ABSTRACT

Limited land and development activities intensified lately cause storey buildings were constructed. Increasing technological developments allow people to build buildings - tall buildings. As has been known that the higher the building, the greater the strength and load sorrows. This causes the required processing time will also be longer.

The structure of the building in the final project will be modified and re-planned using composite steel structure. Between concrete and composite structures is a structural steel beam that utilizes the advantages of concrete and steel that work together as one unit. The advantages include a strong concrete and steel to press strongly against the drag. (Salmon and Johnson, 1995).

This building is modified from conventional concrete steel concrete composite. The design of this building is based on "Planning Procedures for Building Steel Structure (SNI 03-1729-2002)", "Earthquake Resilience Planning Procedures for Building Structures and Non-Building
(RSNI-201x 03-1726)" and the imposition of Indonesia Regulations for Building 1983.

The results of the structural design of this building consists of a portal structure using composite steel floor with 1 to 5 column using profile Kingcross 600.200.11.17 700cm x 700cm sheathed concrete, floor 6 to 9 using Kingcross profile 350.175.7.11 with concrete casing 460cm x 450 cm, the beam composites using profile WF 600.200.13.23. The connection is planned as a rigid connection using A-325 quality 90 ksi. Foundation design using precast concrete piles diameter 50 cm length of 9 m. Sloof size 400xm x 400cm with 7D25 main reinforcement and shear reinforcement O10-150.

**Key words**: Structure, Steel-Concrete Composite, Modified