

Some Features Of The Connection Between The Interior And The Environment

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Abstract – Interior of industrial premises are the most forming and raised activity in difficult ecological conditions of a hot climate. A number of measures and offers on the architecturally-spatial organization for creation of comfortable and safe conditions of personnel ability to live are offered.

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The active development of small business, along with others, makes it necessary to consider the connection of the interior of industrial buildings with the environment due to the fact that the human body needs cyclical, periodic stimulators, without which it experiences physiological pain [1,2]. Man is connected with nature, for him it is a source of health and strength. Separation from it causes a feeling of fear, leads to mental painful states (claustrophobia, etc.). That is why the connection of the interior with the environment, with nature, is an important psychological problem, for the solution of which it is necessary to provide: communication of a person with the environment, especially when it is designed in the form of a park and green spaces; information about weather conditions (whether it is raining, how much snow has fallen, etc.); information about the time of day (day, night, etc.); information about what awaits a person leaving the interior.[3]

This information is involuntary in an interior with natural light and an active building profile. It is more difficult when the ceiling is suspended, which hides the surface visible from the outside, and in buildings without natural light, where the connection between the interior and the exterior is completely interrupted. In such a case, you need to resort to one of the connecting links-the hall, the lobby, which, with good glazing and landscaping, belong largely to the exterior, at the same time reveal the interior. The vestibule also serves to adapt the eyes from high brightness (outside the building) to lower brightness (inside the building), when moving from the outside to the inside (so that there is no feeling of oppression) and from the inside to the outside (to avoid the blinding effect of light).

In general, as a result of psychological influence (the creation of a certain state of health, mood, calm), the connection with the environment has its effect on the health of workers, on productivity and quality of work.

The spatial connection of the interior with the environment is carried out through entrances and exits: one main entrance with a reception area, which is very important for the adaptation of incoming first-time visitors, and many secondary entrances and exits.

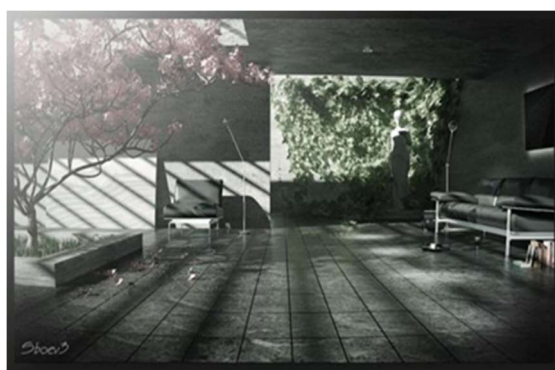
The main entrance-exit combines and distributes the following functional connections: the path of those working from the outside to the household premises, the path to the administration, etc.

The entrance node must have a sufficient area for communication paths, the location of information elements and visual propaganda, as well as an area for waiting, meetings, etc. It should be connected (or include in its space) with stairs, passageways, a cloakroom for visitors, a buffet, a recreation space, a sales hall, and exhibitions.

In the architectural solution of the entrance node (lobby), attention should be paid to the organization of the transition space between the external environment and the internal volume of the building. This transition can be solved in the form of a single space, when the building has natural light and an active profile, and in two zones: in the first, the entrance to the building is carried out without separation from the exterior, and in the second, the transition to the interior itself is organized. The second zone can be less lit, have a lower height and a different color finish using rich, warm colors. The lobby can be designed as a large space running through several floors. In this case, it is advisable to move part of the communication routes to the second level - to the transition bridges or galleries, which, along with improving the traffic schedule, add variety to the architectural solution.

In the decoration of the elements of the entrance group, it is advisable to use colder materials (marble, granite, etc.) to create a connection with the exterior, and warmer (for example, wood, fabric, leather, etc.) - for the decoration of waiting rooms, floors, walls, ceilings, furniture.

When determining the total area of the main entrance node, it is necessary to take into account its functions and the social significance of the enterprise. A simplified solution is unacceptable, but it is very common in existing enterprises.



The arrangement of secondary entrances and exits can be dictated by the technological features of the enterprise, the need to create communication links (for transport and pedestrians) and the requirements of fire protection. When organizing them, the following is taken into account:

They should be connected to small entrance lobbies;

Secondary entrances should preferably be located near the sanitary units, so that they can be used by persons working in the yard;

They should be located close to recreation areas and canteens (especially if the latter do not have an independent exit outside to the green areas);

Exits provided for by fire protection requirements can be combined with gates or special windows that open directly from the production premises (sometimes forcibly) in case of danger;

With a large building area, it is recommended to arrange exits to the courtyards, organized as a park environment. In large courtyards, there are good conditions for the concentration of such natural elements as shrubs, water areas, rock gardens, etc.; in small courtyards, landscaping in the form of lawns and flower beds is provided.

In cases where the space-planning solution of the building allows, open and closed terraces or canopies can be used for communication with the external space.

The organization of the spatial connection between the interior and the external environment requires the solution of thermal engineering issues in accordance with the climatic conditions.

The visual connection of the interior with the external space is carried out by directly viewing the environment through the glazed planes or by feeling it (for example, in the upper natural light). The larger the glazing surface, the better the connection to

the outside space. Factors limiting the area of glazing are: cooling in winter, overheating in summer, sealing requirements and visual discomfort ("silhouette effect", etc.). See Figure 2.

When solving the connection with the external environment, it is necessary to take into account the possibilities of viewing the panorama. In industrial areas, the area of landscaping is limited. Therefore, the view from the windows should be open to a pleasant perspective for the eyes, including the sky, the landscaping area (if the work involves visual strain), some attractions, if any, and limited to annoying objects, such as a noisy highway. It is necessary to pay special attention to the ratio of the external and internal scales, and the internal scale should be closer to the person.

In the absence of a good view from the room, it is advisable to have high windows for viewing the sky and a low location (even below the working plane) for communication with the adjacent land plot. The low position of the windows is also of practical importance: it improves aeration, illumination of the floor near the walls, etc.

It is desirable to strive for the device of windows with a smaller number of covers and a smaller total area of glazing, sufficiently insulating heat, and if necessary, absorbing heat. The presence of sun protection devices should not impair visibility. In the fences made of profile glass, the device of transparent strips at eye level and opening at the top for ventilation is provided.

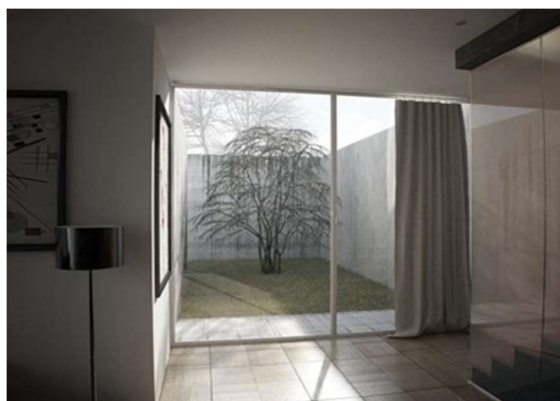
The psychological connection between the interior and the external environment can be carried out by including elements of the exterior in the interior, organizing special openings for psychological communication with the external environment and using special view bay windows. [4, 5]

In the first case, a psychological connection is achieved:

Gardening, at least only near the windows, using the appropriate types of grass, ornamental shrubs that are associated with external gardening;

The use of facade elements that "penetrate" inside and are made of the same material, have the same texture and color (for example, figured masonry);

The use of identical lighting systems on the exterior canopies and in the interior, which emphasize this connection in the evening;



The inclusion of elements of the natural environment (for example, flowing water) in the interior, which creates a sense of coolness.

In the second case, the psychological connection with the external environment is achieved by creating special openings. There are the following types of "psychological" windows:

Vertical light openings (embrasures), which give a good idea of the time of day, as they cover the view from the sky to the surface of the earth;

horizontal light openings with height (0,75); 1,2 - 1,5 (1,8)m; the height of the window sill is taken depending on the working position: sitting or standing. They provide a wider view of the horizon, are more consistent with our visual analyzer, and are more convenient for observing in motion.

"Psychological" windows are located at the end of communication paths or along them. This is done so that everyone can see "what the weather is like outside", better navigate the interior and provide a link between it and the exterior.

See Figure 3.

And, finally, the psychological connection between the interior and the external environment is achieved through special view windows, which slightly affect the microclimate. They are connected to the communication network and the general space-planning solution of the building. The glazed surfaces of such bay windows can be positioned to avoid unwanted sun exposure or to increase the view. If they are successfully oriented (for example, to the north), the possibility of viewing increases.



The psychological connection with the environment can also be indirect, especially in the interiors of category I, where such a connection is made in relation to the glazed beautiful couloirs, galleries, etc.

"Psychological" windows and bay windows are particularly rational in buildings without natural light. Their area depends on the category of the interior and the constancy of the microclimate and can be from 1 to 6% of the surface of the facade wall for category I interiors, and even more for other categories.

The need to organize psychological lighting in a production building has a significant impact on its planning structure, which should provide for the placement of the main production premises directly at the external contour of the building. If it is impossible to arrange psychological lighting (visual review) directly in the shop, then it is advisable to create visual contacts with the external environment with the help of glazed partitions between the shops and the adjacent auxiliary rooms (red corners, buffets, rest rooms, etc.).

Means of decorative landscaping of premises: For the premises of group III, it is preferable to arrange planar green compositions of green showcases, which can be glazed in particularly dusty workshops. In order not to obstruct the passage of transport, the width of such storefronts should not exceed 0.60-0.65 m. For rooms of group I and II, it is recommended to use three-dimensional compositions, which can include small "water devices" that not only increase the decorative effect, but also contribute to humidifying the air in the rooms, which, as a rule, is necessary according to the conditions of the technological process. It should be borne in mind that the edges of the flower beds should raise above the floor level by 0.50-0.60 m, otherwise the plants are obscured by machines and are poorly visible (this simultaneously facilitates the constructive execution of flower baths).

The coloristic solution of green compositions must be linked to the peculiarities of the production process. When developing products of bright colors, you should give preference to decorative deciduous plants of calm green tones. When white or faded yarn or fabric is produced, intense colors, their contrasting combinations are desirable. This increases the visual acuity of the workers, as well as creates color accents in the room.

Green spaces: Green spaces should organically merge with the architectural ensemble of the enterprise, without suppressing it. As noted, for modern industrial buildings, a clear geometricity of forms is typical; often their architecture has an excessively flat character. In combination with the large length of the buildings, this often leads to featureless architectural compositions. By means

of landscaping, you can largely correct these shortcomings. This is facilitated by the decision of the layout of the adjacent territory of the factory plots in a landscape style, as well as a visual overview from the interior space.

Irregularly arranged tree and shrub plantings, asymmetric spots of floral decoration, curved outlines of walking paths soften the excessive dryness of the composition, make the architectural appearance of the enterprise more human. According to this principle, landscaping can be carried out, for example, at a worsted and cloth mill: vertical groups of trees, breaking up the monotonous and plastically featureless facade of the mill into a number of sections commensurate with a person, act as structural elements of the composition that form the space of the pre-factory zone.

In the process of reconstruction of enterprises, when greening their territory, it is often necessary to smooth out the style differences between new buildings and existing buildings. In the landscaping project of a weaving factory, for example, this is achieved by organizing thickened tree plantings on the western and eastern sides of the plot of the new building, shielding the old low-aesthetic buildings. Vertical landscaping is also used for this purpose. The central part of the plot in front of the building can be solved in the form of a lawn parterre with separate picturesque groups of trees, contrasting with the strictly geometric shapes of the surrounding buildings and saturated with equipment and communications production shops.

REFERENCES

- [1] Architectural design of public buildings and structures: Textbook-Moscow, 2007.
- [2] Blokhin V. V. Architecture of the interior of industrial buildings. - Moscow: Stroyizdat, 1973.
- [3] Zokoley S. Architectural design, operation of objects, their connection with the environment. - Moscow, 1984.
- [4] Korepina T. N. Ergonomics of the architectural environment: Textbook-Yekaterinburg: Ural. GAKHA, 2002.
- [5] Mansurov Ya. M. Interior and equipment: Textbook-Tashkent: TASI, 2014.