

PREPARATION OF THE BAR BENDING SCHEDULE (BBS) FOR THE MAIN STRUCTURAL WORKS OF THE BENGKALIS STATE POLYTECHNIC CAMPUS MOSQUE CONSTRUCTION PROJECT

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ABSTRACT

Reinforcement work in reinforced concrete structures requires precise planning to ensure material efficiency and accuracy during on-site execution. One method employed is the Bar Bending Schedule (BBS), which details the shape, diameter, length, quantity, and weight of the reinforcement bars. This study aims to compile a BBS for the main structural work of the Bengkalis State Polytechnic Campus Mosque construction project, identify reinforcement bar shapes and quantities, and compare manual calculation results with those from Autodesk Revit. The study utilizes a case study method based on structural working drawings and adheres to the SNI 2847:2019 standard. The BBS was prepared using Microsoft Excel by identifying reinforcement details and calculating cut lengths, bar quantities, and reinforcement weights for pile caps, columns, tie beams (sloof), and beams. The results showed percentage differences of 18.31%–24.41% for pile caps and 0.47%–7.75% for columns, while the difference for tie beams was below 5% (ranging from 2.09% to 3.44%). For beam elements, the percentage difference ranged from 0.98% to 10.22%.

Keywords : Autodesk Revit, Bar Bending Schedule, Microsoft Excel, SNI 2847 2019