



# **SIKA AT WORK**

## **SAHIWAL COAL POWER PLANT**

### **PROJECT**

**SIKA SOLUTIONS WITH TM CONCRETE & TM  
REFURBISHMENT PRODUCTS**

**BUILDING TRUST**



# SAHIWAL COAL POWER PLANT PROJECT

## HIGH RANGE WATER REDUCER, EXPANSION GROUT & NON-SHRINK PRECISION GROUT

### Project:

The Sahiwal Coal Power Project is a coal power plant project 15 kilometers (9.3 mi) to the northeast of Sahiwal in Pakistan's Province. The power plant will be Pakistan's first supercritical coal power plant, and will consist of two 660-megawatt (890,000 hp) plants for a combined capacity of 1,320 MW in the first phase, and is to be followed by a possible second phase which will include two 1,000-megawatt (1,300,000 hp) plants. With an estimated cost of (US \$ Million) 1,600 the plant will be able to generate a total of 1,320 megawatts of electricity, with a gross efficiency of 42.11% by the use of a supercritical steam generator operating at temperatures of up to 580 degrees Celsius.

### Project Requirements:

The project site spans a total of 690 hectares (1,700 acres). The project will consist not only of the power plants themselves, but also will include the construction of a railway from the village of Yusuf Wala to the site for exclusive use of the plant. Sika always willing to contribute in the wellness of the country became an integral part of the project by offering its quality solutions. Client required high range water-reducing and slump retaining concrete admixture for 240,000 m<sup>3</sup> concrete. 40 & 45 Mpa strength with high slump retention of 180 mm after one hour was required which was successfully achieved after hectic trials conducted by Sika team. Furthermore, expanding grout admixture was demanded to create expansion in grout. Lastly, cementitious, high strength was demanded to meet the requirement of highly flowable grout at 330 mm flow with the strength of 60 MPa as grout pockets were deep.

### Sika Solution:

In light of all the requirements of China Engineering Energy Pvt. Ltd Sika offered its comprehensive solutions at the project. In order to fulfill the requirement of highly effective water reducing and slump retaining concrete admixture Sikament -R4QV (CD) was recommended. Sikament-R4QV (CD) is a high range dual action liquid superplasticizer for the production of free flowing concrete or as a substantial water-reducing agent for promoting high strength concrete. 1,600,000 liters of Sikament-R4QV (CD) was used to ensure excellent slump retention for prolonged period.



In addition to this, Intraplast- Z expanding grout admixture was suggested to provide expansion in concrete. Intraplast-Z works by introducing micro bubbles into the mix, wet volume expansion and results in increased fluidity without segregation. Lastly, SikaGrout-275 high strength, non-shrink grout was suggested. SikaGrout-275 is a pre-bagged, one component, cementitious, precision grout that expands in two stages to sufficiently counteract the plastic shrinkage normally associated with cement grouts. 200 tons of SikaGrout-275 was used for high fluidity to cater deep grout pockets.

**Project Name:** Sahiwal Power Plant

Project

**Client:** China Energy Engineering

**Contractor:** TIANJIN Electric Power  
Co.