



## The Forms of the Reinforced Concrete Catholic Churches in the Czech Republic

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### Summary

This paper discusses forms, shapes and styles of the Catholic churches in the Czech Republic in the 20th and 21st century. One of the most conspicuous groups is of the functionalist churches with their distinctive horizontal and vertical lines (e.g. St. Vaclav, Prague). Other notable groups include: constructivism (e. g. Holy Heart of Jesus, Hradec Kralove), brutalism (e. g. St. Josef, Senetarov), deconstructivism (e. g. St. Vaclav, Breclav), minimalism (e. g. church of Our Lady in Cistercian abbey, Novy Dvur) and modern churches (e.g. St. Vaclav and St. Anezka, Hustopece; Helping Virgin Mary, Brno). The last group shows the universal application of reinforced concrete in sacral architecture (towers of the church of the Blessed Virgin Mary in the Emauzy Abbey, Prague). The use of reinforced concrete in sacred architecture in the Czech Republic has revealed a variety of elegant forms and functions which enhance the experience of sacred space.

**Keywords:** Catholic churches, sacred, reinforced concrete, Czech, forms, shapes, architectural styles

### 1. Introduction

The 20th century was the era of reinforced concrete structures, structures of great spans, varied shapes and forms. Widespread use of concrete has led to its application for structures in sacral buildings from the 1920s which enabled a variety of shapes and forms of the sacral space to emerge. These forms and shapes of the 20th and 21st century Catholic Church architecture in the Czech Republic is the topic of this research paper.

### 2. Forms of the reinforced Catholic churches in the Czech Republic



*Fig.1: Church of St. Vaclav, Prague*

One of the shining examples of early modern sacral buildings in the Czech Republic is the church of St. Vaclav in Prague – Vrsovice. It was built in 1928-1930 according to the plans by architect Josef Gocar (1880-1945) in a functionalistic style where the most distinctive elements of space, horizontal and vertical lines, are constructed in reinforced concrete. The structural possibilities of this material enabled a fluid space undisturbed by columns. It is a three-aisled building where the two lower aisles are convenient for contemplation and the higher nave ended with a stepped roof for ceremonial services. Emerged steps are filled with windows that let the light enter the sacral space, creating mysterious illumination for the choir.

The second group of constructivist churches gives the main emphasis on a perfect technical solution and dynamics for which the typical elements include diagonal and vertical building lines. These principles are presented by two churches in this style: the Church of the Holy Heart of Jesus in Hradec Kralove and the Church of St. Hedvika in Opava. Both of these buildings are remarkable examples of pre-war sacral architecture.



*Fig.2: Church of St. Josef, Senetarov*

As a result of the changes after the Second Vatican Council, the Church of St. Josef in Senetarov (1969-1971) was built. The brutalism church was designed by the artist Ludvik Kolek (\*1933). This building is often spoken about as an inspiration by the sculptural expressionism of architect Le Corbusier (1887-1965) and his chapel Notre Dame du Haut (1950-1954) in Ronchamp. An ascending trough shaped shell of reinforced concrete symbolizes the pilgrimage to God. A three-aisled layout enables the elevation of the nave holding this concrete shell, creating a basilica-like illumination of the inner space. Given the local Czech conditions, this church with its shell structure and sculpture form is considered *sui generis*.

After 1989, when the communist regime in the Czech Republic was overthrown, fifty six Catholic churches were built. Almost 40 % of them use reinforced concrete for their structure. Only four are built as a monolithic structure, while the others have a reinforced concrete skeleton with masonry infill. Representative examples of a concrete skeleton are the churches of St. Vaclav and St. Anezka in Hustopece (1991-1994) or of the Helping Virgin

Mary in Brno – Zabovresky (1993-1994). Both of these churches have a visible interior structure as its integrated part of the inner space which completes the final appearance.

Another form of sacral architecture is seen at the Church of St. Vaclav in Breclav (1992-1995). A moderate indication of deconstructivism was designed also by the artist Ludvik Kolek. This building is founded on an unconventional layout lying in two opposite triangles where the choir arises from their crossing. The ceiling descends towards the choir where it is suddenly broken and rises steeply towards heaven in the shape of three prickles symbolizing the Holy Trinity.

Out of the ordinary sacral building is a church inside the Cistercian (Trappist) monastery in Novy Dvur u Teple dedicated to Our Lady built between 2000-2004. It was designed by the English

architect John Pawson (\*1949) in cooperation with the Czech architect Jan Soukup (\*1946). Minimalism church consists of simplicity, spatial clearness, monumental lightness and working with light which complements the life of Trappist monks, who are dedicated to a prayer, services, spiritual readings and manual work. The load-bearing structure of this church is monolithic reinforced concrete, creating a compact and elegant sacral space.



*Fig.3: Church of the Blessed Virgin Mary, Emauzy Abbey, Prague*

The last chapter gives space to an interesting sacral building using reinforced concrete for its part creating an inconvenient and impressive form of structure. The first one is a ramp leading through the tower of the Church of the Holy Heart of Jesus in Prague – Vinohrady (1928-1932) designed by Josp Plecnik. Masonry hall church use reinforced concrete to create a rising way through the tower to a great glazed clock which lets the daylight into this space. The second notable example is the completion of the gothic Church of the Blessed Virgin Mary in the Emauzy Abbey in Prague which was damaged by bombs at the end of WWII. The vault was extensively damaged and the towers had collapsed. In 1960 architect Frantisek Maria Cerny (1903-1978) developed an innovative solution in the form of two intersecting elegant reinforced concrete shells. The plans were realised between 1965-1967.

Finally strong reactions were overcome and Prague achieved a place in the world's architecture with the iconic crossed towers visible from the banks of the Vltava river.

### 3. Discussion

Almost all the architectural styles of the 20th century were represented in sacral architecture. These groups show the variety of shape and form possibilities rooted in reinforced concrete sacral architecture. Finally, from the numerous examples and groupings, it was possible to observe a simpler division into two categories. The first contains churches where the structure is believed to be an aesthetic element with construction elements used for spatial expression. The second includes structures that are designed as necessities of the building, like supporting elements. The use of reinforced concrete in sacred architecture in the Czech Republic has revealed a variety of elegant forms and functions which enhances the experience of sacred space.