DUCTILCRETE® engineered slab system eliminated 47 miles of control joints from 2.6M ft² project

Project Profile

A large footprint

A large import distribution center in Alabama called for 2.6M ft² of concrete slab. Due to the heavy wear and tear these warehouse floors often endure, the aim was to have as few control joints as possible.

Speak to a Specialist about using DUCTILCRETE® on your next project

A tall order

- 11,500 cubic yards of building foundations
- 2.5M ft² of DUCTILCRETE® HB100 slab system for the floor
- 90,000 ft² of DUCTILCRETE® CS100, a six-inch, dual-course floor slab system
- 355 9.25”-thick concrete tilt-up wall panels
  - 11,000 cubic yards total
- 8,200 linear feet (LFT) of paved ditch ranging 13–33 feet wide
- 5.6 miles of 10-foot-by-10-inch thick dolly strip with double mats of reinforcing and dowel baskets
- More than 90,000 cubic yards of concrete placed on the project from two onsite batch plants
Since the concrete contractor installed DUCTILCRETE®-engineered systems for the slab, the control joints were reduced by 71%—from 352,600 LFT to 103,700 LFT—a difference of 248,900 LFT. To put this into perspective, 248,900 linear feet is equivalent to 47 miles—nearly the distance between Boston, Massachusetts and Providence, Rhode Island.

The DUCTILCRETE® difference

DUCTILCRETE®-engineered slab system contractors and engineers were able to achieve this significant reduction in control joints due to the system's patented technology.

DUCTILCRETE®-HB100 engineered systems for concrete slabs are based on the Heidebed® technology and method. They are specifically designed for tilt-up construction where the two layers are placed in separate pours. The entire bottom part of the slab can be installed quickly, providing a surface for ongoing construction. The top layer is typically placed after the walls and roof have been installed, which allows for a superior slab finish, eliminating the need for repairs of the bottom course.

DUCTILCRETE®-HB100 slab systems result in:

- High performance
- Flat concrete slabs with column line joint spacing
- Superior finish without the residual effects of tilt-up construction
- Increased load carrying capacity vs. traditionally designed floors
- Reduced maintenance and improved construction schedules when compared to traditional slab construction systems

Similar to DUCTILCRETE®-HB100 slab systems, DUCTILCRETE®-CS100 is a patented dual-layer engineered system for concrete slabs, but the layers are placed together, wet on wet. This system also results in high performance, flat concrete slabs with column line joint spacing, while providing increased load capacity and reduced maintenance.

These DUCTILCRETE®-engineered slab systems are best suited for warehouses, e-commerce and distribution center, and manufacturing facilities. Essentially, the systems are ideal for structures with a large expanse of concrete slab, where control joint minimization and reduced curling translate to decreased joint deterioration and less cost of slab maintenance.

DUCTILCRETE®-FS100 slab systems are optimized for cold storage, freezer warehouses and food service facilities. For exterior applications, DUCTILCRETE®-CP100 and WT100 engineered systems work wonders for truck courts, non-DOT paving, car parking and driveways.