

NEW CONTRIBUTIONS OF THE THESIS

I. General information

- Thesis title: ***THE SOLUTIONS OF BUILDING ENVELOPE INTEGRATED DESIGN TO IMPROVE ENERGY EFFICIENCY FOR HIGH-RISE OFFICES IN THE SOUTH CENTRAL COAST AREA OF VIETNAM***
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SUMMARY OF THE NEW CONTRIBUTIONS OF THE THESIS

1. Orient energy efficiency design solutions for projects based on integrating the impact of 3 factors

The thesis proposes solutions for designing the cover based on the simultaneous impact of three factors: Natural lighting - Natural ventilation - Air conditioning to improve energy efficiency for construction. process instead of just researching separate solutions for each impact factor

The research results will be useful documents for architects as well as managers to refer to before and during the process of managing, designing and constructing works based on the integration of the effects of three factors. The solutions, options and proposals in the thesis are truly effective if researched and applied flexibly.

2. Provide a tool to quickly assess building energy efficiency

The thesis provides a toolkit to quickly evaluate the energy efficiency of high-rise office envelopes based on evaluating design solutions of existing buildings or new designs in a synchronous manner.

From the results achieved, we can evaluate the level of energy efficiency achieved by the building, then provide design/renovation directions to further improve the level of energy efficiency achieved.

3. Expand to other climate regions in Vietnam

Basically, Vietnam's climate has common characteristics of being tropical and humid. Although there are differences between regions due to geographical coordinates, wind regimes and terrain, the basic problems that need to be solved for the project are: The architecture is similar. Our country does not have a big difference in solutions to ensure climate adaptation, beyond energy efficiency for architectural works.

Therefore, based on the results of this study, we can apply it to other climate zones throughout the territory of Vietnam, with the condition of evaluating and updating more information and data on climate and other factors. Factors affecting the energy consumption of the enclosure.

4. Một cách tiếp cận với kiến trúc xanh thông qua tiêu chí hiệu quả năng lượng

In most sets of criteria for evaluating green architecture/green buildings in the world, energy efficiency criteria always account for the largest proportion; This means that if we solve the problem of energy efficiency well, we will effectively approach green architecture - the current trend of world architecture.

After designing energy-efficient buildings, it is completely feasible for architects to update the remaining criteria of green architecture to design and build green buildings. Not only that, architects can also make a general assessment of the quality, adaptability and "green" level of the project right from the initial stage.

5. 5. Towards sustainable architecture in Vietnam

The contributions of the research results of this topic will create a premise and inspiration for many subsequent studies for other types of buildings and in different climate areas. So that when the results are applied synchronously and widely, it will ensure the sustainable development goal of our country's architecture in the future.

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