



SIKA AT WORK

HYDROPOWER PLANT STANZERTAL, AUSTRIA

CONSTRUCTION OF A HYDROPOWER PRESSURE GALLERY

BUILDING TRUST



DIFFERENT SYSTEMS REQUIRE DIFFERENT SPRAYING TECHNOLOGIES

PROJECT DESCRIPTION

Due to the continuously increasing energy demand and the overall trend towards ecological cleaner forms of energy generation, Europe is currently investing heavily in hydropower. Presently, the Wasserkraft Stanzertal GmbH is building a hydropower plant in the region of Flirsch/Strengen with a maximum capacity of 13.5 MW and an annual power generation of 52.2 million kWh, and thus provides from the beginning of 2015 energy for approximately 15,000 households. The total investment for this project amounts to around 59 million euros. The hydropower pressure gallery, with a diameter of around 4 meter, is driven from two sides with different systems. On one hand, a tunnel boring machine (TBM) is used and on the other hand the advance is made conventionally by drill and blast. The narrow conditions require special demands on the sprayed concrete, which is produced in a dedicated mobile concrete plant.

PROJECT REQUIREMENTS

Sprayed concrete

Compressive Strength Class:	C25/30
Early Strength Class:	J2
Consistency:	F59
Open Time:	120 min
w/c-Ratio:	≤ 0.50
Aggregates:	≤ 8 mm

Equipment

- Wet and earth-moist spraying technology
- Concrete spraying system in combination with a TBM
- Small machines with big output



SIKA SOLUTION

Sika supplies the proven concrete spraying system Sika®-PM 407, a dense-flow spraying machine, which can produce, despite its small size, large amounts of output. For the use in combination with a TBM the smaller sprayed concrete system Sika® Aliva®-257 allows, beside the narrow space at the head of the TBM, spraying by hand. The use of Sika additives, such as superplasticizer, accelerators and/or retarders, could fulfill the desired concrete requirements.

With the ideal combination of Sika spraying systems and Sika admixtures an excellent all-in-one solution for sprayed concrete in tunneling could be achieved.

SIKA PRODUCTS

Sika®-PM 407	Concrete spraying system
Sika® Aliva®-257	Concrete spraying system
Sika® Sigunit®-49 AF	Accelerator (powder)
Sika® Sigunit®-L93 AF	Accelerator (liquid)
SikaTard®-930	Retarder
Sika® ViscoCrete® SC -305	Superplasticizer



SIKA ALL-IN-ONE SOLUTION FOR SPRAYED CONCRETE IN TUNNELING



PROJECT PARTICIPANTS

Owner: Wasserkraft Stanzertal GmbH

Contractor: Lot 3: ARGE Östu-Stettin and G.Hinteregger & Söhne Baugesellschaft m.b.H

Project manager: Hr. Dipl.Ing. Georg Hofer

Concrete producer: Schretter & Cie GmbH & Co KG

Our most current General Sales Conditions shall apply.
Please consult the Data Sheet prior to any use and processing.



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