



Polavaram
India

CUSTOMER
Navayuga Engineering Co Ltd

SECTOR
Dam

DATE
2019

PRODUCTS

- Conplast SP430

Guinness World Record Achievement for the Most Continuously Poured Concrete Over a 24-Hour Period

THE PROJECT

On Monday 14th January, the Polavaram Dam project in Andhra Pradesh entered the Guinness Book of World Records for pouring 32,315m³ of concrete in 24-hour period. The Union Government of India has accorded the dam national project status.

The dam construction involves building a 1.5 m-thick concrete diaphragm wall below the riverbed under the earth dam, from 40 to 120 m, which is the first of its kind in India. The purpose of the diaphragm wall is to secure the stability of the riverbed to withstand the water pressure on the dam. The project will constitute an earth-cum-rock-fill dam of 2,310 meters (7,580 ft.) in length, with a spillway of 907 meters (2,976 ft.) and containing 44 vents to enable a discharge of 3,600,000 cu ft./s (100,000 m³/s) of water.

The project started in 2017 with the construction of the first spillway and then the earthen DAM. The total volume of concrete used to construct the spillway dam and spillway channel is 32 lakh cubic meter.

THE SOLUTION

After gaining approval for their customised admixture formulation, Conplast SP430, Fosroc was invited to be one of the key associates and official supplier of admixture for the project. The Fosroc sales team in the Andhra Pradesh region played an important role by sending the sample along with other ingredients to the Ministry of Water resources in New Delhi for testing and approval. It took approximately six months to obtain the approval of the product, and the project started once this was granted.

Navayuga Engineering Co Ltd carried out the spillway channel construction using panels of 10M X 10M X 1M, each panel requires 100m³ of concrete to construct it. Approximately 18,000 m³ of concrete was being poured daily to complete the spillway channel construction. Ten batching plants erected on site with a capacity range of 3m³ to 1.5m³ per batch mix, ensured that the concrete requirements of the project were met.

The world record attempt by Navayuga Engineering Co. Ltd started on Sunday 6th January at 8 am and ended on the following morning at 8 am. Fosroc, as the official supplier of admixture for the event, dispatched 100MT of Conplast SP430 on time to help set the world record.

THE BENEFITS

The first hour of pour saw 1275 m³ of concrete being poured. At the 16th hour, the first world record was set by pouring 22,045 m³ of concrete nonstop. The energy levels at the site did not diminish throughout the event, showing the character and determination of everyone involved. Once the 24th hour was over, the world record was set, pouring 32,315 cubic meters of concrete in 24 hours.

It was a proud moment in the history for Fosroc achieving such a feat, using only Fosroc's Conplast SP430 admixture solution to set a world record. A key aspect of the project was the collaboration of various Fosroc teams working together around the clock to support the concrete pouring. Moreover, this was further highlighted and appreciated by everyone involved in the project. To remember the occasion a memento was awarded to the Fosroc team by the Honourable Chief Minister of Andhra Pradesh Sri N. Chandrababu Naidu.



Fosroc awarded for their efforts



Spillway channel construction



Delivery Fosroc Conplast SP430 admixture