



Apologia for “Sculptural engineering”

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Abstract

Swiss expertise in bridge engineering is well recognized since decades. T engineering international based in Geneva is chasing the tradition of its founder Robert Maillart by spreading its experience all around the world. Is it during design competition, for detailed and execution designs or for high level engineering expertise that Jean Francois Klein, leader of T engineering promotes is concept of sculptural engineering. Many recent examples constructed on the Island of la Reunion, in Morocco, to finish with the conceptual design and construction of the Third Bosphorus Bridge has been designed following this philosophy.

Keywords: Bridge, Integration, Engineering, Architecture, Conceptual design, Detailed design. Swiss engineer, Arch, Cable stay, Suspension

1 Introduction

Switzerland has a long and old tradition in bridge design and developments due mainly to the early needs required by our geography. Some of the most recognized Swiss pioneers like Othmar Ammann, Robert Maillart, Christian Menn or René Walther developed their theories based on the structural logic and on the subtle use of relative stiffness and material performances. No kitch, no unnecessary fancy shapes, they are all recognized as some of the fathers of pure and exemplary bridge engineering.

As Swiss engineers active in the international bridge industry, we are just trying to do our job the best we can and continue to perpetuate the logic and pure structural engineering but adapted in our actual culture and society. Trough my involvement in the international professional associations I am fighting since many years for the promotion of good integration of structures and

especially bridges by respecting elementary rules based on structural logic, and on respect of the social, cultural, natural and economical environment.

2 “Sculptural engineering” vs “Structural engineering for a sculpture”

As a structural engineer, the incredible and trendy tendency of systematically look for fancy and flashy structures with almost no relation to their environment inspired me two clear different approaches of our profession. The worthy one, what I named the “sculptural engineering” in opposition to the design of an outstanding, flashy and extravagant structure often proposed today and which tends our work to go in doing “structural engineering for a sculpture” (as far as the concerned bridge can really be contemplated as a sculpture !).