RESEARCH CATALOGUE

ENERGY TECHNOLOGY

AN ASSESSMENT OF DAYLIGHTING PERFORMANCE OF EXTERNAL VERTICAL SLATS FOR SHADING EAST AND WEST WINDOWS

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My Master studies took place during 2017-2019. This research aimed at assessing the performance of daylighting by using external vertical slats for both East and West windows by qualifying the total amount of daylighting in the space at the working level. A window with heat reflective glass was compared to a clear glass window with external vertical slats.

The results showed that using external vertical slats can reduce energy consumption for both lighting and air-conditioning and increase economic efficiency. According to the results obtained, it was found that energy consumption from lighting and air-conditioning could be reduced by 15% and up to 60% for a slat window compared to a heat reflective glass window. At the same time, it was found that heat gain in the space could be reduced providing comfort to its occupants.

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