

HOBAS® Hydropower | Part 2

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HOBAS® Penstock in Chile: How History Repeats Itself



The first HOBAS Pipeline was installed over 50 years ago in Switzerland. It was a penstock realized in inconveniently steep and hardly accessible terrain which is today still in excellent condition and service. Now, half a century later, HOBAS, hydro and Switzerland meet again at pretty much the other end of the world: In southern Chile, close to the Argentinian border, a local Swiss client chose HOBAS Pipes for his hydropower project. Following numerous successful hydropower projects all around the globe, this is the first HOBAS Hydro Pipeline installed in Latin America.

The hydro power plant San Miguel is located in the region Alto Bio Bio southeast of Concepción in the Andes. There are already quite a few storage and run-of-river power plants in this area abundant with water.

The client's reasons for choosing HOBAS reminded of those 50 years ago: Since the terrain was steep and difficult to access, the pipes had to be light and easy to install. Thanks to the HOBAS Couplings which accommodate angular deflections there was also no need for fittings. With short section pipes the client saved on 16 bends and the time-consuming as well as costly construction of thrust blocks. Long drawn curves enabled an optimal adaptation of the pipeline to the territory without sharp changes in direction which would have affected the hydraulics. HOBAS offered support already during the planning stage to optimize the routing and transportation. In the first two weeks a HOBAS Installation Expert accompanied the construction works on site.

Year of construction	Client and building contractor
2012 - 2013	Otto and Verena Wild,
Total length of pipe	Eléctrica San Miguel SpA
1414 m (sections at one, two and 5.8 m)	Constructor
Diameter	Philipp Wild,
DN 600, 700, 800	Constructora Wild Ltda
Pressure class	Designer
PN 6, 10, 16, 20	INTE & JMS
Stiffness class	Advantages
SN 5000 and 10000	Light weight pipes, angular deflections in couplings, easy installation with minimum impact on nature
Capacity	
1.1 MW	
Installation	
Open Trench	

This way, around 1.4 km HOBAS Pipes DN 600, 700 and 800 in the pressure classes PN 6-20 and lengths of one, two and 5.8 m were easily and successfully installed. The supplied product range also included reducers, masonry couplings and a T-piece. The client and contractor imported the first walking excavator to Chile in order to master the steepest sections of the route. Since the light-weight HOBAS Pipes did not require any further heavy equipment the construction area could be reduced considerably and the impact on nature was kept to a minimum.

The Swiss contractors were enthused about the pipes' easy installation and their light weight as well as the possibility to safely establish curves via angular deflection in the couplings: "Many thanks to the entire HOBAS Team for their professional support, especially during the planning stage and installation. We can warmly recommend HOBAS to every power plant constructor."

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