

DELTA-THERM

HEAT SOURCE



HEAT TRACE HELPS MAINTAIN APE HABITAT

The flexibility of Delta-Therm's MI heating cable assemblies allowed Lincoln Park Zoo to create a safe and cozy living environment for the lowland Gorillas residing at the Regenstein Center for African Apes.

CLIENT: What do you do with a 400-pound client who beats his chest and insists on sticking his finger into the wire circuitry? Keep on working, according to salesman Tom Duszynski, who recalls one of Delta-Therm's most challenging and unique projects, the Regenstein Center for African Apes at Lincoln Park Zoo in Chicago.

Since the old ape house was being replaced with a new one on the same site, construction crews had to be "up close and personal" with the gorillas during the six-month long project. And the gorillas had to put up with disruptions and changes to the habitat to which they were accustomed.

"We had to be really nice with the animals," Duszynski said. "If they had little babies, they didn't like to be disturbed but we had to work fairly close to them."

THE EXHIBIT SPACE:

The 29,000 square foot, indoor and outdoor living space was constructed in 2004 by several contractors who created a simulated tropical rainforest for a dozen Western Lowland gorillas.

THE CHALLENGES:

Problem #1: How To Simulate A Rainforest Using Concrete?

The simulated tropical rainforest was made of cold concrete or gunite, a substance similar to concrete but used for fabricating rocks and other elements. For the gorillas' comfort, heating elements were needed to combat winter temperatures, so Delta-Therm was called in to install heating cables in and around the indoor and outdoor portions of the exhibit.

"Delta-Therm's name came up pretty fast as somebody that could do this," said the project's general contractor, Greg Leofanti. "It was complex and there were a lot of things that were new. Nobody had done some of the things before."

The first challenge was heating enormous sliding glass doors to enable the gorillas to go from indoor to outdoor and vice-versa, despite the temperatures. Delta-Therm had to remove the possibility of doors jamming due to snow and ice accumulation along the doors' rail system.

Solution #1

According to Delta-Therm engineer Ed Witte, 48 mineral-insulated stainless steel heating cables were installed within the channels of the doors with 16 heaters per door. Since the doors are split down the middle on each side of the threshold, eight cables were placed on each side. Delta-Therm provided a controlled, automated system for keeping the temperature above freezing.

"We've had great success with the doors," said lead keeper of the apes, Dominic Calderisi, adding that the doors have never jammed or frozen.

Problem #2 How to Heat Trees?

Next, Delta-Therm took on the challenge of heating concrete fabricated trees and hollowed stumps, sections of concrete slab made to look like rocks, and a concrete wall, the latter of which is a communal ground for the gorillas.

Solution #2

"We put a total of 12 heating cables within the slab area," said Witte. "These are all automatically controlled." This particular solution had a two-fold purpose: to keep the gorillas comfortable and to keep them in view of the public, actually drawing them to certain areas they have come to know as warm and cozy.

Problem #3 How to Heat Indoor Holding Pens?

The final element was heating the indoor holding pens where these endangered species go when they are sick or to receive regular check-ups and immunizations. These holding areas are also used daily when maintenance and cleaning is done in the exhibit area, Calderisi said.

"On a regular day, they're down in those holding areas for an hour and a half to two hours," he said

Solution #3

Delta-Therm installed heating cables underneath the concrete floor in each of four holding areas and provided circuitry and connections within a control cabinet accessible by zoo personnel who can adjust the temperature based on the gorillas' needs.

The first year, Calderisi said, zoo keepers had to get to know the system. They agreed that a constant temperature of 70 degrees adequately warmed the floors in the four areas.

"The floors can get very warm," he said. "It's a great thing for them to have and we do utilize them."

RESULTS

Delta-Therm was recognized at the zoo's luncheon as "Contractor of the Year," according to Duszynski, and it led to other projects at the Lincoln Park Zoo. In addition to the gorillas, Delta-Therm's warming cables are now keeping the zoo's foxes, beavers and wolves comfortable.

From concept drawings and specifications to on-site support during installation, Delta-Therm was there to assist. The Regenstein Center for African Apes at Lincoln Park Zoo is one of the many zoo projects in Delta-Therm's long history. ■



PO Box 345
Wauconda, IL 60084
(800) 526-7887
www.delta-therm.com
info@delta-therm.com