



In-between a truss girder and a stay-cable bridge

Julie Gaubert, Jean-Bernard Datry

setec tpi, Paris, France

Contact: julie.gaubert@tpi.setec.fr

Abstract

The Grand Large footbridge, located in the district of the same name in the city of Dunkirk, France, links the old industrial wasteland in the process of restructuring, to Malo-les-Bains, a seaside resort and touristic area of the town. Its silhouette with multiple tension rods blends with the maritime character of the site and its reasonable height does not over-shadow surrounding constructions.

Keywords: Cables, Steel, Bridges, Tension and Membrane Structures, Conceptual Design and Realization, Dynamic effects / vibrations, Innovative Structural Systems

1 Introduction

In 1969, the small town of Malo-les-Bains is attached to the city of Dunkirk, north of France, and becomes one of its neighbourhoods. It adjoins the then thriving shipyards. In the 80's the shipbuilding declines, the firms close one after the other and around 150 hectares of land is deserted.

Conducted notably by S3D (Société de Développement du Dunkerquois), a urbanism plan intended target is to reconquer this lost space. In the 90's, new neighborhoods were constructed on a territory that used to belong to the harbor. New infrastructures, such as moving bridges, were built to reconcile the new urbanization and the part of the port still in activity.

The last area not yet rebuilt, renamed "quartier du Grand Large" (meaning "Open Sea Neighborhood"), is nowadays in complete transformation. Numerous low-energy habitation lots has been erected, the wasteland has been turned into tidy public spaces. The AP2 warehouse, nicknamed "the cathedral" by the locals and last relic of the industrial past of the

area, was transformed into an exhibition room. A twin construction, the façade of which is an inflatable envelope in ETFE, was joined to it. This new building was designed by the architects Lacaton & Vassal, and now houses the Regional Founding for Contemporary Art (FRAC). However, this new neighborhood is separated from the city center by the marina, and from the beach and commercial area of Malo-les-Bains by the canal that regulates the water level of the "wateringues", canal network of the hinterland.

The Grand Large footbridge is the last project led by the Urban Community of Dunkirk. It is both a symbolic and physical link between these cultural and leisure poles, which will contribute to the opening up of the neighborhood. It enables its inhabitants to limit the use of the car and to reach the sea front by foot or by bicycle. Its construction is included in a new landscaping project: the existing soil of the mound was depolluted and planted and large parts of the FRAC forecourt's pavement are to be turned into planted areas.