

# Peldar Bridge, Envigado - Colombia



*An application of VSL stay cables and the first use of a new cable monitoring system.*



▲ The Peldar Bridge is the first cable-stayed bridge displaying the new VSL monostrand load cell

VSL has just completed by beginning of June 2003 the installation of stay cables on the Peldar cable-stayed bridge in Envigado, Colombia.

On this project financed by the Envigado Municipality, the main contractor was a JV of local contractors: Alvarado y Düring Ltda. and Diconci Ltda.

## Scope of works performed

- Supply and supervision of the installation of the stay cables
- Supply of POT-bearings and joints
- Supply of VSoL® and supervision of the installation
- Supply of pylon forms
- Supply of post-tensioning bars and post-tensioning
- Design and supply of the steel saddle on top of pylon
- Monitoring of the stay cables

The 1st contract awarded to VSL in January 2001 was for the stay cables installation with the new VSL SSI 2000 system:

- Galvanised, waxed monostrands placed in an external white PE pipe with helical ribs.

This was VSL's first contract on this project but later on, VSL obtained a 2nd contract in 2001 for 1 600 m<sup>2</sup> of RE Walls executed with the assistance of a supervisor from VSL Chile. A 3rd contract was awarded in 2001 for the inclined pylon forms. In 2002, VSL signed contracts for POT-bearings and joints supply as well as the contract for PT bars and post-tensioning (approximately 120 Tons).

These activities were supervised by a local supervisor. Equipment came from four different countries (Argentina, France, Spain and Switzerland).

VSL was also awarded the design and supply of the steel saddle on top of the pylon.

Stay cables installation took place between February-May 2003. This task employed AMS-03 automatic stressing system for stays.



▲ The pylon under construction

VSL's technical center prepared the methods for stay cable installation as well as the steel saddle design for the top of the pylon.

On this bridge, 6 monostrand load cells developed by VSL were installed on the stay cables and allow a permanent monitoring of the cable force.

Owing to the rapidly growing use of the SSI 2000 stay cable system, VSL has now developed a compact load cell, the SSI 2000 Hc160, for monitoring the load on a single strand within a stay cable.



▲ The new VSL monostrand load cell installed on model

**OWNER**  
Municipality of Envigado, Colombia

**ENGINEER**  
Pedelta, SL

**MAIN CONTRACTOR**  
UT Alvarado y Düring Ltda.  
Diconci Ltda.

**STAY CABLES**  
VSL



▲ Under construction

▼ Delivered



This new equipment fits over one strand and sits on the anchor head of the stay cable between adjacent strands, making it easy to install and replace. This load cell offers an economical way to control the total force on the stay cable.



[www.vsl.com](http://www.vsl.com)