



**Power for KKG**

**The Quality Connection**

**LEONI**



# Demanding large-scale project involving medium voltage power cable at KKG

The Gösgen-Däniken nuclear power plant (KKG) is located in the municipality of Däniken, in the immediate vicinity of the STUDER CABLES plant. KKG is the first Swiss nuclear power plant in the 1000 megawatt class and has been in operation since 1979. Several modernisation projects to optimise safety and enhance performance have been carried out since then – also involving STUDER CABLES.

## **Core issue of safety**

KKG generates about eight billion kilowatt hours of electricity a year and thus covers about 15 percent of Swiss power demand. For safety reasons, KKG decided to replace the 10 kV medium voltage power cable installed in its new building. Extraordinary effort is devoted to safety and reliability, which have top priority.

STUDER CABLES obtained a planning contract in 2005 to assess the expense of replacing the cables and to prepare the execution documents. In January 2006 STUDER CABLES was then given the order remove the existing cables as well as to supply and fit new ones with the corresponding ancillaries, and also to manage the project. This provides for all 10 kV cables to be replaced during the approx. four weeks scheduled for upgrading work each year in the period from 2006 to 2009.

## **Cable management**

KKG opted for STUDER CABLES' XDME-MONO medium voltage power cable: with properties including flame propagating, halogen free, highly flame retardant and low smoke density. The main reason apart from the outstanding quality of the cable was the comprehensive range of additional services – the all-in cable management. Awarding a complete contract in this way makes things much easier for the customer.

## **Comprehensive scope of work**

Work on the first tranche started in June 2006. KKG's deadlines had to be adhered to exactly in order not to obstruct the ongoing upgrading work. STUDER CABLES co-ordinated all the work involved in removing the existing cables as well as supplying and fitting the new ones, completing it on schedule with the help of partner companies. The work also included opening and sealing gastight cable conduits as well as adapting and enhancing existing cable suspension systems.

It is another reference for STUDER CABLES in project planning and fulfilling a cable management contract.



“It is a big advantage to have a locally-based supplier”

**Why did you choose STUDER CABLES as your supplier?**

The main reason is proximity to the supplier. STUDER CABLES already proved itself in the past to be a very flexible and on-time supplier whose production is located virtually on our doorstep. Ultimately, the contract was awarded because STUDER CABLES guarantees a long lifecycle and good quality for its cables, as well as taking responsibility for professional cable laying.

**Why did you opt for STUDER CABLES’ XDME medium voltage power cable?**

Because the XDME-MONO cable has a flame retardant outer jacket and is suitable for exposed laying in the accessible, man-sized cable channels. Compared with the cable to be replaced, XDME-MONO is also highly fire retardant and low in smoke emission.

The XDME-MONO single conductor cable is suited to the relatively tight bending radii in the nuclear power plant and is, furthermore, geared for 20 kV and therefore provides more safety for application in KKG’s 10 kV operation.

**What priority does the issue of safety have, also with respect to our cables?**

The issue of safety and quality has top priority in any nuclear power plant. It is why we paid very close attention to ensuring that the selected cable meets the safety requirements in all respects. We are also obliged here to observe additional safety regulations to which other industrial sectors are not subject.



Rudolf Widmer, Kernkraftwerk Gösgen-Däniken AG

As far as possible we employ only people who have already gathered work experience in power plants. We thus ensure a high standard quality. Similarly, a physician with knowledge of radiation protection annually checks the health status of the involved employees and decides whether they are permitted to enter the reactor building.

**Does STUDER CABLES’ performance meet your expectations?**

Performance certainly has matched our expectations during this 10 kV cable project. Execution has been absolutely smooth. Everyone involved was very satisfied, despite the difficult conditions in the partly very tight cable channels. A good work atmosphere prevailed throughout. The people involved engaged in their work vigorously and successfully.



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