

Moscow's Ostankino TV tower goes up in flames

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On Sunday afternoon, Moscow inhabitants watched incredulously as the city's landmark *Ostankino* TV tower, one of the technical miracles of the post-war period, went up in flames. As the blaze spread through the tower the stabilising steel cables inside were melting one after another in the intense heat, threatening to send the whole building toppling over.

The fire in the 537-metre tower—the world's second tallest structure—was finally put out at 17:40 local time on Monday.

The outbreak of the fire interrupted the broadcast of the most important national television and radio programs and some smaller stations in the European part of Russia. When the fire was finally extinguished 24 hours later, the situation it left was devastating. More than half of the technical systems on the TV tower were destroyed and everything combustible in the parts of the tower hit by the fire was completely burned out. Only the section below the 60-meter level remained largely intact due to the foam barrier established by the fire brigade. All elevators in the tower failed, plunging down their shafts as the fire hit their supporting steel cables.

According to recent reports, four people died in the fire: three fire fighters and an operator suffocated as fire caused the elevator they were riding in to stick in the shaft before plunging down. Visitors to the TV tower, a popular tourist attraction, were evacuated in time, preventing an even greater tragedy.

The cause of the fire is assumed to be a short-circuit in cabling at around the 460-meter point.

A high-ranking fire brigade officer told the press that the short-circuit could have been a result of the constant overloading of the electronic systems in the tower. He said the capacity of the 33-year-old TV tower was already exhausted at the beginning of the 1990s. Nevertheless further systems were installed, which had led to technical installations overloading the tower by 30 percent. In particular, the officer said the installation of transmission equipment for pager systems had led to an overload and the violation of fire regulations, which the fire brigade had warned of years ago. In addition, the tower carried systems for broadcasting 11 television and 12 radio programs.

The Russian television and communications industry, controlled by the so-called oligarchs, established itself around the TV tower and has achieved fantastic profits in recent years.

The heedless installation of the lucrative pager system, which probably led to the overload, is characteristic of the penetration of capitalism throughout the country. Without fundamentally renewing the decaying infrastructure, the conditions were created for the enrichment of the new social elite—with no consideration for the possible consequences.

The two-day failure of the TV tower is said to have caused losses of several million dollars already.

The tower's leaning and its instability due to the loss of more than half the 149 supporting cables, which were an essential component of the special construction of the tower, unleashed fierce arguments over whether the structure would stay standing. For safety reasons, a 700-meter area around the tower was evacuated during the fire-fighting operations. The top of the tower is now leaning almost two meters outside its normal position.

Experts from the Special Steel and Concrete Constructions company, which originally built the structure, believe that the 100-metre-long tip will have to be dismantled in order to save the tower as a whole. This would only be possible by means of a dangerous helicopter operation. Other experts are talking about the complete demolition of the building. The short-term safety of the tower will depend on there being no stormy weather over the next few days.

Experts are also afraid that in cooling down, the tower could become seriously deformed and metal parts might break off.

The *Ostankino* fire is a further link in a chain of accidents, which make clear the catastrophic condition Russia has fallen into after 10 years of capitalist “reforms”. The country's population must increasingly reckon with falling victim to a technical disaster. For too long, investment has been lacking, which is needed for the necessary maintenance of technical apparatus and systems upon which millions depend.

Which visitor to Russia has not seen urban street scenes where bus drivers must first repair their vehicle before completing their journey, or how in the cold Russian winter jets of steam rise up through the streets, or grass verges are still growing because the underground district heating supply pipes leak? A situation of provisional, patchwork repairs and improvisations characterises the life of the entire country. It is only a question of time before the next, even worse, disaster

occurs.

Conditions that were so apparent in the failed rescue of the crew of the *Kursk* submarine—the lack of any divers able to go down 100 meters—became clear again in the inability to deal with a fire 300 meters over the roofs of Moscow.

First of all, the in-built fire-extinguishing systems failed. Then it became apparent that neither the technical equipment nor trained fire fighters were available for this exceptional case. There was a complete lack of the necessary extinguishing foam. Hand-held extinguishers had to be collected from around the city. The hoses of the urban fire brigade only reach 120 meters, leading to the usual improvisation which finally led to the largest section of the TV tower burning out.

Then the fire brigade used sand and carbon dioxide, failing to prevent the fire from travelling downward. According to press agency reports, from the outbreak of the fire in the afternoon until nightfall the fire brigade was only concerned with the rescue of those trapped inside the elevator. Only later in the night did they think to cap off the electric cabling along which the fire was moving downward, instead of taking this relatively simple measure from the start. The cables were only finally capped off at the 64-meter mark and the ducting—which carries both cables used in broadcasting and those supplying the other technical systems on the TV tower—filled with sand, concrete and asbestos.

Interior Minister Vladimir Rushailo, Minister for Exceptional Affairs Sergei Shoigu and Media Minister Vladimir Lessin visited the accident site by helicopter at 3:00 a.m., but did not speak to any journalists. The fire continued to eat away at the tower, and yellow flames could be seen coming from the viewing platform, underneath which is the famous revolving restaurant “In seventh heaven”.

At 5:50 a.m. an explosion occurred at the 147-meter mark, after which black smoke belched out. By the early morning, the fire had eaten its way down to a height of 120-130 meters above ground. By 8:00 a.m. it had reached just over the 100-meter mark, and at 10:00 a.m. was down to 66 meters, where it was stopped by the foam barrier established by the fire brigade.

Until then, fire fighters and onlookers watched helplessly as smoke clouds billowed out from ever-lower parts of the tower. Desperate cries could be heard everywhere: “The fire cannot be stopped, the fire cannot be stopped!”

At 537 meters high, the Moscow TV tower is the largest structure in Europe and second only in the world to the 553-meter-high CN Tower in Toronto, Canada, finished nine years later. The *Ostankino* tower was completed on November 5, 1967 on the fiftieth anniversary of the October Revolution. It is considered one of the most symbolic buildings in Russia and the world due to its reinforced concrete construction, unique at the time it was built. For most tourists to Moscow, it ranks in second place after the Kremlin and has attracted more than 200,000 visitors annually.

The construction of the 55,000-tonne giant was directed by the ingenious architect Nikolai Vassilievitch Nikitin (1907-73). It represented an important innovation in construction and gave a substantial boost to the reputation of the Soviet Union in the post-war test of strength with the United States. Using high-tension steel cables inside the tower, Nikitin succeeded in building an extremely thin and high tower that needed only comparatively small foundations. The use of high-tension cables meant the oscillation at the top of the building could be reduced to just 1.5 meters.

This technique brought the construction of buildings of over one kilometre in height into the realm of technical feasibility. There were even negotiations with Japan about such a building, which failed because of the high costs involved. Nikitin's work embodied the strivings and dreams of a whole generation of technicians, engineers and technical designers. He is not only famous for building the *Ostankino* tower, but for constructing the new main building of Moscow's Lomonossov University in 1953 and the “Mother-homeland” monument in Volgograd, which commemorates the decisive battle of Stalingrad against Hitler's fascist troops.

Nikitin also solved the problems of the foundations in a revolutionary way when constructing the 242-meter-high Lomonossov university building. At Stalin's request, the gigantic building, which dominates the whole city, was constructed on a hill in the southwest of Moscow. The ground was soft and therefore an enormously deep and expensive foundation would have been necessary. Nikitin developed a foundation that resembles an inverted shoe box and thus prevents the building from sinking into the ground by displacement.

The symbolic nature of the fire at the *Ostankino* tower recalls the fate of the lighthouse at Alexandria—one of the Seven Wonders of the World. It was built in 279 BC, about 50 years after the widest expansion of Hellenism under Alexander the Great, and reached the fantastic height of 134 meters, till then only exceeded by the Egyptian pyramids. It stood during the darkest periods of the Middle Ages and only collapsed into the sea in 1326, almost 1,600 years later, during an earthquake.

The Russian version of contemporary capitalism requires no such natural disasters in order to extinguish the symbols of historical achievement. It has been able to do that of its own accord within the shortest period of time.



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