STRUCTURE DESIGN MODIFICATION OF PT. PERUSAHAAN GAS NEGARA SURABAYA BUILDING USING COMPOSITE STEEL

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Abstract
A restricted range of land reconstruction project that are increasingly rising lately led the building of sophisticated and storied building. The improving of technology that are increasingly rised possibility make the human built up the high building. As we know that the higher of the place, the higher of the power and burdent they have. That makes the time of doing that project will be longer than ever.

The structure of the building in this final project will be modified and reconstructed by using the planned structure of composit armor. Composit structure of reinforced concrete and steel beams are such kind of stucture that using the strenght of the reinforced concrete and steel beams work together as an unity. These advantages are the reinforced concrete is strongger and the steel beams is stronger against press appeal (Salmon and Johnson, 1995).

This building is modified from conventional concrete into composite steel. The design of the building was based on "procedures for the planning of steel structure for buildings Building (SNI 03-1729-2002)", "procedures for the planning of earthquake resistance for Building (SNI 03-1726-2002)" the imposition of rules and regulations for The 1983 Indonesia. Analysis of the structure of the building will be the influence of dynamic load of building structure earthquake.
The results of the structural design of this building consists of a portal structure using composite steel floor with columns 1 to 5 using the profile of concrete sheathed 450.200.9.14 Kingcross XH 650 cm x 650 cm, floor 6 to 10 using a profile with a veil of concrete 400.200.8.13 XH 600 cm x 600 cm, using a composite beam profile WF.500.200.10.16. Connection is planned as a rigid connection using A-325 bolts of quality 90 ksi. Planning foundations using precast concrete piles diameter of 50 cm length of 13.5 m. Sloof size 400 cm x 600 cm with 5D25 main reinforcement and shear reinforcement Ø10-150.

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