

Technical Profile

Construction type:	Three-hinged arch, developed as hollow-box girder
Construction material:	Reinforced concrete
Total length:	132.30 m
Width of roadway:	3.5 m
Slope of roadway:	3% or 3.97 m
Span of arch:	90.04 m
Arch rise:	12.99 m
Dimensions of the arch slab:	at the support hinges: 0.40 x 6.00 m at the crown: 0.20 x 3.80 m
Load bearing capacity:	8 t or 350 kg/m ²
Height above water:	over 90 m
Design Engineer:	Robert Maillart, Geneva
Contractor:	Florian Prader & Cie., Zurich/Chur
Scaffolding:	Richard Coray, Trin
Construction time:	1929/30
Total cost:	CHF 180,000
Extensive restoration:	1997/98

Group Transportation

To Salginatobel Bridge: Tel. +41 81 328 11 64



The Salginatobel Bridge Book (in German)

232 pages, 61 b/w photos

16 drawings, 9 plans (4 fold-outs)

23 pages of calculations

ISBN 3 9 5 2 0 9 6 3 1 8

Price CHF 40

(apx. € 26, calculated at daily exchange rate)

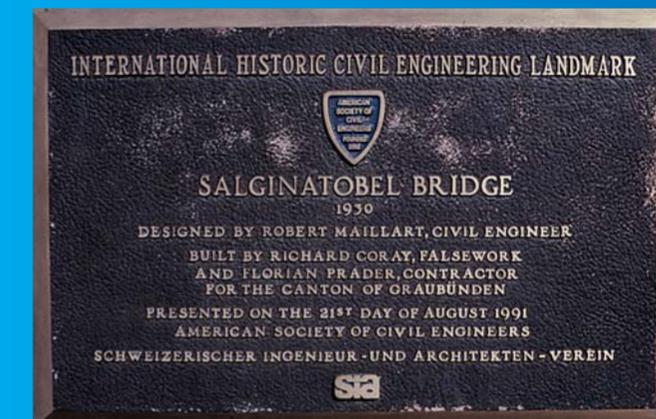
Verlag AG Buchdruckerei Schiers/Switzerland

World Monument Salginatobel Bridge

International Historic Civil Engineering Landmark

World Monument Salginatobel Bridge

SCHIERS



Only thirty structures in the world have received an equivalent bronze plaque!

International Regard

The Salginatobel Bridge is a highlight of 20th century bridge architecture. As an outstanding engineering feat and modern work of art, it has an almost magical attraction to experts and artists alike since its completion in 1930.

In 1991, the American Society of Civil Engineers (ASCE) declared this exceptional bridge a "world monument". Today, around 30 structures form a small group of the most significant engineering creations, including well-known ones such as the Eiffel Tower in Paris, the Statue of Liberty in New York, or the Panama Canal, to name a few.

Almost ten years later, after a worldwide survey, the renowned British trade journal "Bridge - design & engineering" voted the Salginatobel Bridge the most beautiful bridge of the century.

Additional information: www.schierstourismus.ch

4.2002/7,500e

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Robert Maillart's Masterpiece: The bold Salginatobel Bridge

Construction History

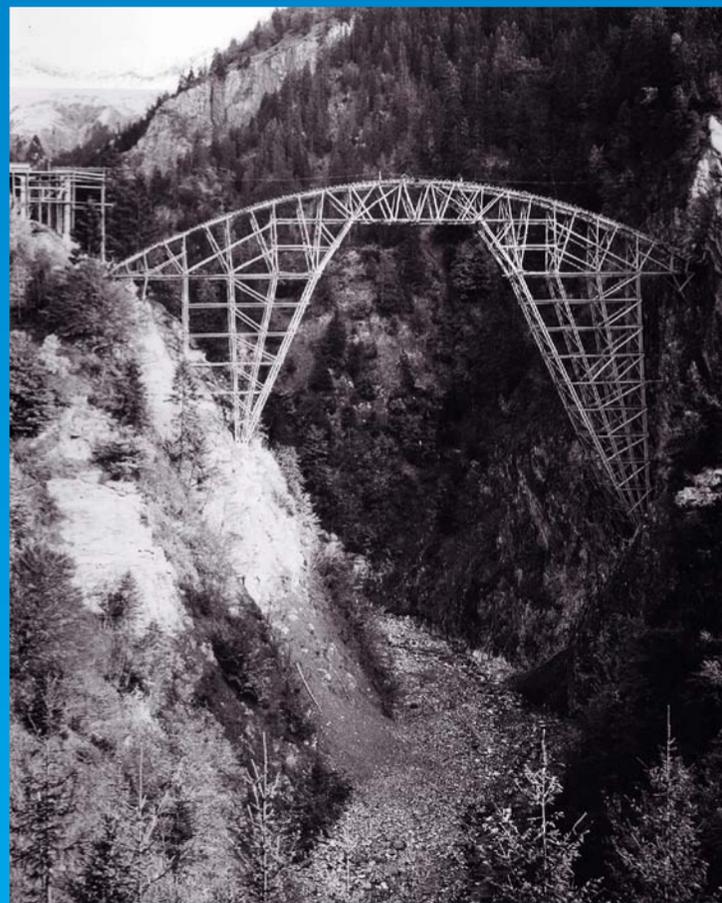
Viewed today as an architectural jewel, this Maillart Bridge was built because it was the least expensive at that time. There was a large choice: Two months after the invitation to tender for its construction, in the summer of 1928, the cantonal building authority had 19 projects for a Salgina brook crossing. Preference was given the cheapest offer by the company Prader, although they didn't really feel comfortable with the unusually lank construction. This was one of Robert Maillart's projects. The clever engineer was once more successful at finding the most economic bridge solution by making the most sparing use possible of reinforced concrete, which was very expensive at that time. The construction order was placed for a fixed-price of CHF 135,000.

Through the access door, on the Schiers side, you reach the hollow-box.



The highly regarded scaffolding by Richard Coray cost an additional CHF 45,000 and was assembled and erected in the steep ravine by only 6 workers in late summer 1929. The concrete was cast in 1930 in the unbelievably short time of only three months. All the materials for the concrete were mixed by hand and transported by wheelbarrow. The most delicate phase was casting the thin arch plate, which had to be done absolutely symmetrically from both sides without interruption. After 40 hours of strenuous work, it was completed.

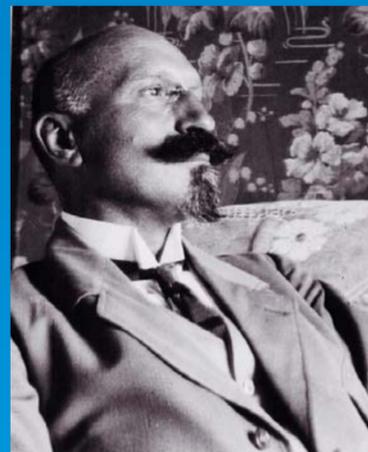
In the middle of August 1930, the scaffolding was lowered and the structure was opened for traffic.



A temporary work of art: Richard Coray's scaffolding

The Design Engineer

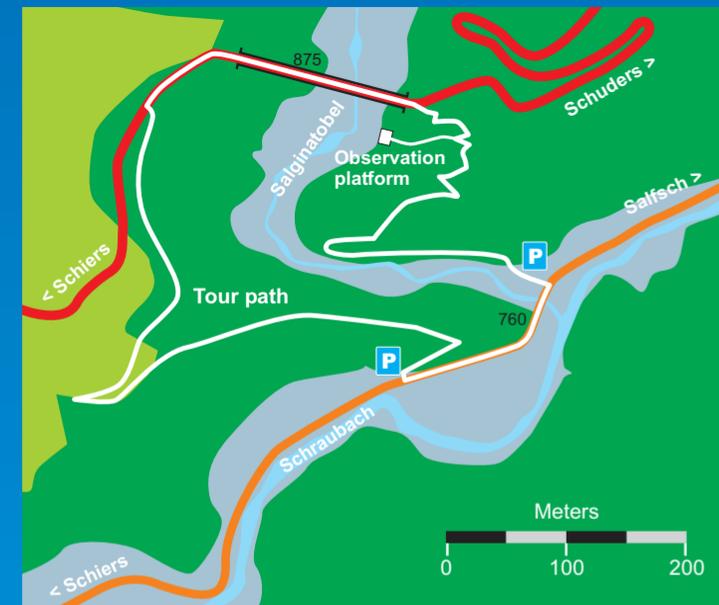
The Swiss Robert Maillart designed innovative and trend-setting structures that made him one of the most significant civil engineers of his time. With the development of the beamless flat slab (mushroom floor), he made an international breakthrough. His successful company built structures in Spain, France, Italy, Finland, Egypt, and Russia, where he was caught by surprise while building a giant factory when the First World War broke out. In 1918, after the revolution, Maillart returned penniless to Switzerland. Here, he began a new career as a consulting engineer with an office in Geneva and branch offices in Bern and Zurich.



The great pioneer of reinforced concrete, Robert Maillart (1872-1940).

The three-hinged, hollow-box arch and the deck-stiffened arch bridge construction systems developed by him are outstanding in the history of engineering.

The monolithic structure of the Salginatobel Bridge: the arch slab, side walls, and roadway form a structural unit.



The tour path mainly follows the route of the old pack trail to Schuders.

The Site

The Salginatobel Bridge forms the heart of the communication road from Schiers to Schuders. With an elegant arch, it crosses the Salgina gorge at a height of over 90 m. Possibilities to view it by car on a single-lane mountain road or by foot on a historical tour path are signposted starting in the village centre. The observation platform, located on an exposed ledge, provides a fantastic view of the world-famous construction.



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