

HOBAS® XL Diameter Hydropower Line in the Apennines of Reggio Emilia, IT

End of 2012, some businessmen of the Italian region Reggio Emilia held the permission for the building of a new hydropower plant in their hands: A project of which the environment around the Secchia River in the municipality of Castellaro benefitted decisively. The close interplay of three HOBAS Organizations significantly contributed to the great success of this project in the Apennines of Reggio Emilia.

The initial idea of the Engineering Office Adelio Pagotto for the hydropower penstock dates back to 2004 and involved a concrete channel combined with a short steel pipeline. In subsequent stages of refinement, the idea of a concrete channel was abandoned and a steel pipeline for the entire length of 380 m was considered instead. In order to decrease the water flow velocity and reduce head losses, the pipeline was supposed to have a diameter of more than 3 m. The pipes' durability should be ensured by means of a cathodic corrosion protection system.

However, after a thorough analysis and numerous meetings with owners of hydroelectric power plants, both the client and the designer chose to switch from steel to HOBAS CC-GRP Pipes for a variety of reasons. HOBAS Pipes feature superior hydraulic performance and offer decisive economic benefits due to fast installation and minimal maintenance. The HOBAS FW Couplings allow for the pipes to be easily connected and are also flexible enough to compensate for some soil settlement. Since GRP is non-conductive and therefore also non-corrosive and highly durable, HOBAS Pipes do not need any cathodic corrosion protection either.



Year of construction	Capacity
2012 - 2013	3 MW
Total length of pipe	Client
380 m	Idroemilia S.r.l.
Diameter	Designer
DN 3000	Studio Ing. Adelio
Pressure class	Pagotto
PN 2	Constructor
Stiffness class	Piacentini Costruzioni
SN 10000	SpA and Granulati
Installation	Donnini SpA.
Open Trench	Advantages
Flow rate	Optimal hydraulic
28 m³/s	performance, corrosion
Head	resistance, minimal
15 m	maintenance required

The installation of the pipeline started at the beginning of 2013. HOBAS Pipes proved their worth right away: Apart from the excavation works, which took rather long due to the size of the trench and hard soil, the installation of each 6-m-long DN 3000 pipe took less than 30 minutes. The curved route of the pipeline was realized without special fittings but by angular deflection in the couplings. For sections with smaller radii, HOBAS supplied pipes with an angular cut end.

HOBAS Experts provided the installation team with valuable support and assistance. The works have been successfully completed and the hydropower plant was put into operation end of May 2013. The installation of the penstock went smoothly, not least thanks to the global expertise of the HOBAS Group, ensuring that the products are optimally adjusted to the customer's demands. At the hydropower plant Castellarano, the interplay of HOBAS Italy, HOBAS Austria and HOBAS Poland stated a good example of this efficient network.

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