PROJECT PROFILE

JFK RUNWAY 4L-22R

EUCLID CHEMICAL

PROJECT DATA

Location – John F. Kennedy International Airport, Queens, New York

Application – Airport runway pavement

Engineer – The Port Authority of NY and NJ

Contractor – Tutor Perini

PRODUCTS FEATURED

Plastol Ultra 109
High-range water-reducing admixture

Eucon Air Mix 250
Air entraining agent for concrete

SCOPE OF PROJECT

Replacement and widening of an asphalt airport runway using a modified Portland Cement Concrete mixture

PROJECT SUMMARY

Completed in 2015, the 13 month, three-stage rehabilitation of a major runway at JFK International Airport in New York City included the installation of 228,000 cubic yards (174,000 m^3) of concrete into a new 18 inch (450 mm) thick concrete pavement. This project extended the dimensions of the original asphalt runway by 700 feet (213 m) and widened the pavement from 150 to 200 feet (45 to 60 m). Placing an average of 2000 – 3000 cubic yards (1500 – 2300 m^3) of concrete daily, the concrete mix design used slag cement and a maximum coarse aggregate size of 2.5 inches (60 mm) while incorporating Euclid Chemical's Plastol Ultra 109 high-range water reducing admixture and Eucon Air Mix 250 air entraining agent. Testing on the concrete produced an average flexural strength above 1100 psi (7.6 MPa) and a Coulomb rating below 1000, exceeding the strict specifications set by the Port Authority of New York and New Jersey. Expected to provide a service life of 100 years, the project was constructed on budget and delivered on time.