南昌市昌东政府机关办公楼设计

摘　要

本毕业设计是六层框架结构，设计包括建筑构造和结构计算，本工程为 6 度设防抗震，基本风压为 0.35kN/m^2，地面粗糙度属于 B 类，为了计算时做到更趋于精确，在建筑设计时把结构设计为对称结构。

框架结构主要承重构件为梁，柱，通常计算时把梁和柱的节点的链接方式看为刚接。为计算分析方便起见，可把实际框架结构看成纵横两个方向的平面框架。本设计的计算主要包括恒荷载、活荷载、风荷载、地震荷载下各个荷载之间的组合，最后选取对结构最不利的荷载组合来配筋，配筋时采用控制截面法来计算。框架结构设计时，荷载效应组合采用简化的方法处理，即对所有可变荷载乘以荷载组合系数。求某一指定截面的最不利内力时，根据影响线方法，直接确定此最不利内力的活荷载布置。结合土层地质情况和地基承载力，基础为条形基础。本设计选了结构中的一榀框架来计算，主要计算了梁和柱在各种荷载组合下的剪力、轴力、弯矩，再按照最不利截面来计算配筋和混凝土强度。

本计算书包括了板，梁，楼梯，框架的所有计算内容。

关键词：框架结构；建筑设计；结构设计；内力组合；内力计算

ABSTRACT

This graduation design is six layers of frame structure, design including building structure and the structure calculation, this project for the octave fortification earthquake, the basic wind pressure is 0.35kN/m^2, the surface roughness belongs to B class, in order to calculate when do tend to be more precise, in the architectural design of the structure design for the symmetric structure.

Frame structure main bearing component for beam, column, usually when calculating the beam and column node link way for just answer. For computational analysis convenience, can see the actual frame structure as vertical and horizontal plane frame in two directions. The calculation of the design mainly includes the constant load and live load, wind load and earthquake load under different load combinations between, lastly, to structure the most unfavorable load combinations to reinforcement, reinforcement when using the method to calculate the control section. Frame structure design, load effect combination using simplified method processing, multiplied by the coefficient of load combination of all variable load. The most unfavorable internal forces of a specific section, according to the influence line method, directly determine the most adverse internal force of live load arrangement. Combined with the geological condition and foundation soil bearing capacity, foundation for strip foundation. This design chose one to calculate the cross of the structure, main beam and column was calculated under various load combination of the shear force, axial force, bending moment, and then according to the most unfavorable section to calculate the reinforcement and concrete strength.

This account includes plate, beam, stair, all the calculation content framework.

Keywords: frame structure; architectural design; structure design; the combination of internal force calculation of the internal force