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1. Television Tower in the City of Tashkent (USSR)

The chief architect of the tower was Yu. L. Semashko, the chief designer – E. P. Morozov, the chief engineer of the project – M. D. Musheev.

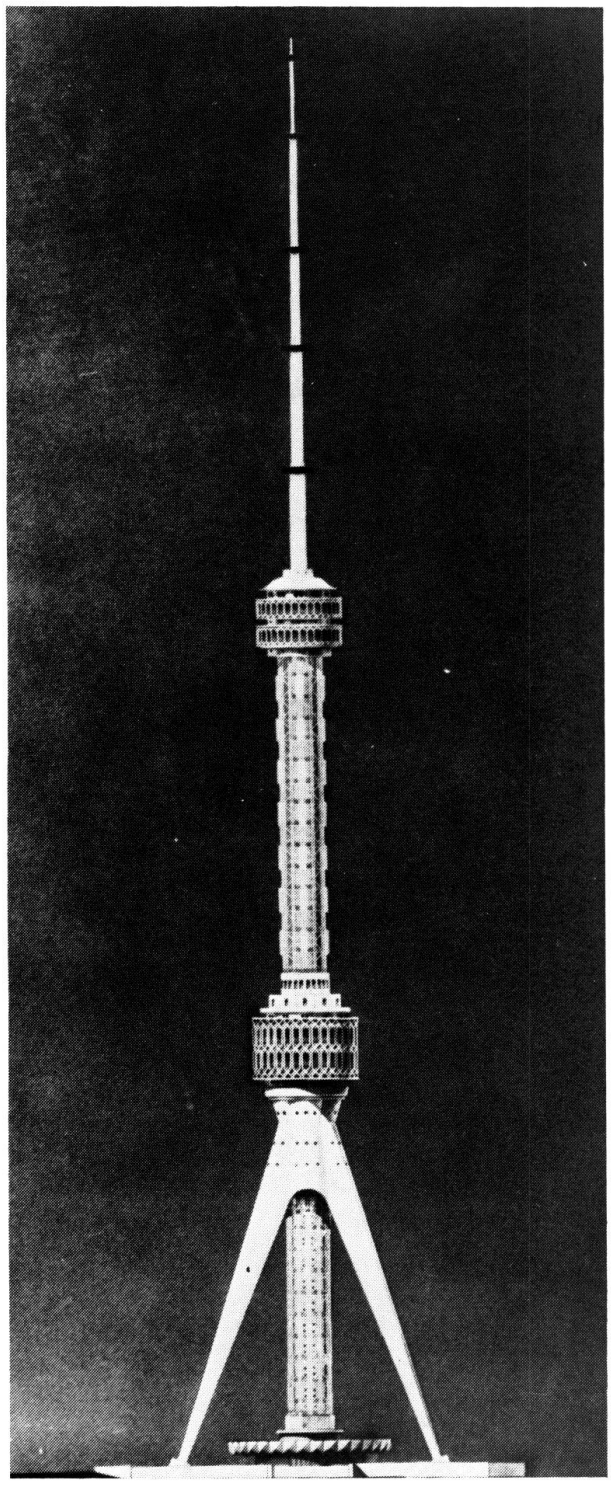

Fig. 1 Façade of the radiotelevision and shaft erection

In 1983 the steel tower of a new Tashkent Television Centre rose to height of 375 m. The engineering solution to the problems concerning the construction of the tower made it possible to realize in metal the architectural composition of latticed and solid-web forms. The tower combines three integral constructive parts: tripod, latticed framework and central shaft.

The tripod consists of three cone struts integrated into a single rosette at the top, and at the bottom they rest on their separate foundations. The latticed framework with a heigt of 220 m is installed on the central foundation an passes through the rosette of the tripod. The rosette is connected with the corresponding ring of the framework by radial hinged links.

The central shaft is installed inside the latticed framework, embedded in it at a height of 147 m and connected with it on several levels by lateral bracings. The shaft passes into a 150-m spire of the antenna. The spire is crowned with the flag pole having a weathercock body. The shaft and the tripod are made of steel plates. The framework is made of steel pipes.

The constructive parts of the tower, which are placed inside each other and interconnected, guarantee a higher storage of elastic energy for the construction. The lateral bracings, ensuring the combined work of constructions under the wind and seismic effects, at the same time do not prevent any mutual vertical temperature translocations of the latticed and solid-web parts in case they are differentially heated by the sun. The above-given characteristics are really important for a construction site with high seismic and solar activities.

The ring-shaped multi-storeyed engineering and civil compartments are fastened to the framework at heights of 100 and 200 m. The compartments are framed with aluminium-made casements, balconies, sunshade enclosures. The civil compartments comprise the observation platforms and bars with rotating floors. The bars' interiors are decorated with marble, coloured glass and other decorative materials. Access to the compartments is provided by means of fast lifts.

The stylobate of the tower simulates the ground technical building. The foundations of this building comprise reinforced concrete bands connecting the plates of foundations of the tower.

The erection of the tower was carried out by means of different methods: the use of a vertical crane resting on the tower (framework), a self-lifting crane (spire), winches with tackled blocks (struts of the tripod). The construction of the tower took five years. The mass of the steel constructions is 59 000 ton.

The tower was designed in Moscow and Tashkent; construction at the plants of the Urals and Uzbekistan; the tower was erected by the assemblers who came from Novosibirsk, Leningrad und Tashkent. The tower has become a symbol of friendship of the peoples of the USSR.

(E. P. Morozov, Y. L. Semashko)

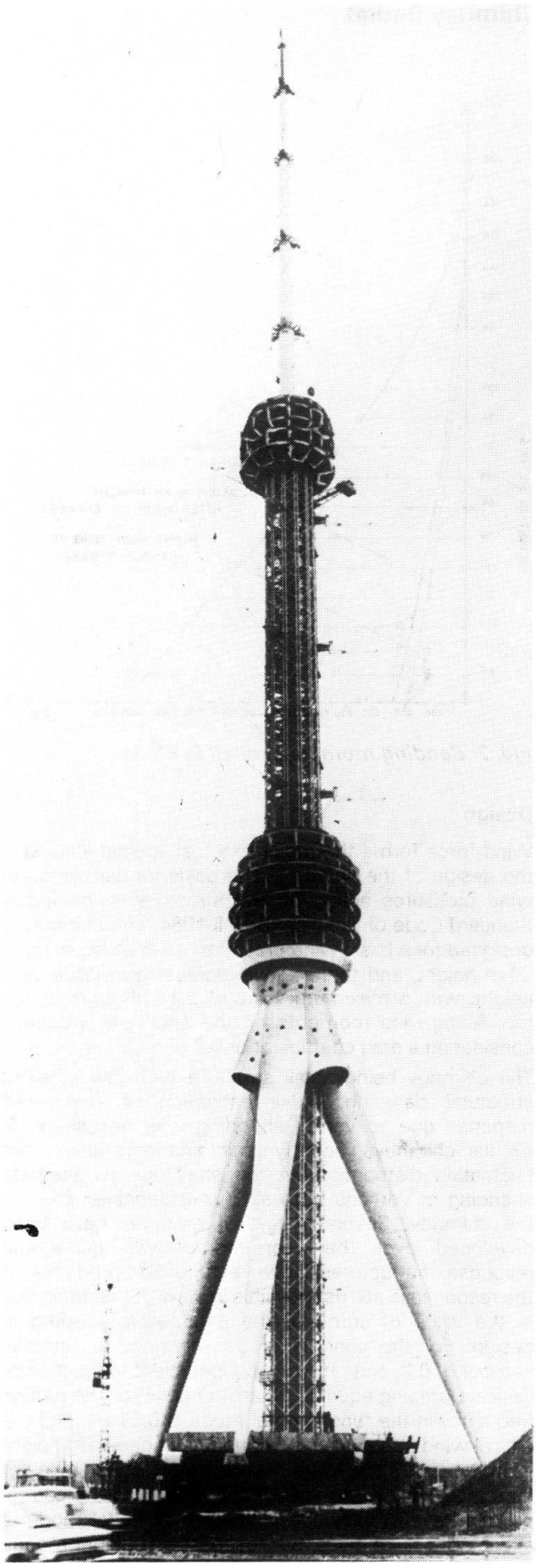

Fig. 2 Beginning of the finishing works in the tower

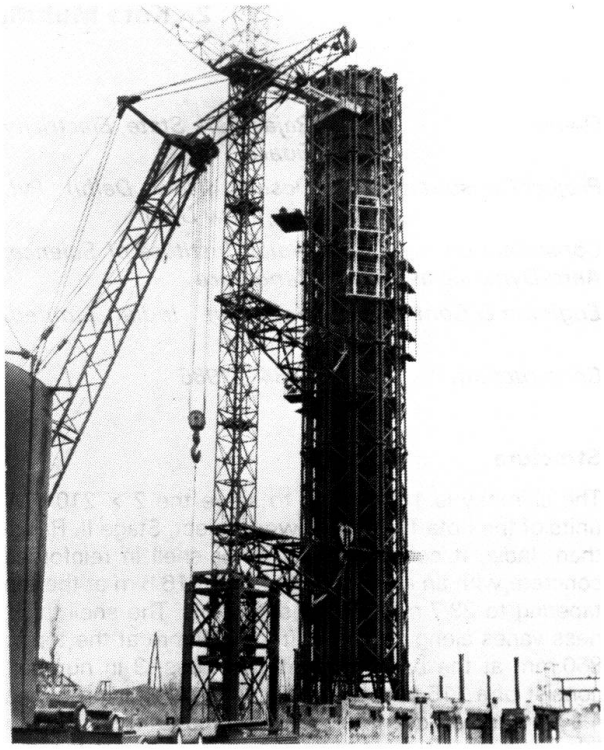

Fig. 3 Beginning of the metal tower erection

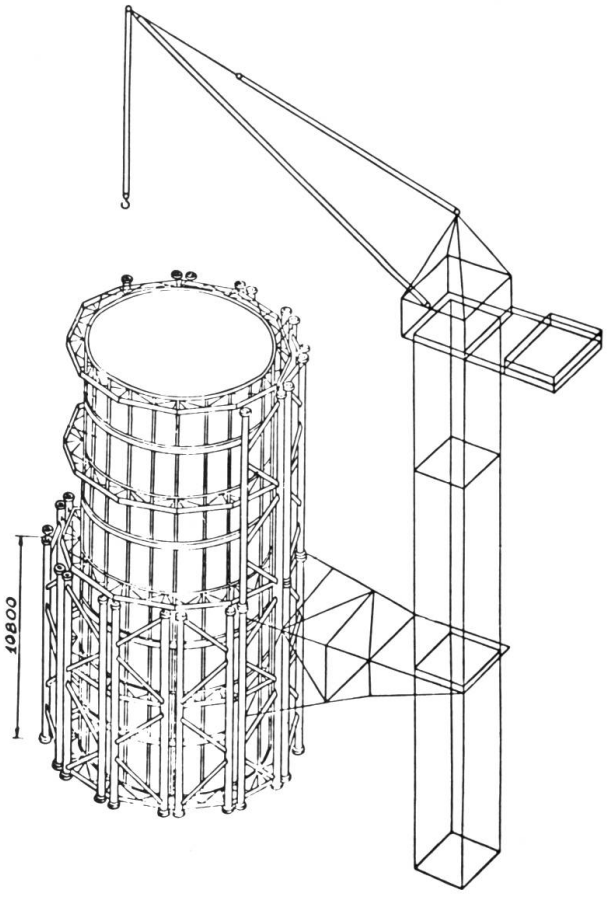

Fig. 4 The tower latticed framework and shaft erection