

# **KORONA**

## **HIDRO POWER PLANT GHAZI BAROTHA, PAKISTAN**

Distributed Control System



### **CONTRACTOR**

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## SCOPE OF WORK

The Ghazi Barotha hydroelectric power station in Pakistan is named after the two towns it passes through, "Ghazi" and "Barotha". It diverts the water of Indus River into a 51.9 km concrete-lined channel, the longest in world, which is fed to a 1,450 MW powerhouse in Barotha. A barrage is built downstream of the Tarbela Dam, which diverts water into this channel. Power is generated by five units, each with a 290 MW capacity.

For the new Ghazi Barotha HPP Korona designed and put into operation following parts of distributed control system (S/W logic and SCADA system):

- Head Regulator Gates (8), responsible to control water level/water flow at the beginning of the 52 km long power channel
- Standard Gates (20) / Undersluice Gates (8), responsible to control water level in the barrage (HPP accumulation) and for cleaning barrage in front of Head Regulator Gates
- Tail Regulator Gates (4), Responsible for protecting the power channel by keeping constant (as much as possible) water level in front of the gates
- Supervision of Diesel Generators (Power house & barrage)
- MV & LV system, automatic switching sequences for MV switchyard (Power house & barrage)

ABB AC 450 controllers with local and distributed I/O units and AS 500 operator station were used for implementation of DCS System.

