RE-PLANNING OF THE STRUCTURE OF INTEGRATED LECTURE BUILDING (GKT) 1 OF BENGKALIS STATE POLYTECHNIC BASED ON SNI 2847:2019 AND SNI 1726:2019 (REVIEW OF BEAMS AND COLUMNS)

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Abstract

Bengkalis state polytechnic is the only polytechnic located in bengkalis. To add infrastructure facilities, a new building was built to support the teaching and learning process. In planning the structure is required to produce a strong and economical building and can function properly. Thus, the re-planning of the structure using SNI 2847: 2019 and 1726: 2019.

The writing of this final task uses a descriptive method consisting of three stages of research, namely the input, analysis, and output stages. The input stages are explanation of structural geometry, dimensions and specifications of structural elements, determination of loading and modeling of three dimensions. The analysis stage is modeling and loading structure by using SAP2000 V.22 application as well as calculation of style in structure elements. The output stage is a discussion of the details of structural elements adapted to ineer styles that work on structural elements of GKT 1 Polythecnic State Bengkalis.

Based on the calculation obtained on reinforced concrete structure dimensions of 300 x 600 mm on the beam pedestal area using the main reinforcement 3D16 and the Sengkang reinforcement Ø10 - 80 mm, while in the field area the beam uses the main reinforcement 3D16 and the Sengkang reinforcement Ø10 - 150 mm. the column uses dimensions of 500 x 500 mm and for the main reinforcement uses 16D16 with a Sengkang reinforcement of Ø10-120 mm.

Keywords : Planning, Top Structure, Dimensions, SAP2000