The press centre building in Bratislava (CSSR)

5. The Press Centre Building in Bratislava (CSSR)

Owner: PRAVDA, Bratislava
Designer: LIGNOPROJEKT, VITKOVICE, Bratislava
Contractors: HYDROSTAV, VITKOVICE, SES Tlmace, HUTNI MONTAZE

Year of begin of construction: 1977

The ground plan size of the office building is 22,1 x 72,0 m, its height is 103 m corresponding to 27 storeys. Its structural system consists of a steel skeleton combined with reinforced concrete stiffening vertical wall structures (Fig. 1). In the transverse direction there are four shear walls spaced 24 m all over the width of the building. These walls divide the building into three sections. The elevation walls have the character of a pair of walls connected by lintels, whereas the internal walls have the form of vertical pierced wall (Fig. 2). The longitudinal walls in the middle section are also designed as walls with holes and are connected to the internal transverse so that they constitute an internal core together. The relatively considerable wall thicknesses are due to large vertical loads and to technological reasons. The walls include rigid steel elements (steel structure) to be in the final stage all embedded in concrete as parts of steel reinforcement.

The horizontal structures are in steel with steel sheet panels. They are connected and in erection stage carried by steel elements in the vertical walls. In the longitudinal facades are one storey high Vierendeel beams of 3 x 24 m span (Fig. 3). The material used for these beams is steel of type COR–TEN, in CSSR produced under mark ATMOFIX. The internal beams are of 2 x 12 m span and of 60 cm height. Also the jalousies in the site facades are in ATMOFIX .

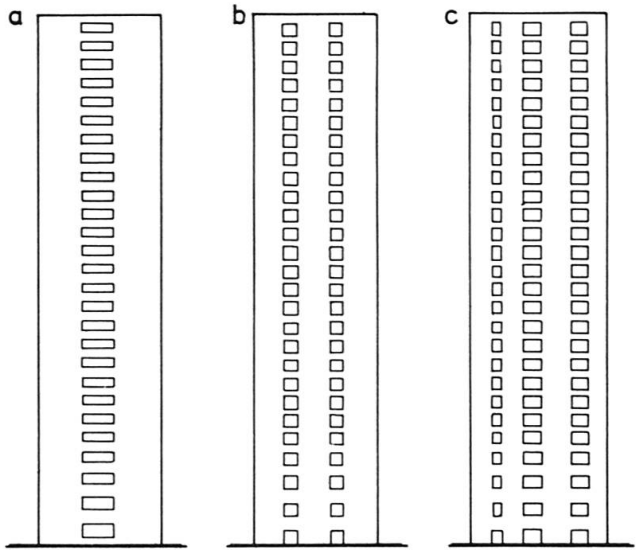

Fig. 2 Scheme of the shear walls:
a) elevation transverse
b) internal transverse
c) longitudinal walls

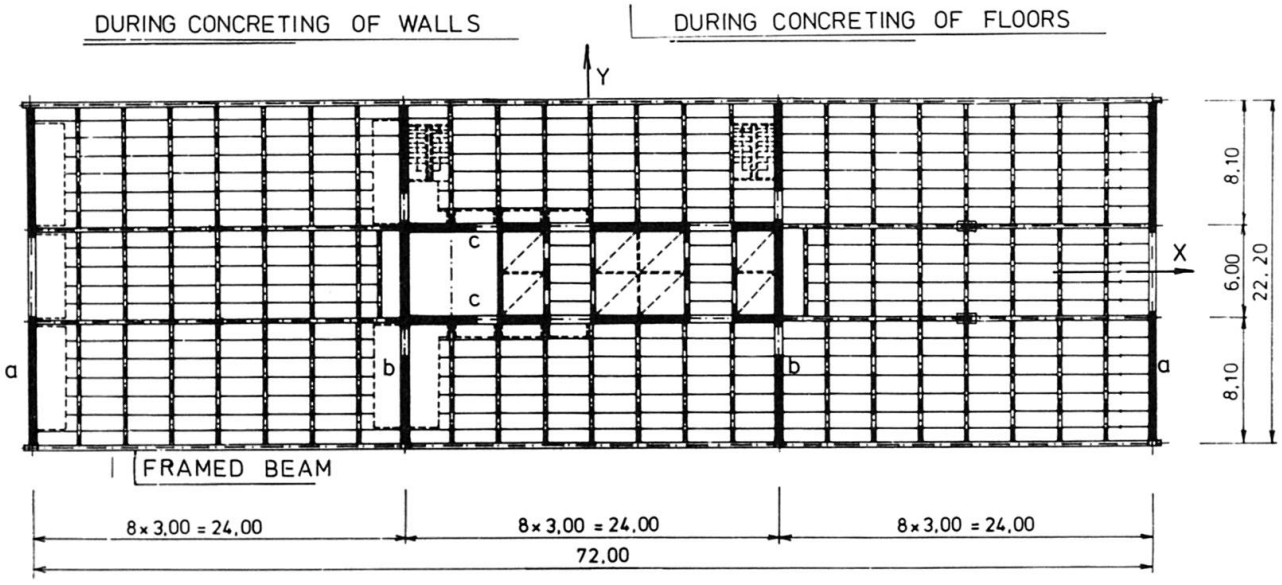

Fig. 1 Floor with shear walls

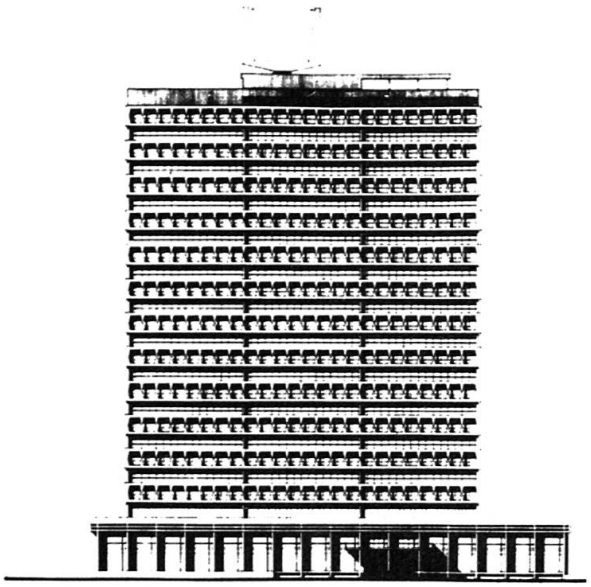

Fig. 3 Longitudinal facade (Project)
Vierendeel beams made of ATMOFIX-steel

The structural spatial system has been analyzed as the structure of the bar character with battened cross section, composed of all vertical perforated walls. The constancy of cross section is secured by the stiff floor structures in the function of transversal diaphragms.

The simple steel structure of vertical walls is most important during construction and they are designed to be able to secure the spatial stability of 6 storeys height without concreting. The bearing of horizontal structures on vertical ones is statically clear, designed as connection steel on steel without tolerance problem.

The steel structures of the vertical walls are assembled on the terrain in a vertical skeleton of 22,0 m width and of two storeys height, completed by reinforcement bars and after that as a whole elevated into the final position. The construction works are to follow the flow technology pattern i.e. after assembly of two to six storeys the next steps are the concreting of walls and pouring of a concrete floor slab on top of the steel sheet panels (Fig. 4).

(J. Kozak)

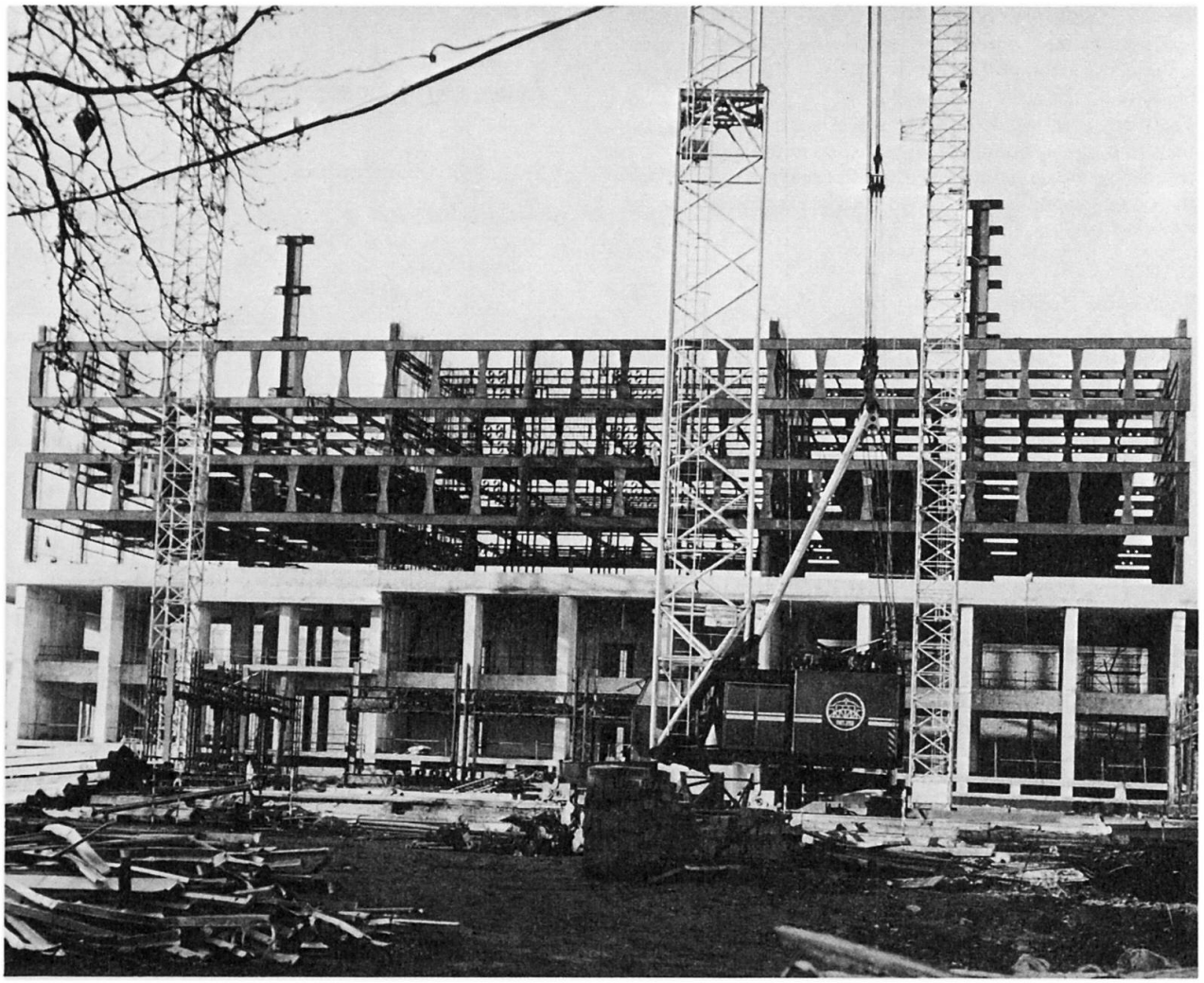

Fig. 4 Building during construction