Experimental Test for Compressive Yield Strength of Cold Form Steel C Profile from X and Y Product

Mudjanarko, SW and Bahaswan, R
Deparment of Civil Engineering
Narotama University
Surabaya, 60117, INDONESIA
sri.wiwoho@narotama.ac.id, rizal.bahaswan@narotama.ac.id

Nawir Rasidi*
Deparment of Civil Engineering
Polinema Negeri Malang
Malang, 65141, INDONESIA
nawirrasidi@gmail.com

Achfas Zacoeb
Deparment of Civil Engineering
Brawijaya University
Malang, 65141, INDONESIA
zacoeb_a@yahoo.com

Ramadhansyah Putra Jaya
Deparment of Civil Engineering
Universiti Malaysia Pahang
Malaysia
ramadhansyah@ump.edu.my

Mohd Haziman Wan Ibrahim
Department Jabatan Kejuruteraan Awam
Universiti Tun Hussein Onn Malaysia
Malaysia
haziman@uthm.edu.my

Mohd Fadzil Bin Arshad
Deparment of Civil Engineering
Universiti Teknologi MARA
Malaysia
mohdfadzil.arshad@salam.uitm.edu.my

Firdaus Pratama Wiwoho
Deparment of Environmental Engineering
Institut Teknologi Sepuluh Nopember
Surabaya, 60117, INDONESIA
ferryfirdausp@gmail.com

© IEOM Society International 1195
Abstract

Mild steel is one of the components that are often used by the community as a building structure. In this study try analyze how much the flexural strength of the mild steel C profile. This is done because the C Profile of mild steel is easy to work with, easy to obtain on the market and relatively inexpensive. Lightweight steel profile C can be used as a substitute for the roof truss of wood and concrete. The results obtained from the flexural strength of steel C profiles lightness of each test object. High strength mild steel C profile bending strength 7.5 cm, thickness 1 mm from PT. X with a span of 1 m and with one point compressive load produced deflection of 9.7 mm, P max 214 kg and σlt (compressive yield strength) 23.61 kg / mm² while from PT. Y produced deflection of 9.2 mm, Pmax 210 kg and σlt (compressive yield strength) 21.82 kg / mm². Thus the best results are generated from the PT. X compared to PT. Y.

Keywords: Experimental, C profile, flexural strength

Acknowledgements

This article is supported, funded by Narotama University and Ristekdikti Indonesia Grant.

Biography / Biographies

Sri Wiwoho Mudjanarko is Rector Narotama University, Surabaya Indonesia. Sri Wiwoho Mudjanarko holds a Bachelor of Civil Engineering degree in Civil Engineering from Narotama University, a Master of Civil Engineering degree in Institut Teknologi Sepuluh Nopember dan a Doctor of Civil Engineering degree in University of Brawijaya, Indonesia. He has been recognized as a professional engineer with more than 27 years of experience working with closely held businesses. He is a member of the Indonesian Railway Society (MASKA) Indonesia.

Nawir Rasidi is a Lecturer, Departement of Civil Engineering, Polinema, Malang Indonesia. Nawir Rasidi holds a Bachelor of Civil Engineering degree in Civil Engineering from University of Brawijaya, a Master of Civil Engineering degree in University of Brawijaya and a Doctor of Civil Engineering degree in University of Brawijaya, Indonesia. He has been recognized as a professional engineer with more than 24 years of experience working with closely held businesses.

Firdaus Pratama Wiwoho is a Bachelor Student of Environmental Engineering, Institut Teknologi Sepuluh Nopember. Surabaya, Indonesia

Rizal Bahaswan is a Lecturer / Supervisor, Departement of Civil Engineering, Narotama University, Surabaya Indonesia

Achfas Zacoeb is a Lecturer, Departement of Civil Engineering, Brawijaya University, Malang, Indonesia

Ramadhansyah Putra Jaya, is a Lecturer, Departement of Civil Engineering, Universiti Malaysia Pahang, Malaysia

Mohd Haziman Wan Ibrahim, is a Lecturer, Department Jabatan Kejuruteraan Awam, Universiti Tun Hussein Onn Malaysia. Malaysia

Mohd Fadzil Bin Arshad is a Lecturer, Departement of Civil Engineering, Universiti Teknologi MARA, Malaysia