

Problems With Unfinished Buildings

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Abstract

There are unfinished construction sites in many cities around the world. Their existence not only creates problems for the purposeful development of urban planning, but also increases the danger of their constructions going out of order and the destruction of the buildings as a whole. In addition, the extremely unsanitary conditions created there have a negative impact on the natural environment. Unattended buildings are often visited by strangers to live there or to hold various events. This is associated with serious pollution of the area and great danger of accidents. Animals carrying various infectious diseases, rodents, insects (dogs, cats, rats, mice, mosquitoes, flies and other living organisms) gather and reproduce on such neglected and abandoned objects.

Key words: building, construction, abandonment, dismantling, risk, annotation.

1. Introduction

There are a lot of abandoned construction sites in the cities of Georgia, which have been left unattended for several decades and represent a center of great risk. An example of this is an unfinished residential house on Tskneti Street in Tbilisi. In the most prestigious district of Tbilisi, it was built for its employees by one of the largest construction unions during the Soviet Union, Sakhidroenergoshen. In the early 1990s, Georgia's declaration of independence was followed by the cessation of centralized funding, and for 35 years since then, nothing has been done to finish the work started due to lack of funds. So far, the issue of dismantling the existing frame has not been resolved. In addition to the fact that people who have invaded the site are often forced out, due to the lack of a roof, the risk of damage to structural elements protected from natural precipitation

and their junctions is increasing every year (Fig. 1).



Fig. 1. An unfinished house

At the same time, it has long prevented the development of infrastructure in the surrounding area and the full perception of the architectural solution of the new, modern-style buildings built near it.

In the same period, again due to lack of financial resources, the construction of a frame 16-story residential building in Borjomi resort was stopped on the 10th floor. In harsh climatic conditions, for many decades, the bearing capacity of the unsealed frame assembled with columns and coils has been reduced to such an extent that there is a danger of the building collapsing at any moment. Such a situation can have dire consequences. Especially since there are sports and recreation areas in its immediate vicinity. Dismantling of the emergency frame requires quite substantial funds, the allocation of which is very doubtful under the conditions of the district's meager budget. The only

solution is to find an investor interested in this place, which has not yet appeared. A similar situation exists with regard to the unfinished frame of one of the educational buildings built in the late 80s of the last century, in front of the high-rise building of Tbilisi State University, near the road. Over time, the scraps of reinforcement of the structural elements of the reinforced concrete frame and their connecting nodes are so damaged by corrosion that they already fall apart by themselves. Fortunately, such facts have not led to an accident, but the frame definitely requires dismantling. Unfinished facilities include the conversion of the former Ministry of Agriculture building into the Tbilisi Hilton hotel in Tbilisi, which was supposed to be opened in 2019. Due to the mistakes made in the construction management, no work has been done on the object for 7-8 years, and if measures are not taken in time, it will definitely be subject to dismantling (Fig. 2).

Many more unfinished buildings can be listed throughout Georgia, which were started during the Soviet Union and stopped due to the change of the political system in the country. It should be noted that conservation work has not been carried out on almost any of them. Due to the restriction of the entry of strangers to the unfinished facilities and the lack of elementary conditions for safe movement there, many accidents occur, including many with fatal results. In various countries and cities of the world, there are unfinished buildings of greater scale and importance, the condition of some of which is described below.



Fig. 2. Tbilisi Hilton frame

2. Main part

As of June 2024, the tallest unfinished building in the world is Goldin Finance 117

(China 117) in one of the largest cities of China, Tianjin (Fig. 3). The construction of the super-tall, 597 m high skyscraper began in 2009 and was supposed to be completed in five years. Initially, it was intended for the rich, elite population, and the financiers spared no money for its realization. However, many doubted the viability of the project from the beginning. The owner of the building, Goldin Properties (Goldin Financial Holdings Ltd.), was implementing such a grand project for the first time and encountered many problems during the construction process. Difficulties appeared already in 2010 in connection with the world economic crisis, and the construction stopped for almost a year. In 2015, the construction of the building's frame was completely completed, but after the Chinese stock market crash in June 2015, construction was halted until today. One of the main problems of financing is the existing rule of receiving facilities in China. The owner has the right to start the sales process only after the inspection and acceptance of the object by the authorities. In addition, the Chinese government banned the construction of skyscrapers taller than 500 meters a few years ago, and when this building is completed, it will be the last skyscraper taller than 500 meters in China. Although this last ban does not apply to the mentioned facility, it has been almost ten years since it was not possible to mobilize funds to continue the works. At the same time, it turned out that the location of the building was chosen incorrectly from the beginning. It is located in an active industrial area, but for this very reason there were very few buyers. Instead, many are interested in climbing the top floor of the unfinished skyscraper and the cranes located there. Despite the increased protection of the object, such arbitrary ascents by representatives of different countries of the world take place almost every year. They usually videotape their unofficial visit and spread the footage of

the extreme ride all over the world via the Internet.



Fig.3. Goldin Finance 117

The second tallest unfinished building in the world is Ryugyong Hotel, a 330 m high pyramid-shaped skyscraper in Pyongyang, the capital of North Korea (Fig. 4). Its construction began in 1987 and it was supposed to break the record of the Westin Stamfordis, the tallest hotel in the world built in 1986 by a South Korean company in Singapore. In 1992, the framework of the building was completed, but due to the collapse of the Soviet Union, the financing of the facility and the production of works were immediately stopped. The government managed to resume construction only in 2008. It was planned to open in 2012, but again due to financial problems it was postponed indefinitely.



Fig.4. Ryugyong Hotel

The hotel consists of three wings that meet at the highest point, and from the observation decks there, the whole city can be seen in the palm of your hand. Each wing is 100 m long and 18 m wide. In 2018, an LED

display was installed on one wing of the building. It is used to show propaganda films and animations. The project of the building was also propagandistic from the beginning, and it is clear that no one paid much attention to its location and architectural solution. This was especially evident in modern conditions, but despite many efforts of the government, the hotel could not be completed. Worldwide, this building has long been the object of ridicule and ironic expressions. Some call it the worst

building in the world, others consider it the embodiment of the current government, etc.

In 1990, the construction of a 60-story office skyscraper, the "Tower of David", began in Caracas, the capital of Venezuela. The construction was financed by millionaire David Bielenburg, and the facility received this name in his honor. In 1993, when 45 floors were built, due to the financial crisis in the country and the sudden death of the main investor, the descendants of the millionaire could not find the funds to continue the work, and the construction was stopped. After the revolutionary coup in the country and the arrival of a new government, in 2000 the building was arbitrarily invaded by the homeless of Caracas. The government did not take any measures to evict them, and the facility turned into the tallest "homeless skyscraper" in the world. There are still no windows, walls and railings. More than 3,000 people continue to live in the building, whose physical and sanitary condition is deteriorating, literally without observing any safety norms (Fig. 5).



Fig.5. "Tower of David" in Caracas

It should be noted that only the 28th floor of the building is equipped with electricity and water supply. Despite the lack of basic living conditions, the population pays utility bills to the government and arbitrarily continues to carry out various renovation works inside the unfinished building, which often makes life there even more dangerous. For example, playgrounds and children's playgrounds are arranged in open spaces without railings and without walls. In the conditions of such

anarchy, accidents often happen, but no one cares to correct the situation, especially since there are still many homeless people living in the country and the political situation inside is very tense.

In Bangkok, the capital of Thailand, there is one of the world's tallest and most famous unfinished buildings "Saturna Tower" (Fig. 6). Construction of the 49-story, 185-meter-tall, 600-unit luxury residential building of reinforced concrete decorated with carved columns and balconies in the ancient Greek style began in 1990 in the Saturna district.



Fig.6. "Saturna Tower" in Bangkok

During this period, Thailand experienced the greatest economic progress. The unprecedented progress of the country was indicated by the numerous high-rise constructions going on there. In connection with the 1997 Asian financial crisis, money in Thailand devalued literally overnight. The financing company of the said object was the first to go bankrupt and soon it was completely liquidated, because they had already caused serious problems due to sales. The area in question was not considered prestigious, and only the distinctive architecture of the building, a tasteful fusion of old and new styles, was not enough to attract wealthy people. The work was stopped so suddenly that the 80% completed building is still in the same condition today. It should be noted that during the financial crisis, the construction of more than 300 high-rise buildings in Bangkok was suspended at the same time. As the economy

recovered, most of them were completed, but Bangkok remains the city with the most unfinished high-rise buildings in the world. People's interest in the unfinished building was great from the beginning. Everyone wanted to go in there and have a look. Such arbitrariness led to many accidents. The number of suicides increased a lot (the number exceeded 40) and the authorities blocked all entrances and exits. The huge building, without which today's Bangkok is unimaginable, was called "bad" by the residents. It is only used to display advertising banners, and people believe that the reason for its incompleteness is that it should not have been built on the site of a cemetery. This disturbed the dead and only "evil spirits" can live there. The fate of the building is not clear at all. According to the current financial calculation, its renovation and completion will cost much more than the construction of a new similar building. It should be noted that due to the lack of fire protection systems in unfinished buildings, many cases end with serious damage. The best example of this is the Cathedral of New York, where in 2001, due to a strong fire, the entire building was so damaged that it took the next 7 years for restoration work. Its construction began on December 27, 1892 and is still unfinished. Because of this, he is ironically called "St. John the Unfinished".

Conclusion

1. Unfinished buildings, regardless of their purpose, create great difficulties in the development of cities. They prevent the production of new buildings and the development of infrastructure in the surrounding areas. Over time, in an unfinished, unroofed building, due to the impact of natural precipitations and climatic conditions, there is a risk of damage to its structural elements and the entire structure;
2. The main reason for the existence of unfinished buildings is the incorrect calculation of expected risks before the start of construction. These risks include: economic crises; inappropriate funding sources; lower than expected sales figures; unreliable investors, etc. The world construction practice has shown that this process is most affected by

the change of political structure in the countries and revolutionary transformations;

3. Animals carrying infectious diseases, rodents, and insects usually gather on unfinished, neglected and abandoned facilities, and it gradually becomes a center of unsanitary conditions. In addition, it is impossible to protect such buildings from the entry of strangers, whose movement there often ends in accidents. The lack of fire protection is especially dangerous. comes with.

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