

Emílio Henrique Baumgart (1889-1943) – The Brazilian bridge builder of the firm Wayss & Freytag

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Abstract

Emílio Henrique Baumgart (1889-1943) graduated from the Polytechnic School of Rio de Janeiro in the year 1918 and conducted projects of bridges in reinforced concrete for the German firm rooted in Brazil Wayss & Freytag. His academic training was based on model studies aimed at French Polytechnic synthesis between aesthetics and technology, known by the term *solidité*¹. The firm Wayss & Freytag had a design doctrine based on the German-Swiss culture advocated by Carl Culmann (1821-1881)² and continued by Wilhelm Ritter (1847-1906)³ where the development of structural calculation in reinforced concrete had to be made in concomitance with aesthetic and technical advances guiding Baumgart to reinforced concrete domain on Brazilian field, coming to be regarded as the "father of reinforced concrete"⁴. His designs of bridges won world records and have introduced unprecedented constructions systems as the cantilever method. The main objective of this article is to provide evidence that Baumgart projects, based on aesthetic and technical advances, directly contributed to the formation of Brazilian engineering and architecture of reinforced concrete.