

ARCHITECTURE AND TECHNICAL ASPECTS OF THE SWIMMING HALL DESIGNS BY FRIEDRICH FLORIAN GRÜNBERGER

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INTRODUCTION

In the year 1968, the Viennese government decided to implement a new concept regarding public swimming pool halls (“Bäderkonzept”). Thereby, it was decided that a network of easily accessible and affordable swimming pool halls should be constructed. The idea behind was to re-establish the bathing culture of earlier times in Vienna, and to generate facilities for sport and recreation of the population. As a key, 1m² of swimming pool surface area was intended for 333 inhabitants of Vienna. It is obvious that with the facilities available in Vienna at that time, this key could not be reached. Thus, the architect Friedrich Florian Grünberger (Figure 1) developed the so called *Bezirkshallenbäderprogramm* (district indoor swimming pool program). Based on this concept a set of very similar swimming pool halls has been constructed in Vienna. While Grünberger in the 1960ies and 1970ies was a well-known architect specialized on recreational facilities – he was even called the bathpope of Vienna (der Bäderpapst von Wien) -, today little knowledge about him is preserved. This seems a bit surprising, given that the majority of his swimming bath design from the backbone of Vienna’s public bath infrastructure of today. One of Grünberger’s major developments was the concept of the so-called *Europabad*, a prototypical plan-layout for an indoor swimming pool hall (Figure 2).

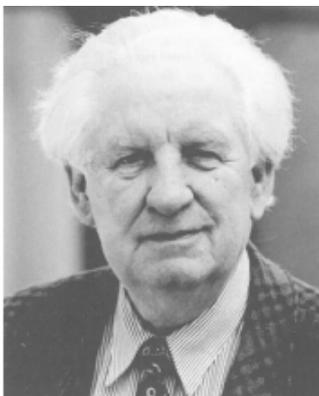
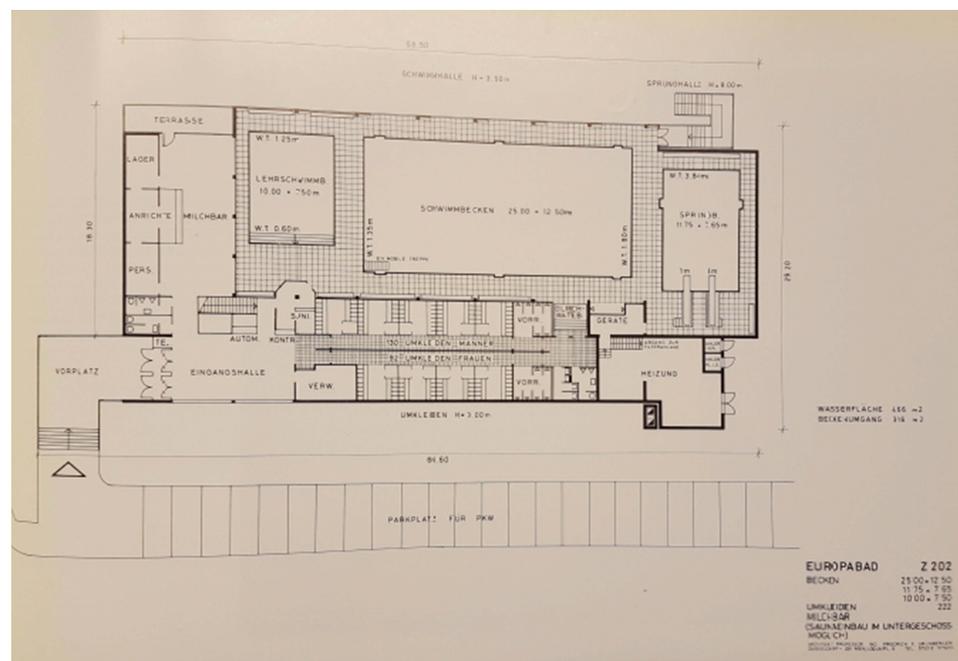


Figure 1 (left): Portrait of Friedrich Florian Grünberger [1].

Figure 2 (right): Plan layout of the Europa-Bad concept by F.F. Grünberger [2]



In a first attempt to rediscover some of the knowledge about both the architect and his oeuvre, it was decided to propose a master thesis that focusses on some technical aspects of one of Grünberger’s swimming pool halls of Vienna. The findings discussed below are based on this master thesis [3].

THE FLORIDSDORFER BAD

The Swimming pool hall in Floridsdorf was designed by F.F. Grünberger, and built between 1964 and 1967. It was the first Swimming pool hall that was built after the second world war. During the planning process the bath was designated as a multi-role swimming pool hall, which required the attachment of number of facilities. For instance, to allow for the usage during competitive swimming a spectators stand had to be integrated. The building is a reinforced concrete skeleton construction and is separated in different parts (one for the pool, one for the change rooms, and one for administration/entry part; a fourth part encompassing a gym has been added in the 1990ies). The layout is thus significantly different from those of later baths designed by Grünberger, following the *Bezirkshallenbäderprogramm*.

Today, the swimming pool hall is still in heavy use, being the only of the public Viennese baths (beside the privately operated Stadthallenbad) that can host swim competitions.

During the early 2000s, the operation of the bath regarding energy usage was changed to contracting in most of the Viennese bahts. Contracting is a Private-Public-Partnership model, where private companies support the public owner in implementing energy-saving measures, and – in return – is paid a part of the saved money. Interestingly, the implemented measures suggested by the private energy contracting firms, regularly do not touch the existing building envelope, but rather the technical infrastructure of the buildings that is necessary for keeping up the required water temperature and quality. Beside the old swimming pool halls of Amalienbad and Theresienbad, there has not been any major thermal retrofit to the envelopes of Grünbergers buildings.

The contracting efforts could be considered as rather successful in the special case of the Floridsdorfer bad. The energy consumption out of Vienna's district heating could be lowered by 34% due to integration of solar panels on the roof. Gas and electricity consumption could be decreased by 4 and 21%, and the water consumption by 67%-

CONCLUSION

The master thesis conducted about the Floridsdorfer Bad and Florian Friedrich Grünberger revealed a larger research necessity which has to encompass multiple streams: (i) the energy performance of the swimming bath halls needs to be more explainable for non HVAC-engineers; Moreover, the impact of potential envelope retrofit measures needs to be examine; (ii) Comfort and performance indicators such as noise levels, thermal comfort, and daylight availability need to be investigated; (iii) Today's state of the Grünberger baths has to be documented and compared to the original realizations. Thereby, the methods of building archaeology/research could be utilized; (iv) the meaningfulness of Grünbergers baths has to be examined from a viewpoint of art history/building history; (v) As a central platform for the different other research streams, it might be wise to generate BIM (Building Information Modelling) models of the Grünberger baths. The mentioned aspects are currently collected and prepared onto a fundamental research proposal addressing Viennes indoor swimming pool halls.

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