Integration between design and advanced technological considerations in the interior design of mobile hotel establishments (caravans)

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Abstract:
The process of producing temporary hotel establishments is an integrated process whose stages and components must be commensurate with the data and conditions of the environment, especially in light of the increasing tourist demand with this type of hotel establishments in the recent period, and the reasons have emerged that these mobile hotel establishments are compatible with the environment given the great environmental awareness that has affected all sectors, including the tourism sector in particular, and mobile hotel establishments or caravan, or travel trailer, or caravans are a trailer Towing them behind a vehicle on the road to provide a sleeping place that is more comfortable and protected than the tent (although there are folding trailer tents). The caravan provides a way for people to have their own homes on a trip or vacation, without relying on a motel or hotel, and enables them to stay in places where none are available. However, in some countries, camps are restricted to specific locations for which fees are paid

Mobile hotel establishments (caravans) vary from basic models that may be a little more than a tent on wheels to those with several rooms with all the furniture, furnishings and equipment of the house. Hard-walled trailers can be created from metal or fiberglass. Travel trailers are mainly used in North America, Europe, Australia and New Zealand, taking into account that mobile hotel establishments (caravans), as non-fixed interior living spaces, have a special nature, this nature should Special considerations in interior design may not be of great importance if the interior living space is traditional, the interior designer must take into account the nature of the living space that he designs, taking into account special considerations that characterize this space, in order to reach the creation of a suitable living environment It is convenient for the residents of this space, and taking into account the special considerations for designing the living space with a mobile living cabin, as it is designed as a mobile home or suite in a five-star hotel that carries the concept of comfort, security and safety that the user of these mobile hotel establishments needs in all environments that suit them

Introduction:
Those wishing to spend long trips use mobile hotel establishments (caravans) where the trip is at lower, simpler and easier costs, so one does not need to spend his day in one of the expensive hotels and resorts, or also avoid the difficulty of obtaining reservations due to the severe pressure on hotels in the holiday season and trips, which makes individuals often turn a blind eye to spending their time somewhere, so we find that the traveler trailer contributed greatly to one's exit to enjoy the backpacker at any time and time without the need To prior organization or any of the procedures such as reservation, etc. This is why the trailer "Caravan" came to replace expensive hotels and to meet the needs of families, young people and people with limited income so that they can enjoy privately and impose the privacy they crave in travelers, whether on beaches, wilderness and mountains, according to the lowest costs and international standards, and the designs of these trailers came to achieve all the amenities that one may enjoy at home, such as the sleeping area in addition to facilities such as living rooms, kitchen and toilet... etc)(1).

Study Problem:
The problem of the study revolves around identifying the environmental factors that must govern the production process of mobile hotel establishments in proportion to the data of local environments in the areas where mobile hotel establishments are used, and in a way that makes it possible also to employ the internal space of mobile hotel establishments in a manner consistent with the modern technology used in the production of such facilities in a manner compatible with the environment

Importance Study:
The importance of the study stems from the importance of the phenomenon in question, as mobile hotel establishments have become one of the important alternatives for long-distance road trip goers due to their lower cost at the long level than traditional hotels, and at the same time, the importance of the study stems from the increasing


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environmental awareness and the need to develop rules for the design and production of mobile hotel facilities commensurate with environmental conditions.

**Objective:**
The research aims to achieve the following objectives:
1- Identify the development of mobile hotel establishments and the environmentally compatible materials used in the design and production of these facilities
2- Promote awareness of the importance of taking into account environmental factors when designing and producing mobile hotel establishments.
3- Study of modern environmental technologies used in the production of mobile hotel establishments compatible with the environment.

**Study Approach:**
The research used the descriptive analytical approach to describe the components of the phenomenon in question, given that the descriptive analytical approach is the method that gives the researcher the ability to analyze and study the phenomenon in question without the research becoming part of the phenomenon, or being affected or affected by it. It also used the analytical method to study the components of the phenomenon under study, given that the analytical method gives the researcher the ability to link the factors that interfere in his study in a disciplined scientific and systematic manner, leading to the emergence of disciplined scientific results on which new scientific studies can be built in the future\(^1\).

- **The basic characteristics that must be available in the caravan:**
  - Good internal distribution.
  - Comprehensive interior lighting on all sides of the caravan.
  - Good natural ventilation (preferably skylight). Good quality air conditioner.
  - Comprehensive electrical system. Suitable storage spaces internally and externally.
  - Durable structural structure with means of protection. Good quality wheels and tires.
  - Appropriate installation system for caravan structure.

- **Types of mobile hotel establishments:**
There are many types of mobile hotel facilities available from self-drawn to non-self-pulling, and the diversity of suspension methods from normal traction to a facility that uses the fifth wheel system, and there is a clear variation in shape between different models, as each model has a specific feature that distinguishes it from others and implicitly affects its internal living space, and the diversity of sizes from within one model\(^2\).

In general, in general, the types of caravan can be divided into three main types, which are trailers, motorhome caravans and truck camper.

- **General specifications in the design of mobile hotel establishments:**
The designer must pay attention to the functionality and aesthetic appearance of the interior design, while not neglecting the functional aspect of colors, materials and interior design elements so that they give a sense of spaciousness and safety, and distributing lighting to multiple sources instead of using only one source increases the sense of capacity, taking into account the following:
1- The use of overalls, sokollo and ceiling cornices because they give them a sense of space spaciousness due to their continuous horizontal extension
2- The use of relatively light paint colors for the walls and ceiling gives a more sense of spaciousness.
3- The use of light shades of green and blue (trees and sky) gives a sense of familiarity with the place, which overshadows the feeling of distress.
4- It is preferable to use homogeneous colors in all floors, walls and mattresses, and avoid contrasting colors, which gives a required sense of homogeneity that supports a relative sense of amplitude.
5- The deliberate use of shiny metal mirrors and canars contributes to a sense of extra dimensions for limited space.
6- The use of transparent dividers (whenever possible) gives more a sense of spaciousness, and the use of tables with transparent pinches also increases the sense of spaciousness.
7- The use of the idea of open living space allows giving the space additional dimensions, as walls and partitions cut off the view and increase the feeling of tightness, and therefore their use should be limited to necessity only (such as the bathroom and the main sleeping spaces).
8- Using lighting in a good way gives the space more capacity, so it is preferable to use a larger number of facilities with less capacity so that

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\(^1\) Ahmed Darwish, Research Methods in the Social Sciences, Arab Authors Exhibition for Publishing and Distribution, First Edition, 2018, Cairo, p. 141

the lighting effect becomes homogeneous, which gives a greater sense of amplitude, and the space avoids any dazzling light halos that may result from the use of.

9- The use of wall-based furniture (Build in) and avoiding the interstitial islands and pieces of furniture that permeate the corridors adds more sense of spaciousness, as the more the floor of the place appears, the more this gives it a sense of spaciousness.

10- Use low-rise furniture as much as possible, as the high level of these pieces limits the user's sense of spaciousness.

11- The use of furniture facilities in a thoughtful manner so that it does not exceed the required limit, which leads to loading the space in the facilities unnecessary furniture. Installations use furniture that is relatively small in size so that it performs the function and does not consume more space than necessary.

12- The use of multi-purpose furniture installations, which makes the exploited space serve more than one living purpose, which works to exploit the space optimally.

13- The use of applicable facilities and furniture allows space to be made for other living activities if you do not want to use them, as they are easy to store if applicable.

14- Using wall spaces to create shelves and shelves for storage, which leaves the floor space empty for other activities.

15- Finding storage spaces as much as possible, which makes there a suitable place to store all the necessary belongings, which if they remained outside the storage spaces, would have become in themselves a negative thing that contradicts the necessary sense of spaciousness.

At the same time, the interior design must be developed according to the vacuum mass of the mobile facility so that it meets all the needs of the user in an integrated system so that it corresponds to the internal size of the vacuum mass and these parts and elements (furniture and elements

First: Environmental sustainability conditions and elements of compatibility with the environment in mobile hotel establishments:
In order to achieve environmental sustainability and compatibility of design elements with the environment in mobile hotel establishments, it is necessary for the designer to take into account, while setting the main lines for the design of mobile hotel establishments, that these facilities simulate the details of the daily life of the indigenous people, and at the same time employ the appropriate colors during design, and that the colors used in the external facades or even in its internal components are chosen is important in raising the aesthetic image and preventing visual pollution for the environmental tourist, taking into account Considering in this context also that choosing colors that correspond to the salt environment, also helps to provide psychological comfort for the tourist when staying in the unit and makes him more able to taste and enjoy the aesthetic elements through an experience very similar to the idea of escaping to nature for the purpose of reflection and meditation.

Second: Standards of functional relations and movement paths for mobile cabin spaces:
There is no ideal internal distribution specific to mobile spaces, so it is possible to diversify the distribution of spaces inside the caravan while maintaining the relationships between the space and the other and exploiting the spaces to the fullest, as well as taking into account the corridors of movement and safety.

Third: Environmental considerations in the design of the living space in mobile hotel establishments:
First: The most important results:
1- Hotel establishments have evolved since their inception until today in accordance with the conditions of environmental sustainability, and this development included the design and construction of hotel facilities that use the least possible amount of traditional energy and fuel and rely on forms of renewable energy such as solar and wind energy to generate lighting or heat water in a way that reduces harmful environmental emissions arising from these mobile hotel establishments.

2- Mobile hotel establishments are characterized by their ability to meet the desires of tourists to obtain cheap mobile hotel accommodation facilities compared to traditional hotel accommodation prices and at the same time they are able to adapt to the local environment in the local tourist areas that the tourist visits.

3- The design and manufacturing standards for mobile hotel establishments tend to use materials in the environmentally friendly architectural environment and employ these materials to produce mobile hotel facilities in a way that does not represent a conflict with the environmental and local data that receive tourism trips from mobile hotel owners during their visit to their preferred tourist and environmental environments

Second: The most important recommendations:

In light of the results of the study, the research recommends the following recommendations:

1. Designers should expand the use of environmentally friendly materials in the design and production of mobile hotel establishments with a deep awareness and awareness of the environmental and heritage specificity that tourists prefer and use mobile hotel establishments on their tourist journey.

2. Research centers should take into account the non-excessive use of materials that are not suitable for the environment, and ensure the employment of sustainable energy resources and avoid as much as possible the employment of traditional energy-consuming materials or materials that produce harmful outputs to the environment.

3. The state shall establish specialized training centers with the aim of developing professional frameworks to accommodate modern technologies used in the design and production of mobile hotel units in line with the culture prevailing in the local environments frequented by unit owners and mobile hotel establishments.

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