

From Innovative Patterns to Symbols of National Identity

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Generally, this type of high-rise structures – radio and TV towers – was considered a tool for innovative high technologies and was constructed on the limits of what was technically feasible. But these structures have become unique city landmarks, a cosmos of science, technology and culture, and even symbols of national identity. They must be carefully looked after; their damage and disappearance would hurt the people.

On 24 March 2018 the TV Tower in the city of Ekaterinburg, in the Ural Mountains between Europe and Asia, was blown up. It was the second-tallest structure of reinforced concrete in Russia – the tallest being Ostankino TV Tower in Moscow, 540 metres, erected from 1960 to 1967. Since then it has become a Moscow landmark and one of the symbols of the Soviet Union and of Russia. The Ural TV Tower, 371 metres high according to the project design, was constructed up to the height of 220 metres. Its erection began in 1983 in a typical project similar to that in Tallinn (Estonia) and Vilnius (Lithuania) and continued until 1991. Then there were financial problems and the tower remained unfinished. Only the trunk of concrete was carried out, including the empty interior space. You can simply imagine it – the cone from 15

to eight metres. In 2000 years, it will attract rock climbers, base jumpers and suicides.

For a long time, the tower and its land were the object of investment and competitions, from fantastic cosmic proposals up to orthodox cathedrals, with the conservation of the tower in 2013. However, the World Championship of 2018 was approaching, and the decision was taken to demolish the tower. Immediately a protest movement of citizens, public organisations, people from the cultural sector was initiated. The final decision on the issue was taken after the president's elections. The process of demolition was observed by the entire city with serious fears; fortunately, it was carried out without any complications. After that the protests diminished and eventually stopped. The State board of conservation of cultural heritage refused to list it, because 1) it wasn't 40 years old; 2) it was unfinished; 3) the project was typical.

I would like to mention the opinion of the French expert on World Expos regarding this case: “The TV Tower in Ekaterinburg included in the project ‘The Global Phase’ could support the nomination of the city for the EXPO 2025, by



Fig. 1: TV tower in Ekaterinburg, demolished in 2018, general view

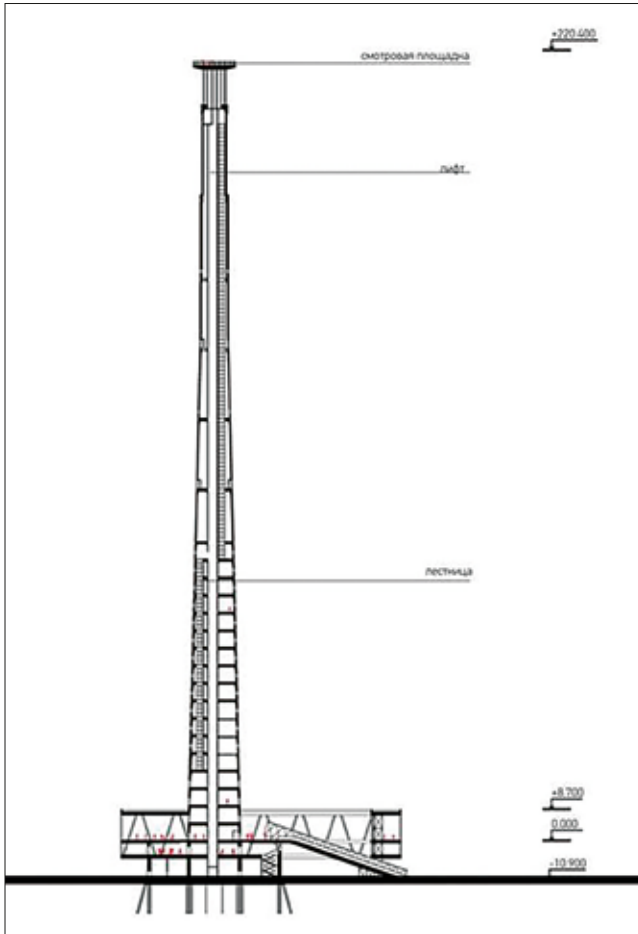


Fig. 2: Design of the TV Tower <http://awesomearchitects.co.uk/ru/menu/projects/urbanism/tv-tower-ekaterinburg.html>



Fig. 3: The TV tower before demolition (<https://neferjournal.livejournal.com/4710982.html>)



Fig. 4: The demolition (<http://www.brodyaga.com/pages/viewlarge.php?id=51040&cty=Ekaterinburg&place=Russia%20Sverdlovsk®ion=Sverdlovsk>)

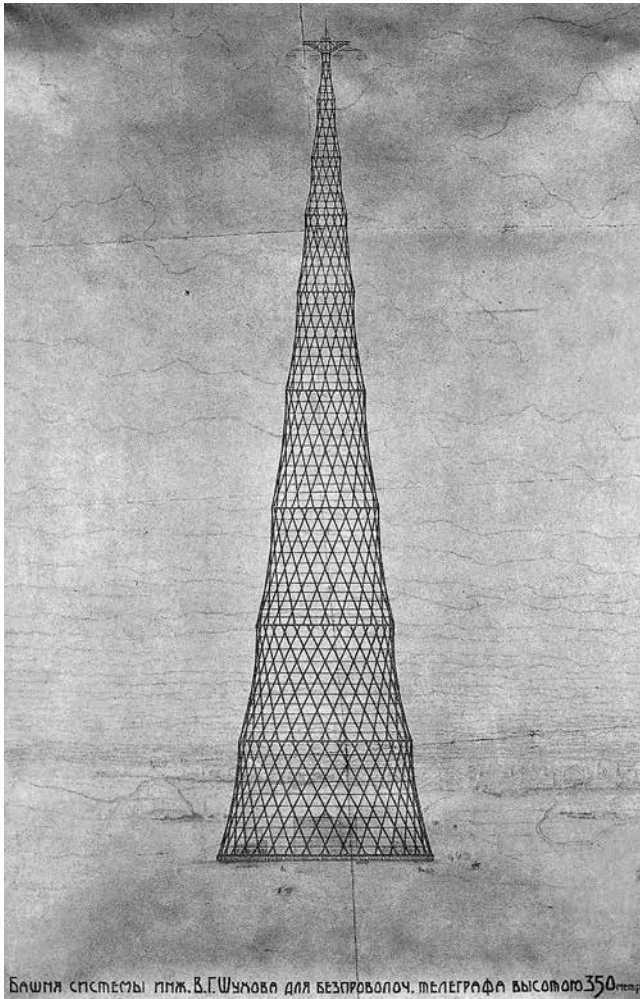


Fig. 5: Radio tower in Moscow, Ing V. Shukhov, design for a height of 350m (<http://inrussia.com/avant-garde-around-the-shukhov-tower>)

analogy with the Eiffel Tower, constructed also on the occasion of a World Exhibition”.

But at the beginning there was the Shukhov Radio Tower, the world-famous innovative 20th century hyperboloid construction constructed as a structural grid steelwork. Designed by academician V.G. Shukhov and built in the 1920s, it belongs to the Ministry of Communication, was used for radio broadcasting and later for TV broadcasting. Since 2002, it is no longer used for broadcasting, but it still carries cellular network transmitters. Its height: 148.3 metres (in total 160 metres), depth of the basement: three metres. In 1939, the tower faced a serious challenge: a mail plane hit a thick hawser stretched from the top of the tower down to the ground. The hawser had been left after the construction as it was considered harmless. The plane broke apart; the tower was seriously hit. The expertise showed that the tower withstood the test and did not even require repairs.

The tower was recognised as a monument of architecture and engineering, but it has never undergone restoration. Attempts to strengthen it with prefabricated elements are considered vandalism affecting the tower’s unique structure. The strengthening ruined Shukhov’s basic principle – a certain degree of mobility and self-compensation to external loading. The tower is not protected against corrosion. The moving base of the tower is embedded in concrete, which also violates the kinematic idea of the structure. Access to the tower is restricted and tourists cannot approach it. In February 2014, the Ministry of Communication proposed to dismantle the tower, which had become useless to them, and to move it to another location. This caused a public outcry. The reaction of the Ministry of Culture was distinctly negative. The Government interfered and ordered the owner to conduct conservation work and emergency repairs and to initiate an international competition for the restoration of the tower. In Summer 2014 a referendum was launched for the perspec-

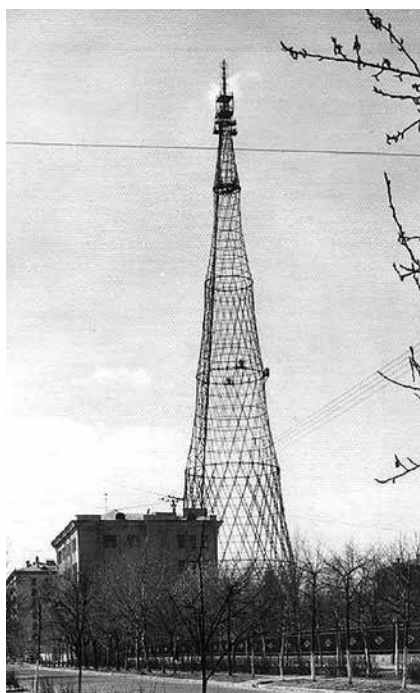


Fig. 6: General views of the built tower (author’s archive)

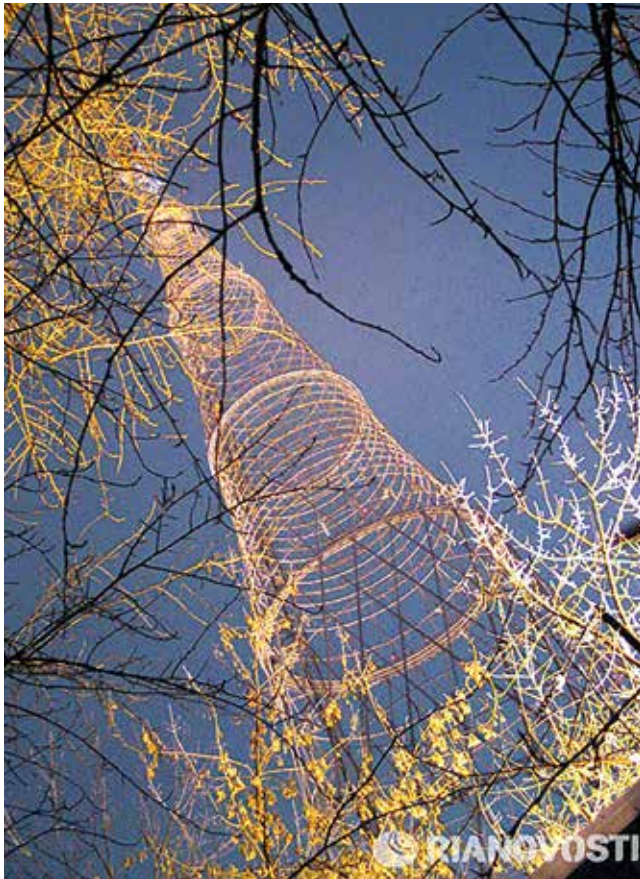


Fig. 7: General views of the built tower (author's archive)

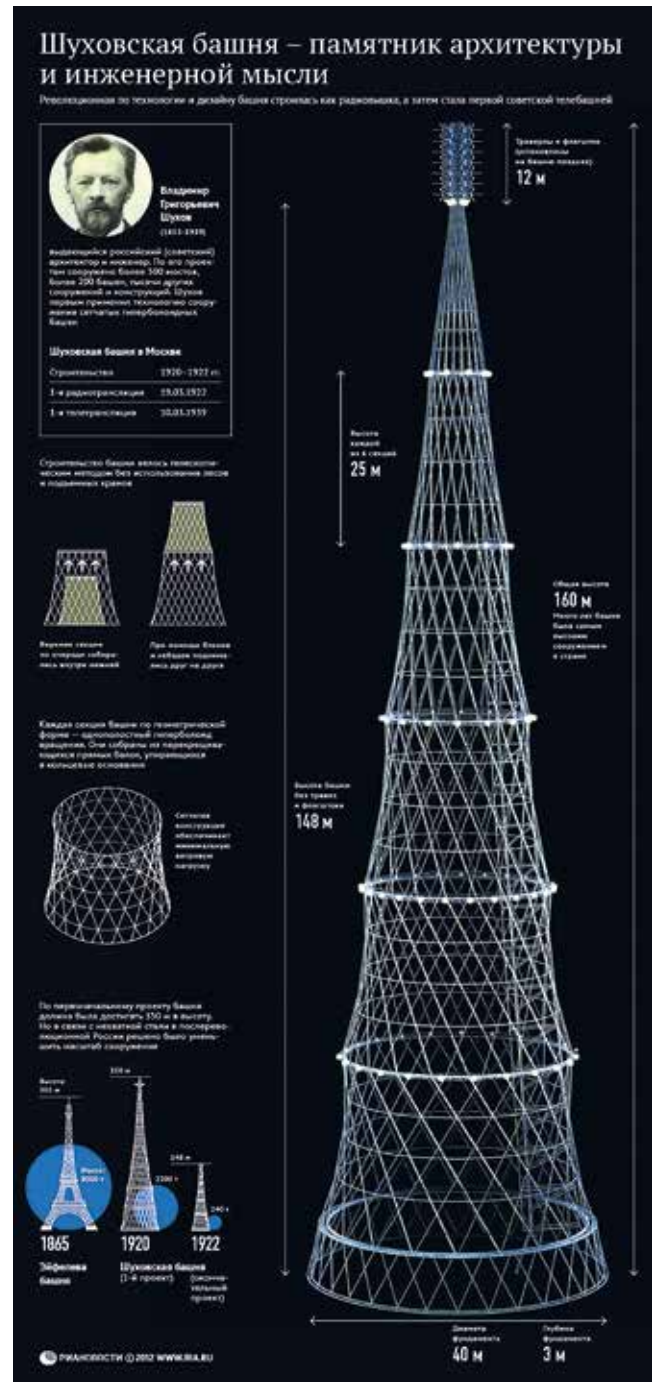


Fig. 8: History of the design of the tower (<https://ria.ru/20120319/597065933.html>)

tive phase of the Tower, and 90% of the participants were in favour of a conservation of the Shukhov Tower. In July 2014 it was declared that the tower would not be dismantled and that an international competition for a restoration project would be organised. Now the structure is supported by metallic hanger or “coat rack”, waiting for the start of the restoration project commissioned in January 2017.

In 2006, the international conference “The Soviet Heritage and European Modernism” in Moscow with the participation of ICOMOS, DOCOMOMO, and UIA adopted a declaration in which six monuments of the Soviet avant-garde architec-



Fig. 9: Protest slogans against the replacement of the tower (author's archive)

ture were proposed for a UNESCO World Heritage nomination. One of these masterpieces was the Shukhov Tower. In 2015 the Foundation “Shukhov Tower” declared such a nomination to the World Monuments Fund.

In 2019 it will be 100 years since the start of the tower's construction. It has survived these 100 years and has demonstrated its capacity and its eternal cultural value, thus becoming one of Moscow's favorites.

There are more than 200 Shukhov Towers in all of Russia. The first one was constructed for the Russian Market in Nizhniy Novgorod in 1896. It also still exists. It is known that the responsible authority of the city has proposed a serial nomination of the Shukhov heritage for the UNESCO World Heritage List. In my opinion, we should support this initiative.

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¹ Французский эксперт: телебашня может повысить шансы Екатеринбурга выиграть ЭКСПО – 2005. Сайт znak.com



Fig. 10: Concept proposal for the protection of the tower; 2013 by arch. Y. P. Volchok (author's archive)



Fig. 11: The fixed foot of the construction (author's archive)