



Case Study

Empire State Building

Install Location:

Empire State Building, New York, NY

Parties Involved: ICP, Solaira

Application: Commercial Heating

Products Used: Solaira Alpha Series,
Industrial, Solaira Omnis Control

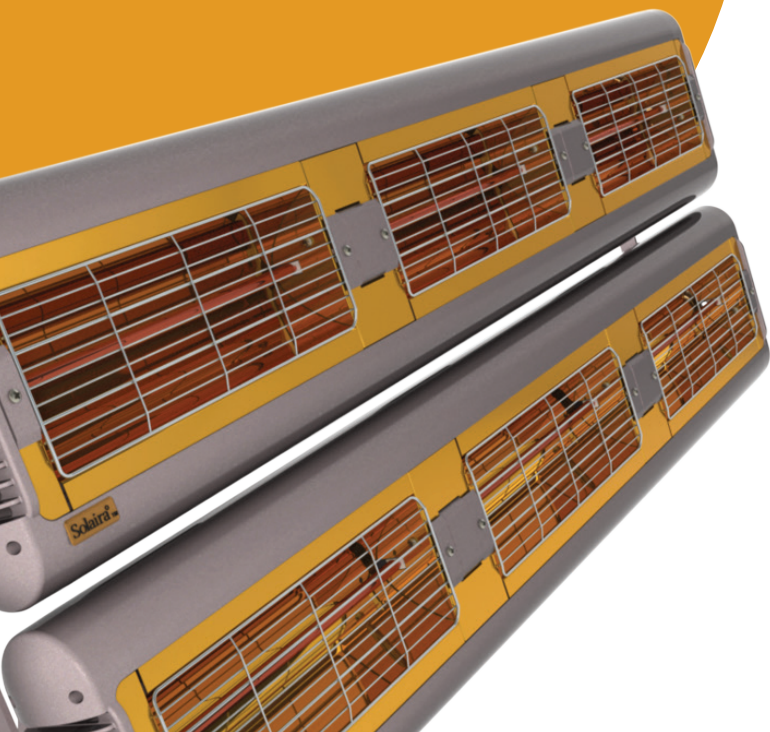
Background

The Empire State Trust embarked on a plan to enhance the visitor experience in one of the most visited, iconic attractions in New York city, the Empire State Building. The proposal was to include radiant infrared heaters on the outdoor perimeter of the 86th floor observation deck to improve visitor comfort during the colder months of the year.

Challenges

The historical building provided numerous physical and mechanical challenges but nothing more difficult than engineering a heating system in a technically challenging outdoor environment.

The perimeter observation deck is 86 stories above street level, fully exposed to severe weather and climate conditions. The objective was to mount the heaters high enough to clear the observation deck windows. The team also wanted the ability to control heater output based on outdoor temperature, operational hours, and control individual or multiple heaters. The final requirement was to locate a product that architecturally amalgamated within the rigid demands of a historic structure.





Solution

The engineering team devised a plan to utilize high efficiency, radiant heaters that heat people and objects with limited heat loss due to windy conditions. The team reviewed several radiant heating products for performance, exposure, and wind load testing and selected Solaira heaters to be tested on the East side of the building.

The test pilot objectives were to validate comfort heat calculation performance in the difficult outdoor environment. The team also wanted to test Solaira Omnis Controls and ability to integrate into their building management systems. Testing proceeded during the winter of 2016 and found an estimated +17°F - +20°F was achieved. Testing validated the engineering team's hypothesis, and the project was approved for installation on all four sides of observation deck.

Conclusion

The authorized Solaira Alpha heater (CSA/UL industrial configuration) is a standard production, 6063 aircraft aluminum fixtures with stainless steel assembly components in RAL9006 antique grey with a custom silver reflector package to compliment the historic architectural requirements of the building structure.

The Solaira Omnis Custom Control was utilized to control the connectivity to the buildings BMS System. Today millions of visitors enjoy added comfort on cold days, 86 stories above the streets of Manhattan thanks to Solaira heating systems.

Inforesight Consumer Products Incorporated

Inforesight Consumer Products Inc. was established in 2004 with a vision to advance the latest high performance radiant technology in engineered heating and control solutions. Our technologies are centered on high efficiency, performance and exceptional quality for long-term performance. Our technologies are utilized globally and in the most severe environments.