

Observation and Analysis of Urban Micro-Climate and Urban Morphology on Block Scale in Zhengzhou City

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Abstract : Zhengzhou is a typical plain city with a high population density and a permanent population of 10 million, located in central China. The scale of this city is constantly expanding, and the urban form has changed dramatically by the accelerating process of urbanization, which makes a great effect on the urban microclimate. In order to study the influence of block morphology on urban micro-climate, air temperature, humidity, wind velocity and so on in three typical types of blocks in the center of Zhengzhou were collected, which was chosen to perform the fixed and mobile observation. After data handling and analysis, a series of graphs and diagrams were obtained to reflect the differences in the influence of different types of block morphology on the urban microclimate. These can provide targeted strategies for urban design to improve and regulate urban micro-climate.

Keywords : urban micro-climate, block morphology, fixed and mobile observation, urban design

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