CASE STUDY

Construction of new runway and taxiways at Cleveland Hopkins International Airport

Cleveland- The busy Hopkins International Airport has undergone a major expansion program to provide additional capacity and accommodate as many as 1.1 million passengers relying on air transportation into and out of Cleveland each month.

New Runway 6L-24R Stage 1&2

The largest portion of the expansion program consists of construction of a new 9,000-foot parallel runway equipped for category III approaches and designed for Group V aircraft.

Anthony Allega Cement Contractor, Inc. was awarded the runway contract, totaling approximately $130 million, by the City of Cleveland, Department of Port Control in February 2001. The 2-stage project is scheduled to be completed in 2003.

The contractor is constructing the 40-inch composite pavement, totaling 512,000 square yards or 468,000 cubic yards of concrete, as follows:

- 6-inch cement treated permeable base course
- 8-inch P 306 concrete base course
- 10-inch P 209 aggregate base course
- 16-inch P 501 finish pavement course

Safe-Cure 2000™ was selected as the concrete curing compound for the project.

When completed in 2003, the 150-foot wide concrete runway will span 9,000 feet in length to accommodate the airport's busy stream of commercial aircraft.

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How ChemMasters Met The Challenge

Safe-Cure 2000 is a water based, white pigmented, resin concrete curing agent. It complies with all FAA and EPA regulations, and is DOT approved in many states. It consistently exceeds the curing efficiency requirements of ASTM C-309, Type II, Class B.

Nearly 77,000 gallons will be spray applied at 150 - 200 square feet per gallon on this large airport runway project to form a resin film over the surface of the freshly poured concrete and reduce the amount of water leaving the slab during the 28-day curing process. This enables the concrete to meet the full designed compression strength and minimize shrinkage cracking of the surface. Safe-Cure 2000's high level light reflection keeps the concrete surface cooler to ensure maximum hydration of the cement.

In addition to curing the top surface, Safe-Cure 2000 was applied in a bond-breaker application between the P 306 and P 501 layers to prevent potential strain and cracking.

Owner:
City of Cleveland

Design Engineer:
Baker & Associates

General Contractor:
Anthony Allega
Cement Contractor, Inc.

What they said:

Gary Thomas, Allega Project Manager, provides the following comments, *"We have used Safe-Cure 2000 on other airport jobs with good success. It is consistent in performance and doesn't clog our spray equipment. We are confident it will do the job.*

In addition, ChemMasters provides us with reliable service and delivery, which is critical on a job of this magnitude."

With the concrete poured and finished, Safe-Cure 2000 curing compound is spray applied at 150 - 200 square feet per gallon. It helps the concrete achieve its maximum impact and abrasion resistance while reducing shrinkage cracking.

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