PALMA DEL RIO WATER TANK TURBINE

GENERAL INFORMATION:

- LOCATION: PALMA DEL RÍO (SPAIN)
- NET PRESSURE DROP: 18 METERS
- FLOW: 20 LITERS/SECOND
- POWER: 2,5 kW
- USE OF THE ENERGY: GRID TIED SELF-CONSUMPTION

BACKGROUND

The municipality of Palma del Río (Spain) has a high tank to supply drinking water to around 22.000 people. To avoid excess pressure in the supply network, the tank outlet line has a pressure reducing valve where a significant amount of energy is dissipated 24 hours a day and 365 days a year, producing a significant amount of heat and noise.

THE SOLUTION

Thanks to the installation of the turbine in bypass with the reducing valve, it produces 2.5 kW of electric power working with 1,8 bar of pressure drop and 20 litres/second. In addition, the pressure reducing valve is located next to the water treatment plant of the municipality, so the energy is used 100% for self-consumption in the facility, generating the corresponding savings in energy purchase from the company electric.

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