



Restoration of the Pênsil Bridge

São Vicente, São Paulo, Brazil / 2012

Structural type
Characteristics
Client

suspension bridge replacement of main cables for structural restoration
main span: 177.60m
Engeti Engenharia



The São Vicente Suspension Bridge was erected in 1914 as part of the sanitation plan of the Santos and São Vicente area. Bridge condition in 2012 was deemed to be critical as some elements in trusses had disappeared and cable shown important corrosion and loss of cross section.

The cable substitution project had to take into account several constraints which conditioned the final proposals.

The main factor influencing the cable substitution process was the configuration of the existing cables, which were grouped in two rows of six plus two cables. Being the bridge part of the São Paulo State Historical Heritage, it was mandatory that cables final configuration was similar to the original in number, position and dimensions. Besides this, connections between cables and deck was also to be maintained, this implying the need of fabricating new clamps and saddles as similar as possible to the existing ones.

These requirements determined the proposed construction process, as they implied dismantling the actual cables before installation of the new cables in their final position, and therefore placing a temporary saddle independent of the existing.



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