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8. Tampere Main Library, Tampere (Finland)

Owner:	*City of Tampere*
Architect:	*Raili and Reima Pietilä*
Structural engineers:	*A-Insinöörit Ky, Consulting engineers, Tampere*
Contractor:	*City of Tampere, Housing construction department*
Building time:	*36 months*
Completion date:	*August 1986*

Floor area:	Ground floor	4424 m²
	Main floor	4722 m²
	Mezzanine	1665 m²
	Top floor	414 m²
Total:		11225 m²
Netfloor area of the library:	6630 m²	
Netfloor area of other municipal offices:	856 m²	

The new main library in the city of Tampere was completed in the autumn of 1986, well on schedule. Designed by Raili and Reima Pietilä, who describe it as a «work of spatial art», it is an unusual, domed building of stone, copper and glass.

Seen from above, the library building is shaped like a bird, a wood grouse. There is not a rectilinear surface in sight. It is all arches, domes vaults and undulations, which means that everything had to be tailor-made; hardly any standard structures could be used. There were quite a number of technical challenges along the way.

The building has a total floor area of 11225 m². It is divided into four expansion joint areas. The basement floor partly rests on piling. Intermediate floors are mainly of in situ reinforced concrete. The projecting parts in the main library are of prestressed concrete. Upper floors have partly conventional structures and partly special arch and dome structures. The main hall roof is arched with a rib and vault construction of prefabricated arch units and in situ concrete vaulting envelopes.

The main foyer hall dome, which has an 11° inclination to the south, is constructed of a small inner circumferential ring beam and a larger circumferential ring beam. Between these two beams are twenty-four sectors consisting of dome segmental units made of reinforced concrete. The dome is thus formed by the conjunction of two circumferential beams constructed in situ with the prefabricated units in between.

The interior of the dome is painted blue to enhance daylight and accentuate the impression of spaciousness.

The basement cladding and the steps to the library are of Viborgite granite. The facades and curving eaves are of copper, as are also the arched sections of the roofing and the dome. About 4700 m² of copper has been used.

In addition to copper sheeting, bitumen felt has been used as a roofing material. On the flat roof the insulation is mainly of thermal chippings and bitumen felt. The arch and other roofing areas are insulated with mineral wool and wind-resistant sheeting. Condensed water insulation is provided by a ventilated timber cavity substructure.

Tampere Main Library will be a new landmark and a work of spatial art expressing the modern environmentalistic spirit.

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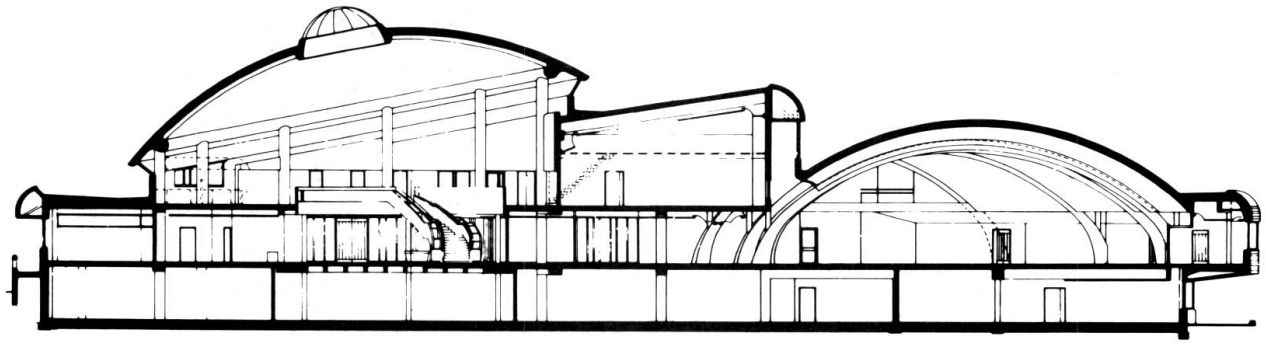

Fig. 1 Section

Fig. 2 Air Photograph

Fig. 3 Facade