ABSTRAK

SIFAT MEKANIK PANEL FEROSEMEN AKIBAT BEBAN LENTUR DAN GESER TERPUSAT

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Panel ferosemen memiliki sifat mekanik yang dipengaruhi oleh ukuran tulangan, kekuatan mortar, kekakuan bentuk struktur, cara pembuatan dan pengolahannya. Panel ferosemen yang diuji dalam penelitian ini berbentuk pelat U dengan rib dipinggir berukuran 120 cm x 80 cm x 8 cm dan tebal permukaan 2,5 cm. Penelitian ini bertujuan untuk mengetahui tentang karakteristik sifat mekanis panel ferosemen akibat pembebanan berupa lentur dua titik dan geser terpusat. Pengujian juga dilakukan terhadap bahan penyusun panel ferosemen seperti pengujian terhadap mortar, tulangan baja, dan kawat ayam. Hasil pengujian terhadap bahan penyusun panel ferosemen akan dijadikan sebagai data *input* perhitungan dan dibandingkan dengan hasil analisis teoritisnya. Perbandingan antara hasil pengujian panel ferosemen dan hasil analisisnya, diketahui bahwa desain penampang dan bahan penyusun ferosemen telah sesuai dan berfungsi dengan baik dalam menahan pembebanan yang diakibatkan oleh dua pembebanan pada benda uji panel ferosemen.

Kata kunci : Sifat Mekanik Ferosemen, Bahan Penyusun Ferosemen, Uji Lentur Dua Titik Pembebanan, Uji Beban Geser Terpusat, Analisis Teoritis Panel Ferosemen

ABSTRACT

MECHANICAL PROPERTIES OF FEROCEMENT PANEL DUE TO FLEXURAL AND PUNCHING SHEAR LOADS

By

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Ferrocement panels have mechanical properties that are influenced by the size of the steel reinforcement, the strength of the mortar, the stiffness of the structure, how it is manufactured and processed. The speciment in this study was in the form of a U-plate with ribs measuring 120 cm x 80 cm x 8 cm and a surface thickness of 2.5 cm. This study aims to determine the mechanical properties of ferrocement panels due to flexural and punching shear loads. Testing is also conducted on the constituent materials of ferrocement panels, such as testing on mortar, steel reinforcement, and chicken mesh. The results of testing on the constituent materials of ferrocement panels will be used as input data for calculations and compared with the results of theoretical analysis. By comparing the results of the ferrocement panel testing and analytical analysis, it is revealed that the design and constituent materials of ferrocement are in accordance and function effectively in resisting the load generated by the dual loading on the ferrocement panel test specimen

Keywords :Mechanical Properties of Ferocement, Constituent Components of Ferrocement, Two-Point Flexural Test, Punching Shear Test, Theoretical Analysis of Ferrocement Panels