

FLOATEL'S FORMING ELEMENTS ON THE BASIS OF BIODESIGN

Abstract: The study was conducted on samples of foreign experience of floating houses, as well as on the author's development. Based on the analysis identified the main elements forming the design of housing on the water and asked to use them to create a floating module Floatel.

Keywords: Floatel, design, hotel economy, forming, floating module.

Statement of the problem. Hospitality plays a key role in the presentation of Ukrainian tourism product in the international market and must meet the level of hotel service European standards. Creating effective hotel management is essential for the economy of Ukraine.

Today Ukraine is urgent to increase the total number of hotels and hotel complexes and their industry specialization. Rationally balanced hospitality sector should include the development of a network of specialized hotel enterprises, service-oriented originality and maintenance of certain categories of travelers according to modern standards.

Promising means of activating the sphere of hospitality is a natural development of the recreational potential of boating including the most attractive tourist regions - Crimea, Carpathians and the Azov-Black Sea. In the implementation of this direction can take a significant role in this relatively new for our country as a form of hospitality and Floatel Botel. Formative elements of such institutions is a powerful tool for creating aesthetic and functional comfort. Given the above analysis of the factors shaping them in pressing issue today, and disclosure shaping based biodesign will further bring together people and nature.

Analysis of recent research and publications. Malska MP, IG Pandyak in their work "Hospitality: Theory and Practice" consistently reveal the evolution of hospitality sphere, analyze the problem of typology and classification of hotel enterprises, organization and management, technology services, architectural and planning features facilities of hotel businesses.

Putsenteylo PR in "Economics and Organization of tourist and hotel business" provides the features of the current state of the tourism and hospitality sector, determines the effective areas of marketing activities of enterprises of hospitality.

The manual Rohlyeva H.Y. "Fundamentals of Hospitality Management" systematized and presented theoretical, methodological and practical issues of managing a modern hotel, given the definition of Floatel and Botel. We study the principles of modern design interiors and exteriors interiors hotels.

Bionic forming the subject of numerous scholarly works, including work A.N.Lypova "Biomorphological shaping in an artificial environment " fundamentals of architectural bionics, which addressed bimorph shaping under artificial environment.

But the above mentioned sources rises research problem formative elements Floatel on the bases and bio-design biomorphological.

The wording of Article goals. Objective publication is to identify the formative elements Floatel on the bases bio-design.

The main part. Bionic aim of shaping is to achieve unity between wildlife and man-made environment, creating an environment in which people will live in harmony with nature. "Demolish" in nature means taking into account technological, environmental and aesthetic factors in the design, and the specific ways and means of such consideration may be different.

Organic blend with the natural environment can be achieved by means of associative ideas about "wildlife" with colors, shapes, textures, based on the purpose and capabilities of materials, using forms that are transformed. At present bionics allows designers do not just copy the external forms of nature and apply the properties and characteristics of the shape, which is an expression of the functions of a particular organism, similar functional and utilitarian sides of the designed object. From function to form and to the formation of patterns - a main route architectural bionics.

Contact with the natural environment can also be made by direct borrowing bionic form natural counterparts. Any natural object is the perfect product that differs feasibility, functionality, reliability, durability, efficiency of use of building materials and harmonious relationships with the environment.

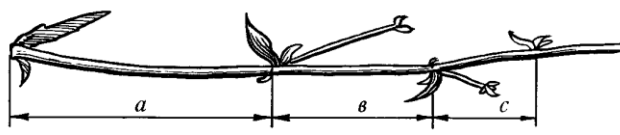
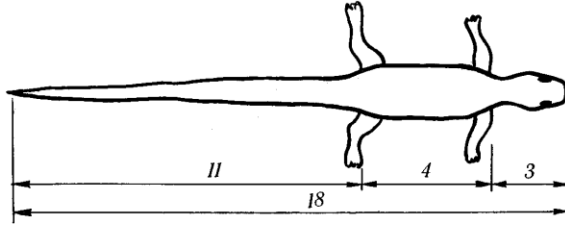
Forms of nature is extremely functional. Natural forms are harmonious coordination of parts of the whole, the unity of the overall logic of development, the relationship of form and structure, they are big and sustained proportionally perfect. The shape in nature is characterized by combinations of plastic, a gradual transition from one part to another form, the development of plastic forms for the interaction between structural elements. The close connection between function and form is seen as a distinct aesthetic feature wildlife.

The perfection of natural forms - an inexhaustible source of inspiration and, taking natural objects that cause certain aesthetic emotion, the designer can create harmonious art image, which is not directly connected with the peculiarities of functioning (life) analogue. Any approach designing bionic forms based on the imaginative perception of nature.

In bionic objects created by man, the main aesthetic value is integrity, "concentration", which can be created under the influence of natural elements unity down. Achieving such integrity possible through the use of techniques of composition and structure, and found in the wild: purposeful three-dimensional organization, the nature of the fluid lines, symmetry, including the types of asymmetry, rhythm, scale, proportion, such as the golden section, which observed in a variety of natural objects: the proportions of plant and animal organisms,

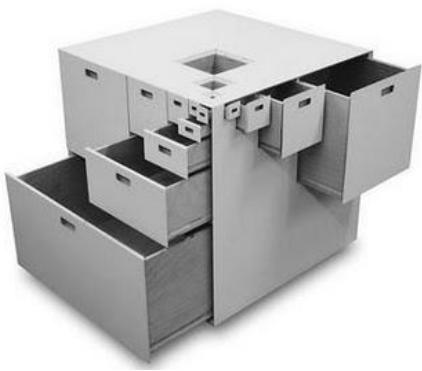

biorhythm brain structure in the human eye, the energy of interaction at the level of elementary particles, etc. (Table № 1).

Table number 1

Lots intersection in nature	
 <p>A diagram of a branch with three leaves. The distance from the left end to the first leaf is labeled 'a', from the first leaf to the second is 'b', and from the second to the third is 'c'.</p>	 <p>A diagram of a lizard. The total length is labeled '18'. The distance from the tail to the front legs is '11', from the front legs to the back legs is '4', and the tail length is '3'.</p>

To organize the space used bionic synergistic principles of nonclosure, self-similarity, open structures, the principle of fractal (Table № 2). The spherical shape of the module is the expression of symmetry as one of the fundamental principles to which all natural shaping. Symmetry environment that creates an object superimposed on the symmetry of the body, which is formed in this environment. Isotropy aquatic environment provides an ellipsoid. Thus it forms spheres and ellipses are most common in the design of Floatel.

Table № 2

Use of the principle of fractal design	
 <p>A 3D rendering of a modular desk system with several drawers and compartments, illustrating fractal design.</p>	 <p>A 3D rendering of a modular desk system with several drawers and compartments, illustrating fractal design.</p>

Floatel - hotel, which is often called "resort on water", as used by ships. Floatel recent major competitors are the big hotels, their advantage is that they allow you to navigate through the sea (ocean), thereby greatly expanding the variety of experiences that the traveler gets the client. Resting in a hotel, you can wake up every morning in a new place. For Floatel capacity can be small (20-room cabins) and large (800-room cabins).

The idea of water as a holiday and permanent living on the water recently become widespread in the West. Houseboats are successful in many countries - the U.S., Canada, Italy, Britain, Indian Kashmir. In the U.S., they appeared in the late 40's at Lake Cumberland (USA, Kentucky), and in Europe at the time they were built not one hundred years. Most of these homes ships in Holland, where they are assigned to the rank of national landmarks. In addition to ships using stationary

barge building on the basis of concrete landing stages, self hausboty based katamarannyh float systems.

Recently, these projects are active and well-known architectural design company (Confused-Direction, Kingsley Architects, Anthenea, AquaDomi), engineers and korablebudivelnky.

Interesting project houseboat is ideal for life on the sea, coves and bays Giancarlo Zema has created. The "trilobite-65" is a hybrid yachts and bathyscaphe, composed of surface and submarine units. The upper level is rising at 3.5 feet above sea level, second level - 1.4 meters and is actually quite open deck.

The third level is at 0.8 meters below sea level, and is designed for sleeping areas. Trilobites six beds - two single and two double bedrooms, each with bath.

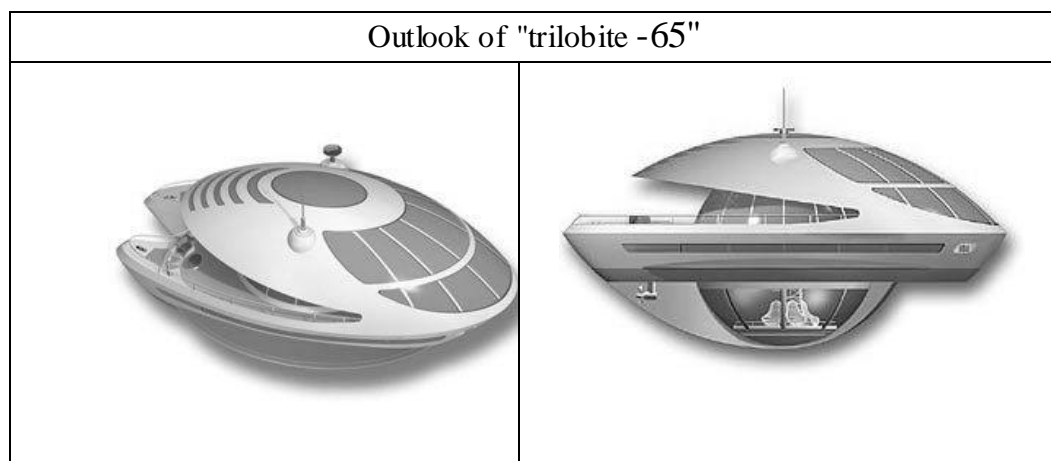
3 meters below sea level is spherical room with transparent walls for recreation and sightseeing. Built in the same technical standards as tourist submarines, the glass bell provides a 360 ° view. The special design of the glass allows to change transparency by changing the voltage. On the outside wall of his circle are spotlights that allows to inspect and night sea.

House boat is equipped with electric motors that run on hydrogen fuel cells through Ballard.

Project Giancarlo Zemy up to 6 people and is 20 meters in length. To create the sleek vessel with excellent aerodynamic shape inspired by ancient sea creatures - trilobites.

"Trilobite-65" is designed for owners of luxury ocean yachts, and is financially inaccessible to the wider (Table number 3).

Table number 3

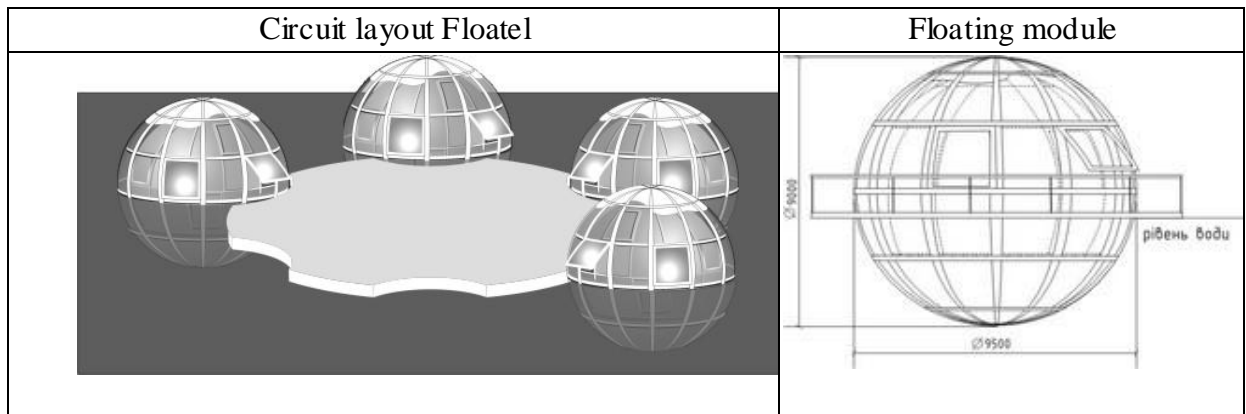


As a possible alternative, more democratic version of the water housing can offer floating authoring module that provides opportunities to meet vital human needs of all, and can serve as a home on the water for one family. Since such water housing is able to walk on water, it can simultaneously act as a vehicle. Several of these modules moored around the platform-berth may form a floating island village (Table number 4).

If planning to ensure environmental safety thanks to recycling, environmentally friendly means of transportation, mass conservation of solar energy - a man-made island can sit at any place on the sea or river waters and serve

as a means of resort-style hospitality. Module can also be used as a means summer vacation for families of moderate means.

Table number 4



The basis of the form module - field. This two ellipsoid - inside, which actually is a living space, located inside the outer, which is protective and thermostatic thanks air that fills the gap between the ellipsoid and is cooled or heated by the fact that the lower part of the water is . At the level of the water around the perimeter of "home" surrounded by a small outdoor deck, which can be increased through the inflatable part. Modern, durable and lightweight materials enable and streamline support "house-boat" to resist water and waves.

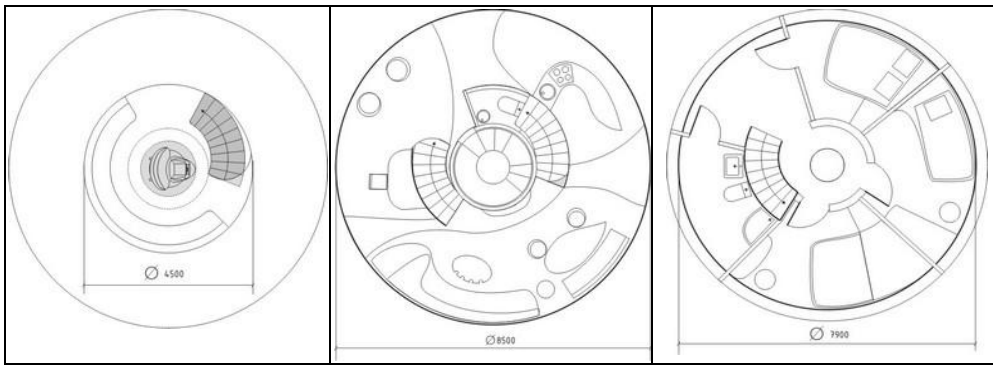
Structurally, the vehicle is a modular steel frame (retina) with total glazing. The outer sphere is covered with a photosensitive material, which allows the use of solar energy. The diameter of the outer sphere is 9.5 m residential area of the module is 105m².

The internal space of the floating module is divided into 4 levels, including 1 Technical (Table number 5). The lowest level is completely under water, the next - partly over the water requirements for insulation, the top two are completely above water. In the lower part, which is filled with ballast needed to ensure stability on the waves, is Jet engine to electric drive. Two of these are based on the center column and combined spiral staircase. These levels are intended for residential premises. The highest level, which are spiral staircases, is a platform with a diameter of 4.5 m, on which the module controls both the vehicle and navigation equipment. The bridge provides a review of 360⁰.

The upper level is designed for residential areas of entrance hall, kitchen, dining room, living room, work area, bathroom and walk-in closet (storage area). Partitions are separated only last two areas, other delimited visually by means of design. The lower living level, two-thirds of its height is below the water level, there are three bedrooms and a bathroom.

Table number 5

For superficial planning floating module		
Top plan of the level of bridge	Top plan of the residential level	The plan of the lower level of housing



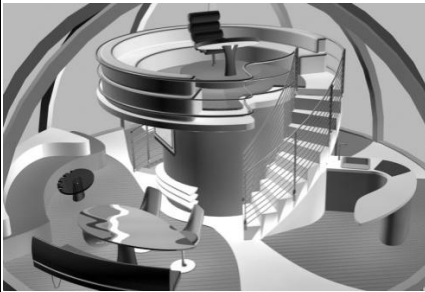
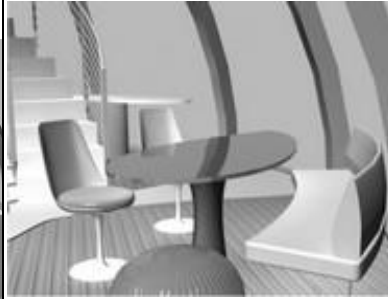
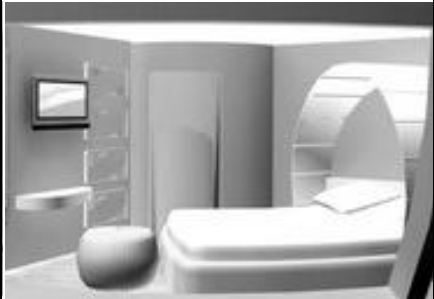
The spherical shape of the floating module provides the necessary aerodynamic properties, as this Floatel is designed as a vehicle for use on the open water surface.

The concept of the interior of the Floatel - various associations with sea and river space, the image of water. Creating the right of association by using color scheme and the use of appropriate bionic flowing forms (Table number 6).

Bionic shapes, natural styling can be applied to interior design as a whole and to individual subjects design.

To finish Floatel is appropriate to use materials that can facilitate the entire design and good withstand conditions of high humidity. Also, because the floating module represents both the vehicle and can be far from the coast, with its designs and materials are resent increased safety requirements. Therefore, we proposed to use materials that are commonly used for decoration of yachts. This specially treated wooden coating, marine plywood, plastic HPL, sandwich panels, panels RESOPAL ® Compact for use in high humidity. Some details of the decoration and the subject content of interiors made of aluminum - the metal is grounded becoming increasingly popular in the construction of boats, yachts and superyacht.

Table number 6

Interiors Floatel		
The top residential level		Lower level apartment
		

Interiors floating module solved in warm colors to provide comfort and create an impression of comfort, a sense of "grounding" in the midst of water space.

If most of the interior of objects visual connection with the natural surroundings static and tied to a specific landscape, in the case Floatel as kind of natural environment may change (it is an open expanse of water, the shore of the

sea or rivers with their unique landscape), such connection must be dynamic. In such circumstances, it seems logical to use in filling the interior and objective decisions associative connection with nature.

Conclusions. Floatel Since the main purpose is to allow travelers to spend time in an environment that is closely related to the natural environment, in harmony with the environment, design tools, in particular by means of a suitable formation in the interiors of its exterior and `yeri need to create images that will seamlessly blend with the environment. The main formative elements Floatel - range and smooth, bionic lines associated with volatility, fluctuations inherent element of water as life itself.

Bionic space due to the specifics of forms creates a sense of movement, dynamics and variability of the environment and people whose daily life is spent in the urbanized world can feel the tension and discomfort in that area that are not compatible with the rest. So, are forming an interior Floatel can be defined as "a mix of sustainability."

Prospects for further research. Spite of the fact that natural bionic form a positive effect on health, mood, their use corresponds to their functional interior, the design Floatel need to find a balance between the bionic and traditional rectilinear forms in the interior. Determining this balance is a promising area of research

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Аннотация

Гнатюк Л.Р., Новик А.В. Формообразующие элементы флотелей на основах биодизайна статья посвящена исследованию формообразующих элементов флотелей на основах биодизайна. Исследование проведено на образцах зарубежного опыта плавучих домов, а также на авторских разработках. На

основе проведенного анализа были выявлены основные элементы формообразования при проектировании жилья на воде и предложено их использование для формирования модуля флотеля.

Ключевые слова: флотель, дизайн, биодизайн, гостиничное хозяйство, формообразование, модуль.

Анотація

Гнатюк Л.Р., Новик А.В. Формотворні елементи флотелю на засадах біодизайна. стаття присвячена дослідженню формотворчих елементів флотелів на основах біодизайну. Дослідження проведено на зразках закордонного досвіду плавучих будинків, а також на авторських розробках. На основі проведеного аналізу виявлено засадничі елементи формоутворення створення засобів життя на воді та запропоновано їх використання при розробці плавучого модуля флотелю.

Ключові слова: флотель, дизайн, біодизайн, готельне підприємство, формоутворення, плавучий модуль.