ABSTRACT

This research aims to determine the results of the effect of adding pieces of tire rubber on the flexural strength of concrete. This research was conducted at the Civil Engineering Laboratory, Putra Indonesia University "YPTK" Padang Campus. The object used in this research is the effect of adding pieces of tire rubber on the flexural strength of concrete with percentages of 5%, 10% and 12%. The results of research and analysis regarding the influence of adding pieces of tire rubber on the flexural strength of concrete in the form of small pieces measuring 2 cm long and 2 mm wide have a very positive impact on the flexural strength value, this is in line with the increase in the flexural strength value for each percentage of the object. tests such as normal concrete have a flexural strength value of 8 Mpa, a percentage of 5% has a flexural strength value of 10 Mpa, 10% has a flexural strength value of 13 Mpa and 12% has a flexural strength value of 7 Mpa, meaning there is an increase in the flexural strength value in normal concrete, percentage of 5% to optimum at 10%. So these pieces of tire rubber have a positive effect and are suitable as an alternative addition to modified concrete mixes, and are suitable for use in structural concrete beams in residential buildings, house foundations and bridges.

Keywords: Concrete, Flexural Strength, Tire Rubber.

ABSTRAK

Penelitian ini bertujuan untuk mengetahui hasil pengaruh penambahan potongan karet ban terhadapkuat lentur beton. Penelitian ini dilakukan di Laboratorium Teknik Sipil Kampus Universitas Putra Indonesia “YPTK” Padang. Objek yang digunakan dalam penelitian ini adalah pengaruh penambahan potongan karet ban terhadap kuat lentur beton dengan persentase 5%, 10% dan 12%. Hasil penelitian dan analisis untuk penambahan pengaruh penambahan potongan karet ban terhadap kuat lentur beton yang berbentuk dengan potongan kecil-kecil berukuran panjang 2 cm dan lebar 2 mm sangat berdampak positif pada nilai kuat lentur, hal ini seiring dengan meningkatnya nilai kuat lentur pada tiap persentase benda uji seperti beton normal memiliki nilai kuat lentur sebesar 8 Mpa, persentase 5 % memiliki nilai kuat lentur sebesar 10 Mpa, 10% memiliki nilai kuat lentur sebesar 13 Mpa dan 12% memiliki nilai kuat lentur sebesar 7 Mpa, artinya ada kenaikan nilai kuat lentur di beton normal, persentase 5% sampai optimum di 10%. Sehingga potongan karet ban ini berpengaruh positif dan layak sebagai alternatif penambahan campuran beton modifikasi, serta cocok digunakan pada balok beton struktural pada bangunan rumah tinggal, pondasi rumah dan jembatan.

Kata Kunci: Beton, Kuat Lentur, Karet Ban.