Climate adaptation research on the energy-saving design of gymnasiums in cold regions

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ABSTRACT

Energy-saving design must be based on regional climate conditions. This study takes the gymnasium in cold regions of northeast China as the research object, by analyzing the temperature, humidity, wind, rainfall and other climatic conditions of cold regions in China and combining with the characteristics of gymnasium, based on the field research, model simulation, data analysis result, and via study on mutual relationship of energy-saving strategies and construction techniques of gymnasium, proposes the envelope insulation, solar utilization, natural ventilation and other related strategies adopted by gymnasium in cold regions of northeast China to cope with local climatic conditions.

Keywords: Climatic adaptation; Cold region of northeast China; Gymnasium; Energy-efficient design

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