

Cutting-edge technology in Ticino



A hydroelectric power plant on the banks of the Lake of Lugano

Project fact file

- Valmara power plant in Ticino
- Amount of water used:
400 - 600 l/s
- Pressure at the pipe fracture
safety device: 2.2 bar
- Pressure at the turbine: 25 bar
- Nominal size of pressure pipe:
DN 500

Clean energy at the Lake of Lugano

Clean energy is generated here at the Valmara power plant near Maroggia on the banks of the Lake of Lugano (Ticino). The water for the plant is collected in the valley around the Sighignola mountain, which is 1,300 metres high, and transported via a channel to the power plant. The water flows through a man-made water basin into the pressure pipe and is directed into the turbine where electric power is generated.

The powerhouse at the power station went into operation in 1965. Almost 50 years after initial operation, the complete valve chamber was refurbished in 2013, including replacement of the pipe fracture safety device. As in 1965, valves from ERHARD were used for refurbishment work.



The old pipe fracture safety device DN 600 (left) was installed in the power station in around 1965. In 2013, almost 50 years after installation, the new pipe fracture safety device (centre) was put into operation. In addition, an overspeed detector with protective cage was installed (right).

General contractor TMH Hagenbucher

When the refurbishment work began, ERHARD's Swiss sales partner, TMH Hagenbucher, was asked to submit a quote for the valves. However, it quickly became clear due to a number of factors that it would not be as straightforward to carry out the refurbishment work as had originally been assumed. As a result, TMH Hagenbucher stepped into the breach as the general contractor.

The project involved several challenges. In 1965, the powerhouse was built directly on a steep cliff, which was to make measurement work significantly more difficult. This meant that some of the pipe sections had to be made to fit on site.

The old routing of the pipe presented a further difficulty and made the installation of the new ERHARD pipe fracture safety device more complicated. For this reason, the T-sections had to be anchored very compactly in the lower part of the building.

Equipment installed in the newly refurbished valve chamber at the Valmara power plant include ROCO butterfly valves, Multamed gate valves, ventilation and bleeding valves as well as control valves from ERHARD.

The new ERHARD valves guarantee enhanced safety and reliability in the Valmara power plant.

Product list:

- ERHARD ROCO Premium Butterfly Valves
- ERHARD Multamed Gate Valves Premium
- ERHARD TWIN AIR®
- ERHARD Control Valves
- ERHARD T-Stück



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