

**DSI References****Reference Details**

Owner Merowe Dam Project Implementation Unit, Khartoum Ministry of Irrigation and Water Resources, Sudan +++ **General Contractor** CCMD JV, Merowe Dam Project, Sudan (Joint Venture Partner: CWE und Sinohydro) +++ **Engineers** Lahmeyer International GmbH, Germany

DSI Units DSI Far East Ltd., Hongkong, China (supply of material); DSI Group Headquarter Operations, Munich, Germany

DSI Scope Supply of 2 x 108 pieces of 32mm DYWIDAG Post-Tensioning Bars and hydraulic jacks; supervision of the installation, injection and post-tensioning of DYWIDAG THREADBAR®

**Construction of the Merowe Dam in Northern Sudan**

Stabilization of Radial Gates at Merowe Dam Using DYWIDAG Post-Tensioning Systems, Hamdab, Northern Sudan

Construction of the Merowe Dam on the River Nile in Northern Sudan, 350km north of the capital of Khartoum, began in 2003. With its total length of approximately 9.2km and its hydropower capacity of 1,250MW, the Merowe Dam will be the second largest dam on the Nile after the Assuan Dam.

The dam is to provide electricity, provide irrigation for the creation of new farmland, protect against flooding and reduce problematical sedimentation in the Assuan Dam located about 350km downstream.

The 154m long and 67m high spillway with its radial gates and the 370m long power station are at the core of the rockfill dams on each side. Construction cost is estimated to be around 555 Million Euros, with another 575 Million Euros to be added for the power station.

For anchoring the trunnion girders to the radial gates, DSI delivered a total of $4 \times 27 = 108$ pieces of 32mm St930/1080 DYWIDAG Post-Tensioning Bars in lengths between 6.0m and 11.20m with bilateral plate anchorages. All in all, the spillway dam contains 12 lower and 2 upper flood spillways where the water level can be regulated by means of the radial gates in times of critical flooding.

In addition to the supply of material, DSI assisted the client by supervising the installation, tensioning and grouting of the DYWIDAG bar tendons.

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