

Exotic Aviary Geodesic Dome

Kevadia, India



The Exotic Aviary Geodesic Dome, the world's largest, is located in the Sardar Patel Zoological Park near the Statue of Unity in Kevadia Narmada district, Gujarat, India. The project was envisioned by the Prime Minister of India in December 2018 as part of his grand vision of Integrated Development of the area around the Statue of Unity, the tallest statue in the world. The work of Aviary Dome was completed in record time (6 months) and was inaugurated on October 30, 2020.

A state-of-art zoological park boasts a unique collection of indigenous and exotic animals and birds from the various biogeographic regions of the world. Located in the picturesque hills near The Sardar Sarovar Dam, this zoo will take you through an adventurous and exciting trip of watching wildlife, enjoying scenic beauty of the hills, and entertaining experiences of a lifetime.

The Jungle Safari covers 375 acres at seven different levels ranging in elevation from 29 meters up to 180 meters, on the right bank of the Narmada River. The park is a home to more than 186 species of fauna, covering various biomes of Africa, Australia, Asia and America. Visitors will also be able to spot India's endangered species,

The hot-dip galvanized coating specified required a higher quality finish than standard galvanizing specifications and careful attention to vent and drain holes was vital to the overall finish quality.



which includes the magnificent big cats such as Asiatic Lion, Royal Bengal Tiger and Leopard. The safari route has been designed so visitors can view animal activities, spot reptiles and watch birds. The zoological park has two aviaries - one for domestic birds and another for exotic birds. The Indian Aviary is 150 meters long, 50 meters wide and 15 meters high while the Exotic Aviary is 125 meters long, 35 meters wide and 15 meters high making this the world's largest geodesic dome for aviary. Included in the aviaries is an enclosed petting →

Galvanizer

Valmont Coatings

Owner

Sardar Patel Zoological Park

Other

Sardar Sarovar Narmada Nigam Ltd.

Exotic Aviary Geodesic Dome

Kevadia, India



zone which would provide a unique touch, feel and exhilarating experience of cuddling animals such as the Macaw, Cockatoo, Rabbits, Guinea Pigs, etc.

The geodesic dome structure is the first of its kind in India and was built with crossing steel pipe members creating an open-air experience for the inhabitants and visitors to enjoy. This design is preferred for building domes due to important factors such as scalability, overall reduced cost, construction time and the minimal impact on the ecological balance of the surrounding eco system. The steel structure required a coating that would be inherently sturdy, protecting against any abrasion with a lifespan of at least 20 years without maintenance. Hot-dip galvanizing was ultimately selected for a variety of reasons. It would not require the frequent touch-up other coatings systems require and it would meet or exceed the lifespan goals for the structure. Hot-dip galvanizing also provide a quick turnaround

time compared to other options and the team was fond of the pleasant aesthetic it would provide. Although cost was not the primary concern, hot-dip galvanizing turned out to be less expensive as well.

All 100 metric tons of steel used for this project were hot-dip galvanized to withstand the environmental conditions. This included pipe structures, wire mesh, nuts and bolts. The hot-dip galvanized coating specified required a higher quality finish than standard galvanizing specifications and careful attention to vent and drain holes was vital to the overall finish quality. The galvanizer had to work through the challenges of this project while being mindful of the critical turnaround times needed.

The steel was shot blasted prior to galvanizing, increasing the surface profile. The design engineers and representatives from the galvanizing company took extended efforts in reviewing and finalizing

the design to ensure the proper placement of holes without negatively impacting the aesthetics. Finally, the galvanizers appointed a dedicated team to this project and increased production planning to turnaround the material quickly.

The completed Geodesic Aviary Dome is a spectacular sight. Hot-dip galvanizing helped bring this vision to life and its protective qualities will ensure visitors can enjoy the unique experiences at the zoological park for decades. ■

Galvanizer

Valmont Coatings

Owner

Sardar Patel Zoological Park

Other

Sardar Sarovar Narmada Nigam Ltd.