

The effect of environmental control systems on the interior residential space and its users

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Abstract:

Environmental control is currently one of the most important research topics because it has a great effect on the internal space and its residents especially and on the environment, architecture and urban design in general.

Therefore, the recognition of environmental control systems and their effective treatment leads to reaching the highest levels of thermal, visual and audio comfort, and thus psychological comfort, which in turn leads to an increase in the productivity of the individual and subsequently society.

Therefore, the interior design process for any space, whether it is (residential - commercial - administrative etc), environmental control must have a major role in it in order to meet the needs of the comfort required for users.

These systems are divided into air conditioning, ventilation, lighting and architectural acoustics, whether natural or industrial methods, and designers have recently tended to benefit from advantage of natural resources in a large way because of the lack of energy sources, high level of environmental pollution and many environmental problems, which is called environmental or green design.

The research includes: air conditioning, its steps and its applications in interior space, internal ventilation, whether mechanical or natural, and its importance in getting rid of indoor air pollution and also the architectural elements involved in the ventilation of the building in a natural way, also deals with acoustics in the interior design and its definition and the acoustics problems facing the designer and the aim of studying acoustics inside the building and soundproofing materials and the lighting in interior design and its types according to the need inside space, natural lighting, its sources, its relationship to visual comfort, industrial lighting, its sources, colors and its relationship to sunlight.

The main objective of the research is to have a great knowledge of the environmental control systems and their impact on the internal space and its users in order to reach to the best use of these systems in order to user comfort in all aspects.

Keywords:

Environmental control- Interior space- Thermal comfort-User comfort