

ABSTRAK

**PENERAPAN *BUILDING INFORMATION MODELLING* (BIM)
QUANTITY MATERIAL TAKE OFF
(STUDI KASUS : PENULANGAN KOLOM ZONA GEDUNG
PERAWATAN BEDAH TERPADU RSUD DR. H. ABDUL MOELOEK)**

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Di era globalisasi ini, teknologi semakin berkembang pesat di seluruh aspek kehidupan termasuk dalam bidang infrastruktur. Perkembangan teknologi di bidang infrastruktur dapat dilihat dari banyaknya *software-software* yang memudahkan pekerjaan pembangunan. *Software-software* tersebut kemudian hadir dalam kemasan sebuah program yang disebut *Building Information Modelling* (BIM). Salah satu *software* dari *Building Information Modelling* (BIM) adalah Autodesk Revit yang mampu secara otomatis menghasilkan *Quantity Material Take Off* (QMTO) yang digunakan kontraktor dalam pembuatan *Bill Of Quantity* (BOQ). Pada *Quantity Material Take Off* (QMTO) aspek penting yang harus diperhatikan adalah tulangan atau pekerjaan penulangan. Oleh karena itu peneliti meninjau *Quantity Material Take Off* (QMTO) penulangan khususnya kolom pada Gedung Bedah Terpadu RSUD Dr. H. Abdul Moleok. Berdasarkan penelitian yang telah dilakukan menggunakan *Software* Autodesk Revit terdapat perbedaan nilai volume penulangan kolom antara perhitungan menggunakan metode konvensional dan metode berbasis BIM. Berdasarkan hasil analisis didapat nilai volume penulangan kolom dengan metode konvensional lebih besar dibandingkan dengan menggunakan metode berbasis BIM dengan selisih persentase sebesar 6,54 %. selain itu didapatkan hasil persentase *waste material* yang cukup besar yaitu 9,61 %.

Kata Kunci : Building Information Modelling (BIM), Autodesk Revit, Quantity Material Take Off (QMTO), Tulangan Kolom, Waste Material

ABSTRACT

IMPLEMENTATION OF BUILDING INFORMATION MODELING (BIM) QUANTITY MATERIAL TAKE OFF (CASE STUDY : REINFORCEMENT OF ZONE B COLUMN OF INTEGRATED SURGICAL CARE BUILDING DR.H. ABDUL MOELOEK)

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In this era of globalization, technology is growing rapidly in all aspects of life, including in the field of infrastructure. Technological developments in the field of infrastructure can be seen from the many softwares that facilitate development work. The software then comes packaged in a program called Building information Modeling (BIM). One of the software of Building information Modeling (BIM) is a Autodesk Revit which is able to automatically generate Material Quantity Take Off (QMTO) which is used by contractors in making Bill Of Quantity (BOQ). in Quantity Material Take Off (QMTO) an important aspect that must be considered is reinforcement or reinforcement work. Therefore, the researchers reviewed the Quantity Material take Off (QMTO) reinforcement, especially the column in the integrated surgery building, RSUD Dr. H. Abdul Moeloek. Based the research that has been done using Autodesk Revit software, there are difference in the value of column reinforcement volume between calculations using conventional methods. Base of the results of the analysis, the value of column reinforcement volume with conventional methods is greater than using the BIM-based method with percentage difference of 6,54 %. In addition, the percentage of waste material is quite large, namely 9,61 %.

Keywords : Building Information Modeling (BIM), Autodesk Revit, Quantity Material Take off (QMTO), column reinforcement, Waste Material