

昌吉惠明写字楼结构设计

摘要: 本文设计的建筑物为南昌市商业写字楼，总投资 500 万元，位于南昌市主干道的西北角，总用地面积 3782.3m²。主体结构为 8 层框架结构，首层为公共部分，二层以上各层能分别独立使用。建筑柱网尺寸纵向为 3.3m 和 7.5m，横向为 5.2m，底层及各层层高均为 3.8m。建筑物基础采用端承桩基础。建筑结构按 7 度设防设计，建筑按 6 度设防设计，耐久年限为 50 年。本文对该建筑物结构进行设计，主要设计依据包括：框架结构设计计算、荷载计算。本文主要设计内容包括：地形，结构。在框架结构计算时，采用底部剪力法计算地震作用，采用弯矩分配法对框架进行分配，在计算过程中对梁的弯矩进行了调幅，对柱的轴力进行了折减。对建筑中出现的墙体均直接放在梁上，墙、板的重量传给梁，梁再传给柱，传力路线明确。通过设计，得到了南昌市商业写字楼结构设计图，为建筑物施工提供了依据。

关键词: 商业写字楼；建筑设计；结构设计；框架结构；桩基础

Structure Design of Changji Huiming Office Building

ABSTRACT : The building designed in this paper is Changji Huiming Commercial Office Building, Total investment 5.00 million yuan, Located in the northwest corner of Changji's main road, A total land area of 3782.3m², Theme structure 8-layer frame structure, The dimensions of the construction grid are 3.3 m and 7.5 m, in lengthwise 5.2 m, lateral 3.8 m. in height at the bottom The wall is aerated concrete block, The staircase adopts a plate staircase, All fire resistant stairs. The building foundation adopts end bearing pile foundation. The building structure is designed at 7 degrees, The building is designed for 6 degrees, The durability is 50 years. The building sits north facing south, the first floor is the public part, each floor above the second floor can use independently, uses the big space office, the daylighting is better, the office area is concentrated in the south, but the conference room and the exhibition hall are concentrated in the north, the partition is more reasonable, suitable for the small and medium-sized enterprise, the company lease. In this paper, the structure of the building is designed, the main design basis includes: design and calculation of frame structure, load calculation. The main design contents of this paper include: terrain, structure. In the calculation of frame structure, the bottom shear method is used to calculate the seismic action, the moment distribution method is used to distribute the frame, the bending moment of the beam is adjusted in the calculation process, and the axial force of the column is reduced. For the wall in the building are directly placed on the beam, the weight of the wall, plate to the beam, beam to the column, the transmission route is clear. Through the design, the structural design diagram of Changji Huiming commercial office building is obtained, which provides the basis for building construction.

KEYWORDS : Commercial office building; architectural design; structural design; frame structure; pile foundation

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