

PEMBUATAN BAR BENDING SCHEDULE (BBS)
PROYEK GEDUNG BENGKEL TERPADU POLITEKNIK
NEGERI BENGKALIS (TITINJAUAN KASUS: BBS UNTUK
STRUKTUR KOLOM DAN BALOK)

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ABSTRAK

Bar Bending Schedule (BBS) merupakan dokumen yang digunakan untuk menentukan kebutuhan baja tulangan berdasarkan detail penulangan pada gambar kerja, sehingga mendukung efisiensi fabrikasi dan pengendalian material. Penelitian ini bertujuan menyusun BBS menggunakan Microsoft Excel pada Proyek Pembangunan Gedung Bengkel Terpadu Politeknik Negeri Bengkalis, dengan tinjauan struktur balok dan kolom, mengevaluasi kesesuaian detail penulangan terhadap SNI 2847:2019, serta membandingkan hasil BBS dengan *Bill of Quantity* (BOQ). Metode yang digunakan adalah deskriptif kuantitatif berdasarkan data *shop drawing* melalui identifikasi detail penulangan, penentuan diameter dan jumlah tulangan, perhitungan panjang dan berat tulangan, serta penyusunan BBS. Pada beberapa bagian *shop drawing* ditemukan detail yang belum lengkap, sehingga dilakukan pemodelan dan pendetailan menggunakan Autodesk Revit dengan mengacu pada SNI 2847:2019. Hasil penelitian menunjukkan kebutuhan tulangan berdasarkan BBS pada kolom CC1 sebesar 156,158 kg, kolom CC2 *Reinforcement Quantities* sebesar 795,119 kg, kolom CC2 *Staircase Housing* sebesar 1.317,574 kg, dan balok CB3 sebesar 2.098,844 kg, dengan total 4.367,695 kg. Sementara itu, total berdasarkan BOQ sebesar 4.548,641 kg, sehingga diperoleh selisih 180,946 kg atau 3,98%. Perbedaan tersebut dipengaruhi oleh ketidaklengkapan detail penulangan pada *shop drawing* dan perbedaan metode perhitungan kebutuhan tulangan. Hasil evaluasi menunjukkan detail penulangan yang ditinjau telah disesuaikan dengan SNI 2847:2019. Microsoft Excel efektif digunakan untuk menyusun BBS secara sistematis serta mendukung perhitungan dan pengendalian kebutuhan baja tulangan.

Kata Kunci : Bar Bending Schedule, Balok dan Kolom, Autodesk Revit, Microsoft Excel, SNI 2847:2019.

***PREPARATION OF BAR BENDING SCHEDULE (BBS)
INTEGRATED WORKSHOP BUILDING PROJECT,
POLYTECHNIC OF BENGKALIS (CASE STUDY: BBS FOR
COLUMN AND BEAM STRUCTURES)***

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ABSTRACT

Bar Bending Schedule (BBS) is a document used to determine reinforcing steel requirements based on reinforcement details in working drawings, thereby supporting fabrication efficiency and material control. This study aims to prepare a BBS using Microsoft Excel for the Integrated Workshop Building Construction Project of Politeknik Negeri Bengkalis, focusing on beam and column structures, evaluate the conformity of reinforcement details with SNI 2847:2019, and compare the BBS results with the *Bill of Quantity* (BOQ). The research method used is descriptive quantitative based on *shop drawing* data through reinforcement detail identification, determination of reinforcement diameter and quantity, calculation of reinforcement length and weight, and BBS preparation. Several incomplete reinforcement details were found in the *shop drawings*; therefore, modeling and detailing were carried out using Autodesk Revit with reference to SNI 2847:2019. The results show that the reinforcement requirements based on the BBS were 156.158 kg for column CC1, 795.119 kg for column CC2 *Reinforcement Quantities*, 1,317.574 kg for column CC2 *Staircase Housing*, and 2,098.844 kg for beam CB3, with a total of 4,367.695 kg. Meanwhile, the total requirement based on the BOQ was 4,548.641 kg, resulting in a difference of 180.946 kg or 3.98%. The difference was influenced by incomplete reinforcement details in the *shop drawings* and differences in reinforcement quantity calculations. The evaluation results indicate that the reviewed reinforcement details were adjusted to comply with SNI 2847:2019. Microsoft Excel can be effectively used to prepare a systematic BBS and support the calculation and control of reinforcing steel requirements.

Keywords : *Bar Bending Schedule, Columns and Beams, Autodesk Revit, Microsoft Excel, SNI 2847:2019.*