sebesar 3% terhadap kuat lekat besi tanpa kait.

**Kata kunci:** beton bertulang; kuat lekat beton; sika *anchorfix-2*; grouting beton

## ABSTRACT

Rebar is iron used for concrete construction or better known as reinforced concrete. Bond strength is the ability of the reinforcing steel and concrete that surrounds it to withstand external forces. Bond stress plays an important role in preventing concrete from slipping. In practice, the design method that will be used is the laboratory experimental method. With 4 test objects each with variations of 5 detailed samples at the age of 7 and 28 days. Where the quality of concrete used is f'c 20 MPa. samples for concrete quality control, concrete bond strength test samples without hooks and 135° hooks cast in place method, and without hooks post installed method. After conducting the research, the results of the pull-out test on concrete aged 28 days (post installed) method with 16 mm grouting holes 150 mm deep reinforced with Sika *Anchorfix-2* using D10 reinforcing iron obtained an average bond strength value of 6,752 Mpa. The method (cast in place) without a hook obtained an average value of 8,493 Mpa and a 135° hook obtained an average value of 8,747 Mpa. The (post installed) method experienced an influence on the smooth grouting holes so that there was no cooperation between the Sika *Anchorfix-2* material and the concrete, failure occurred in the form of the reinforcement being pulled out of the intact concrete. From the results of testing the method (cast in place) using a 135° hook, there was an increase of 3% in the bond strength of iron without a hook.

**Keywords:** reinforced concrete; concrete bond strength; sika *anchorfix-2*; concrete grouting