

*“Designing of GIS 150 kV building
at Gambir Lama, Jakarta using Load and Resistance Factor design
(LRFD)”*

Abstraction

“Growth of various life sector in Indonesia fast progressively, this matter directly also will make usage of electric energy progressively mount. Due to the increasing of demand of energy supply, PLN (National Electric Policy) as BUMN which is managing and distributing it, trying to fulfill all the demand by giving such a good services. One of the efforts to increase those services by increasing quality and quantity of medium of infrastructure.

One of the effort is by building GIS 150 kV at Gambir Lama, Jakarta. This structure is designed by using steel as beam and column and conventional concrete as the plate. The method that used in calculation is Load and Resistance Factor Design (LRFD) method. Designing of this structure will be tried to use a composite condition between plate concrete with steel beam. To obtain result of calculation comes near the reality condition, it'll be modeled in the 3D form. The calculation of earthquake at this designing only using dynamic analysis, it means that modelling of earthquake force will approach the earthquake force that occurred to structure in real condition. In calculating the inside forces that happened to structure, it's used SAP (structure analyze program) 2000, in order to get the results more quickly, more precise and more accurate.

The usage of LRFD methode purposes to produce the strengthen structure that means more stable and more usefull as the design age and uses less production cost.”