
MONITORING OF THE MICROCLIMATE IN THE SVESHTARI TOMB

TZVYATKO KADIYSKI

(S u m m a r y)

The exceptional historical and artistic significance of this monument, the complicated microclimatic conditions and the high requirements for the protection necessitated from the very beginning a systematic observation and control of the microclimate. The results of the monitoring, shown in the article, have been used for the design works of the airconditioning.

In the first stage, immediately after the tomb was discovered, only part of the tubular embankment was removed, after which the first small insulation chambers were built. The principles on which permanent air-conditioning installation was designed were formulated as follows: creating an air space between the tomb and the tumulus by building a projective concrete structure, over which the tumular embankment was restored; the entrance is designed as a labyrinth in order to prevent direct penetration of external air; the provisional protective structures are dismantled only after the final complection of the permanent protective building and the reliable functioning of a full airconditioning. The directions of the intervention of the engineer-climatologist were defined as follows: to guarantee that the temperature on the walls of the tomb do not fall under freezing point; to prevent condensation on the surface; to guarantee that the RH in the camera do not extend 65 %. The permanent air conditioning installation has complete control of all parameters with the regime, chosen as follows: temperature 17 deg and RH 60 %. The amount of fresh air for the visitors is reduced to 10 m³/h per man instead the normal 20 m³/h.