

ABSTRAK

Judul: Analisis Perbandingan Quantity Material Pekerjaan Struktur Menggunakan Building Information Modeling (BIM) Dan Konvensional (Studi Kasus: Proyek Wijaya Apartemen), Nama: Noor Izza Fachriza, NIM: 41118120127. Dosen Pembimbing: Prihadmadi Anggoro Seno,ST.,MT.

Penelitian ini dilakukan untuk mengeksplorasi potensi BIM dan mengetahui perbandingan perhitungan BoQ menggunakan Revit 2019 dan metode konvensional pada pekerjaan struktur dengan volume slab basement tulangan. Saat ini BIM (Building Information Modeling) merupakan teknologi yang sangat memiliki dampak positif pada pekerjaan konstruksi yang dapat mempelajari proyek yang akan dibangun terlebih dahulu sebelum dibangunnya konstruksi tersebut. Saat ini di Indonesia sendiri masih banyak penggunaan konstruksi Indonesia yang belum mengerti mengenai BIM sedangkan BIM memiliki banyak keunggulan dibanding metode konvensional yang sudah biasa digunakan. Untuk mengetahui keunggulan metode BIM dibandingkan dengan metode konvensional maka dilakukanlah penelitian ini. Metode yang digunakan untuk penelitian ini yaitu studi kasus, sehingga dapat diketahui pengetahuan mengenai kinerja BIM. Dengan studi kasus perencanaan gedung 45 lantai dilakukan perbandingan efisiensi kinerja antara metode konvensional dengan konsep BIM dalam kebutuhan waktu.

Berdasarkan hasil volume perhitungan harga pada proyek didapatkan pelaksanaan biaya pekerjaan dimana hasil perhitungan selisih BIM dengan konvensional diantaranya basement 1 sebesar Rp. 4.061.330; basement 2 sebesar Rp. 10.692.430; basement 3 sebesar Rp. 62.820.900.

Kata kunci : *Bill of Quantity, BIM, Metode Konvensional*

ABSTRACT

Title: Comparative Analysis of Material Quantity of Structural Work Using Building Information Modeling (BIM) And Conventional (Case Study: Wijaya Apartement Project). Name: Noor Izza Fachriza, NIM: 41118120127. Mentor Lecture: Prihadmadi Anggoro Seno,ST.,MT.

This research was conducted to explore the potential of BIM and find out the comparison of BoQ calculations using Revit 2019 and conventional methods on structural work with basement slab volume reinforcement. Currently, BIM (Building Information Modeling) is a technology that has a very positive impact on construction work that can study the project to be built first before the construction is built. Currently in Indonesia itself there are still many uses of Indonesian construction that do not understand about BIM while BIM has many advantages over conventional methods that are commonly used. To find out the advantages of the BIM method compared to conventional methods, this study was conducted. The method used for this research is a case study, so that knowledge of BIM performance can be known. With a case study of planning a 45-story building, a comparison of performance efficiency between conventional methods and the concept of BIM in time needs was carried out.

Based on the results of the volume of price calculations on the project, the implementation of work costs was obtained where the results of the calculation of the difference between BIM and conventional including basement 1 amounted to Rp. 4.061.330; basement 2 of Rp. 10.692.430; basement 3 of Rp. 62.820.900.

Keywords: Bill of Quantity, BIM, Conventional Methods



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