

POWER PROFILE

Customer: Mumbai International Airport Private Limited (MIAL)

Location:

Mumbai, India

Customer Business Issue:

24/7 electric power availability to maintain smooth operations and safety of planes for a newly opened international airport

Solution:

Six Cat® C175-16 standby diesel generator sets (3000 kVA each)

Three-year Operations & Maintenance (O&M) Contract

Product Support

Cat® Dealer:

GMMCO Limited



POWER NEED

India's financial capital, Mumbai, will have a new state-of-the-art terminal at the local Chhatrapati Shivaji International Airport, one of the fastest-growing and busiest airports on the Indian Subcontinent. Ranked the second busiest airport in India, its two older main terminals and twin intersecting runways are able to handle 36 flights every hour and this demand is projected to potentially increase exponentially in future, in line with the rapid economic growth happening in India.

To cater to the projected growth and improve the passenger handling capabilities of the airport, the operators of the airport, MIAL, embarked on a project to build a new, modern, Terminal Two passenger terminal complex on the site of the older Terminal Two building.

MIAL appointed India's largest engineering and construction contractors, Larson & Toubro, to oversee the project. When completed, the new international terminal will cover 210,000 square meters of land area and will be able to handle up to 40 million passengers annually.

To support the smooth operation of the new terminal to ensure the safety of planes using the complex, MIAL could not afford to have power outages affect the new, modern passenger terminal.

Reliable power is also paramount in keeping the large space and the large number of passengers using the terminal cool, especially in the Indian summer heat, where temperatures can soar beyond 40 degrees Celsius.

SOLUTION

MIAL approached the local Cat dealer GMMCO Limited for assistance in designing a reliable backup power system for the new

terminal building. The power requirements were challenging, it had to be reliable, provide enough power for the large terminal even on the hottest days and compact enough to be hidden away from the public-accessible areas of the building to preserve the aesthetics of the unique X-shaped terminal and comply with local Indian noise and emissions regulations, some of the strictest in the world.

To meet the challenge, GMMCO Limited designed a high power density, small footprint system comprising of six units of C175-16 diesel generator sets, each capable of providing 3,000 kVA of standby power in the event of grid power failure. The generator sets were also packaged locally into sound-attenuated containers to manage sound levels, and has customized intake and exhaust ducting fabricated locally to overcome the space restrictions without affecting the effectiveness of the generator sets.

RESULTS

The Cat C175 gensets were installed in early 2013 and have been in operation to provide 24/7 standby power to ensure the smooth operations of the new airport international terminal.

Supported by a three-year full Operations & Maintenance (O&M) contract with GMMCO Limited and an extended three-year warranty, the technically advanced Cat C175-16 generator sets are ready at all times to provide reliable power for MIAL to focus on maintaining safety and security of the passengers using the new terminal."

For more information, please visit

cat.com/powergeneration