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Maritime Living Areas

Dirk Schumann

Kamar – concept for a living complex in the near-coastal areas

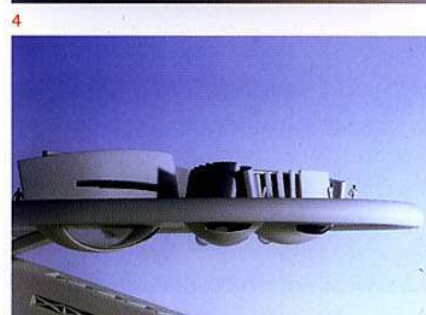
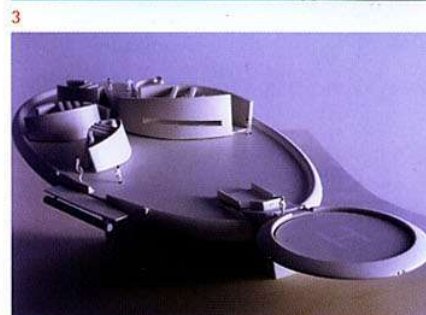
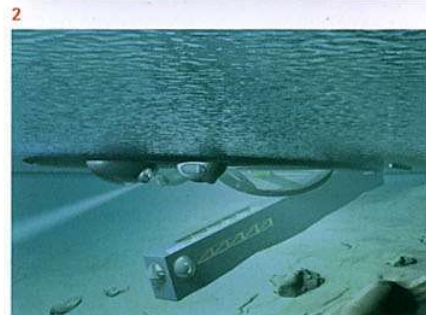
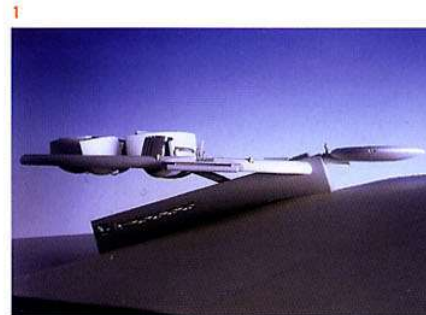
The Kamar concept (Figure 1, 2) is designed to allow people to live for a short or longer time between the above-water and underwater worlds. The construction comprises two areas: the underwater complex and, connected to it, a surface platform. The underwater complex is permanently anchored to the seabed running downward at a shallow angle. The highest point of the rectangular construction emerges from the water surface allowing access to the interior. The access can be closed by a water-tight bulkhead.

On accessing the underwater complex by a staircase, one first enters an anteroom from where a sloping walkway leads to the lower sections. The anteroom is connected to a construction carrying the static elements of the whole complex and being attached to the supporting system of the floating surface platform. After the anteroom a gallery is reached which is fitted into the side walls and the roof with large windows that open a clear view to the surrounding sea. At the lowest point of the construction there are three lookout domes which make the underwater world perceivable, as far as possible, in three-dimensional form. The architecture of the construction is a simple

cubic form expressing the connection to the seabed. The windows in the gallery use classical architectural elements, which in this environment also provide a good hydrostatic function. Going deeper into the interior, the visitor experiences a gradual transition from the familiar above-water world to the new and completely different underwater environment. In the gallery the effect is still similar to that of a large aquarium, while the bottom dome room generates an increasingly intensive contact to the underwater world.

Surface platform (Figure 3, 4)

The surface platform connected to the below complex by a lever system has a raft-like character. The lever system has to compensate the differences in the water level caused by the tides. As the whole system is considered being installed in protected areas, such as atolls and lagoons, the expected wave movements can be absorbed by the surface platform itself. As a more dynamic variant, a system of links using universal joints could be used. In contrast with the static underwater complex the form language of the platform and its sub-elements is softer and more organic, as this is the interface between the two worlds and is exposed to the dynamic of

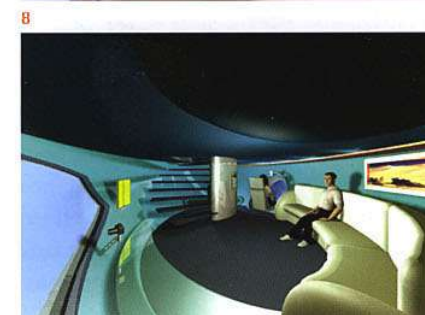


the elements of water, air, waves and currents and the interactions between them. The underwater complex, on the other hand, is located in the more static, all-embracing body of water.

The surface platform comprises several living areas, which likewise embrace both the above-water and the underwater world. The architecture of the superstructures refers to tent structures or to sails. The character of the individual is sheltering and gives a sense of protection. The individual elements are grouped protectively around a small central open space. There are similarities and allusions to Arabian or Mediterranean urban structures, with narrow alleyways and small squares. Viewed from the above, the whole group gives an impression of a blossom floating on water.

Living areas (Figure 5, 6)

In the upper part of the living units there is a room with a bed and sanitary installations. One side of the room is open, allowing a view of the sea. From here, there is an access to a capsule-shaped space below that lies under the surface of the water. The space as well has a large viewing window. Diagonally opposite the viewing window there is a smaller, quiet hemispherical observation window which integrates the viewer



even more closely into the underwater world. Part of the ceiling of this underwater space is cut away in order to let daylight in. These small living units are all linked to a somewhat larger general-purpose room. This also has an underwater area in which the dining room is located.

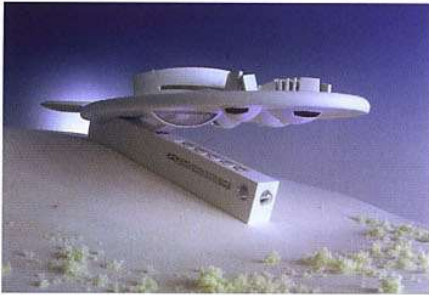
Locations and use (Figure 7, 8)

The complex can be installed in various areas throughout the world. The ideal location would be the near-coastal areas of tropical seas as this is where the fantastic underwater can be most intensively experienced. Depending on intended use, aspects such as infrastructure, accessibility, supply and waste disposal have to be taken into consideration. The complex can be used for different purposes: e.g. as a small hotel providing very high experience value, or as a personal residence. In either case, it offers a life between two worlds, and the possibility to enjoy the seclusion and peace of a small island combined with the ability to explore the underwater world in various configurations, i.e. either in the company of others or alone.

Ecological concept and infrastructure (Figure 9, 10)

As the underwater complex is firmly anchored to the seabed a location should be

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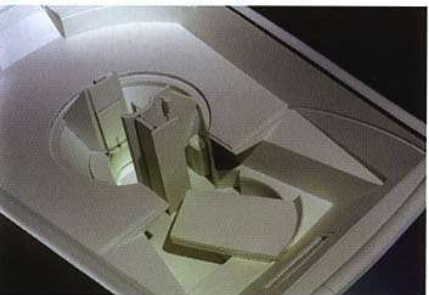
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chosen which as yet has no highly developed flora and fauna. After installation reef balls can be placed on the seabed. These offer the opportunity for colonisation by a wide range of life forms. As a result, a new habitat will be developed over time, which can be viewed from the various observation rooms of the complex for example a newly established coral garden with all its flora and fauna.

The complex is installed in the near-coastal area of the chosen location. Supplies and the disposal of waste have to be done by boats from the shore. Energy for the electrical systems can be supplied either by cable from land or generated on the platform itself using photovoltaic equipment. A land-based service is used for maintenance and supply.

Palinurus – concept for a habitable installation in the in-shore zones

Designed for in-shore zones of certain maritime regions, the fundamental purpose of Palinurus is to enable people to experience an unfamiliar and fantastic world without being dependent on techniques which they first have to learn, which may prevent them from participation at all or from the handling of experience of the sensual impressions.

The installation concentrates on an intimate inside space in which the experiences of a foreign environment can be absorbed in a tranquil, internal situation. These experiences are therefore not short-term, compressed or superficial, to be subsequently relativised by following ones, but make it possible to achieve a long-term effect and establish a long-term relationship to another world. The concept is designed to make longer stays possible. In combination with opportunities for other activities within the installation or its surroundings, the spatial structure always brings people back to its fundamental purpose.

Platform (Figure 11)

Palinurus is structured into three zones. The first area, the platform, is above water and provides access to the inner rooms. The platform has the character of a small island with interior space for the occupants. The inside rooms are entered through the central access from the deck. The bedroom is provided with large windows having blind-like covers to protect against daylight at the rear of the platform. The central access is closed with a hinged glass dome at the top. From here each room can be entered.

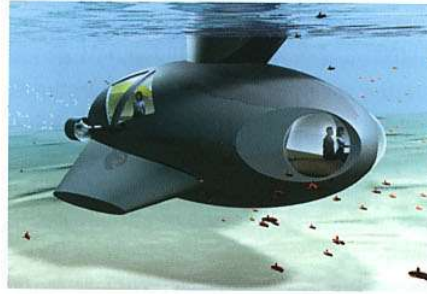
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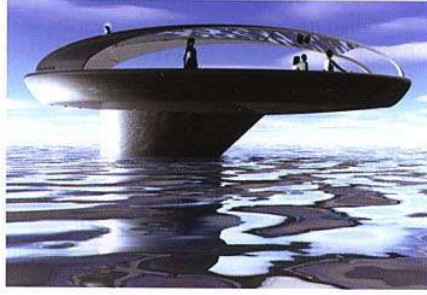
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Transit area, lounge and bedroom (Figure 12)

This room can be used as a direct transit area to the viewing dome or, by inserting a floor it can be transformed into a small lounge. The room offers several seats. It is possible to prepare meals and serve them on a fold-down table. The entrance to the bedroom is at the side of the ladder. Beside the bed, this room also offers stowage for the luggage. At the head end of the bed, there is an underwater window and the whole bedroom is fenced round of windows so that the room receives plenty of light. The ceiling windows can be raised and even used as an access to outside. Adjacent to the bedroom there is a bathroom, with washbasin, shower and toilet. Leaving the bedroom, the viewing dome is reached through the transit area.

Viewing dome (Figure 13)

The viewing dome lies underwater. From here, it is possible to see underwater landscapes with their fauna and flora under daylight conditions. At night, the marine fauna can be viewed with artificial light. Soft daylight enters the viewing dome from the transit area above. Behind the seats there is the access to the utility installations.

Dirk Schumann, born in 1960, studied product design in Münster. He worked for different design offices, before in 1991 he founded his own studio for product design. He is lecturer at the University of Münster, works for international companies and was for example awarded with the red dot, the Medaille d'Or, Paris and the G-Mark, Tokyo.

Temporary status

Kamar took part of the exhibition "European Way(s) of Life" in 2002 in the Carrousel du Louvre, Paris and the Seoul Arts Center.

Palinurus was awarded in Japan in 1997 the prestigious Golden Prize of the Japanese Design Foundation. In this prototype the concept developed of the keel has a functional space in the form of a glass sphere with seating for panoramic views.

The latest version (Figure 14-16) has an underwater cabin for five to six people and is 13.4 meters long by 8.5 meters wide. The glass capsule is located at the front and allows residents to feel part of the marine life, as there is no visible barrier between the interior and the exterior worlds. A transit area in the connecting tower leads to the above-water section with its special diving facilities.

The Palinurus project is being further developed by Architectura Navalis® in collaboration with various university institutes. Compromise is inevitable in the interests of feasibility; whereas the first design did not envisage any form of propulsion, in the interests of a more sensitive approach to nature, the later designs have engines.