Suspensions Bridge Construction with Cohestrand® – Installation in Jungle Conditions

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Abstract

Build a bridge in a remote area with difficult climate always embodies a challenge for the builders. From the Designer point of view, it is essential to consider this hostile environment in the choice of materials and structural principle in order to guarantee a good sustainability for the bridge. From the Contractor point of view, transport of materials and equipment may be problematic. It is then necessary to imagine a light and efficient construction methodology.

This article concentrates on the construction of a suspension bridge in the forest area of Pichanaki in Peru. This region is greatly rainy and isolated from the rest of the country which makes the story of the construction of this bridge a human and technological adventure.

The design of the Bridge reminds the traditional suspension footbridges of the indigenous communities living in the Amazon forest.

Keywords: suspended bridge, Cohestrand®, saddle, collar, jungle.

1 Introduction

The suspension bridge of Perene project crosses 102m of the Perene river connecting the regional road to the isolated villages in the deep Amazonian jungle (Figs.1-3). It has 2 suspension cables continuously connected from one anchorage to another through deviation saddles on top of the pylons. The main cable is made of a bundle of 75 strands (Fig.4). The Cohestrand® system has been retained for the suspension of the bridge. Each suspension cable has 18 collars, so a total of 36 in the entire bridge and 2 deviation saddles.

Figure 1. View of the bridge

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