

**ANALYSIS OF FORMWORK DEFLECTION AND QUALITY CONTROL OF
PRESTRESS BEAM**

Final Report

As one of the requirements for obtaining a Bachelor's degree from

Atma Jaya University Yogyakarta



Oleh:

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ABSTRACT

Each project has different standards according to the function and purpose of each building. There are several main components found in the building structure such as columns, beams, and slabs. Columns are vertical compression members that carry the weight of the entire building. Beams serve as a binder for columns and seats for the upper floor and roof. To make the desired shape of the column, beam or slab, formwork is needed which aims to be a concrete mold so that columns, beams and slabs can be formed according to the desired shape and design. Because formwork is a very important component of a building structure, a good formwork strength analysis is required. Each project has different reinforced concrete specifications according to the design that has been made. The specifications of a concrete can be fulfilled if it fulfills various requirements, to fulfill the requirements, before casting can be carried out a temperature test and a slump test. At each casting, before pouring the concrete it is very important to test the concrete so that it can monitor whether the concrete is of good quality and according to specifications. This is one of the methods of work carried out on the Upper West project in order to produce a building with good quality and on time. In the Upper West project there are also prestress beams that use a different quality of concrete from the other beams, namely FC 45 screening concrete. After casting, the prestress beams will also be subjected to a stress test and concrete compression test to determine their feasibility. An obstacle in the project needs to cause delays in existing progress, therefore it is necessary to prepare a catch up plan to overcome existing obstacles and minimize delays so that the project can still be completed on time without causing harm to the owner or the contractor himself.

Keywords: Structure, Method, Prestress

STATEMENT

The undersigned,

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Truly declare that the Final Project with the title:

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is an original work and is not the result of plagiarism from the work of others. We, the undersigned, contribute to this Final Project in the same proportion. Thus, author make this statement as a complement to this Final Project document.

Yogyakarta, 10 January 2022



(Angelina Amara Nugroho)

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Final Report

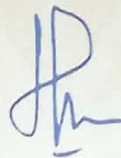
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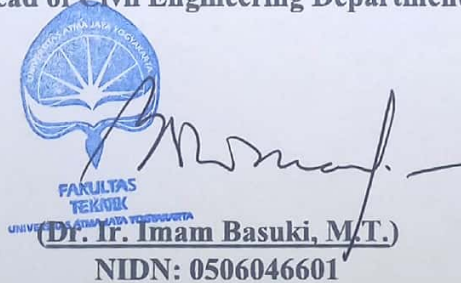
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PREFACE

I would like to thank God for the blessing that given to me, so I can finish this internship report. Internship is one of the compulsory subjects as a civil engineering student at Atma Jaya Yogyakarta University. The objectives of internship, which was implemented on Upper West Apartment Project since 22 August 2022 – 31 December 2022, are:

1. To implement theories that have been learned in class into the construction site and allow me to understand problems that commonly exist on the site.
2. To fulfil the requirement to graduate from the faculty of engineering at Universitas Atma Jaya Yogyakarta.

Also, I would like to express my gratitude to:

1. Dr. Eng. Luky Handoko, S.T. M.Eng. as the supervisor of my internship report, who had already given directions and guidance to complete my internship report.
2. The author's family member for their support and prayers that helped the author finish the internship report
3. L Haryo Priyo J, S.T., as the project manager of Upper West Apartment Project that let the author to do on internship in the project.
4. Fadly Ferdinand, S.T. as the Chief Quality Control and author's field supervisor that helped and guided the author during internship.

Finally, as the writer realize this report has many mistakes and may have space for further improvement. For that, any suggestion and critics will be accepted. Hopefully this report can be of useful for all parties who read this report.

Yogyakarta, 10 December 2022



Angelina Amara Nugroho

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