

***PREPARATION OF BAR BENDING SCHEDULE (BBS)
FOR THE CONSTRUCTION PROJECT OF THE
INTEGRATED WORKSHOP BUILDING AT
BENGKALIS STATE POLYTECHNIC
(CASE STUDY: BBS FOR STAIRCASE AND FLOOR
SLAB STRUCTURES)***

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ABSTRACT

Bar Bending Schedule (BBS) is a document used to determine reinforcement steel requirements in detail, thereby improving fabrication efficiency and material control. This study aims to prepare a Bar Bending Schedule using Microsoft Excel for the Integrated Workshop Building Construction Project at Politeknik Negeri Bengkalis, with a case study focusing on the stair and floor slab structures. The study also evaluates the compliance of reinforcement detailing with SNI 2847:2019 and compares the calculated reinforcement quantities with the Bill of Quantity (BOQ). A quantitative descriptive method was employed based on shop drawing data through the identification of reinforcement details, calculation of reinforcement lengths, quantities, and weights, which were subsequently compiled into a Bar Bending Schedule using Microsoft Excel. The results indicate that the total reinforcement steel requirement is 3,823.44 kg for the stair structures and 20,938.70 kg for the floor slab structures. The reinforcement detailing complies with the requirements of SNI 2847:2019. Comparison with the BOQ shows that the reinforcement requirement for the floor slab based on the BBS is 20,938.75 kg, while the BOQ specifies 20,440.67 kg, resulting in a difference of 498.08 kg or 2.44%. The findings demonstrate that Microsoft Excel is an effective tool for producing a systematic and accurate Bar Bending Schedule while supporting efficient reinforcement steel quantity control.

Keywords: *Bar Bending Schedule (BBS), Microsoft Excel, reinforcement steel, stairs, floor slab.*