

THE EFFECT OF SUSTAINABLE LOUVERS PERFORMANCE ON INDOOR ENVIRONMENT IN OFFICE BUILDINGS

<https://www.researchgate.net/publication/328868424> The effect of sustainable louvers performance on indoor environment in office buildings

ABSTRACT

Sustainable shading devices play an important role in controlling the environmental variables such as: indoor environment, solar gain through the glass, and sound insulation, in addition to keeping good Visual connection with the outside environment.

This study evaluates louvers' performance as a shading system on the glazed facades of the Royal Jordanian (RJ) airline building in Amman –Jordan, which is taken as a case study of offices building.

The study has three sections, the first includes theoretical background of sustainable shading devices in building and its performance parameters (thermal, daylight, sound), which are used later on to evaluate Louvers' efficiency of the southern façade of Royal Jordanian building.

The second explains questionnaire results about employees' satisfaction in the indoor environment of the area close to glazed facades, which led to the definition of the problem. The third section suggests two alternative design options and compares their performance to the existing louvers design using Design Builder as simulation software.

Results shows that by changing louvers shape and material, better indoor environment quality can be achieved, which enhances employees' satisfaction and comfort, in addition to natural daylight levels.