

Concrete Storage Replacement

ILLINOIS COOP REBUILDS AFTER TORNADO DESTROYS BOLTED STEEL TANKS



Ludlow Coop Elevator Co.
Ludlow, IL • 217-396-4111

Founded: 1904
Storage capacity: 10.7 million bushels at seven locations
Annual volume: 16.5 million bushels
Annual revenues: \$50 million
Number of members: 824
Number of employees: 21
Crops handled: Corn, soybeans, soft red winter wheat, oats
Services: Grain handling and merchandising, feed, seed

Key personnel:

- David Hastings, general manager
- Carl Evans, operations manager
- Jackie Prah, grain accounting
- Twila Johnson, grain accounting

Supplier List

- Aeration system** Decatur Aeration
Catwalk .. LeMar Industries Corp.
Concrete tank builder Hoffmann Inc.
Contractor Cleveland Grain Systems
Conveyors Union Iron Works
Millwright Paul's Machine & Welding Corp.
Sampler InterSystems Inc.
Speed reducers Dodge
Tower support system ... LeMar Industries Corp.



Ludlow Coop Elevator Co.'s flagship elevator in Ludlow, IL, with two new Hoffmann jumpform concrete tanks at the center of photo. Aerial photo by B&M Studio of Photography, Pekin, IL.

The tornado that tore through the little east-central Illinois town of Ludlow at 3:30 p.m. July 13, 2004, did a serious number on the 1.6-million-bushel headquarters elevator for Ludlow Coop Elevator Co. The twister completely destroyed two bolted steel tanks and damaged a third beyond use, leaving a big gap between two concrete elevators along the Ca-



Carl Evans

nadian National main line.

"I heard a loud roar," recalls Operations Manager Carl Evans. "I went out and looked down the street and saw a big pile of corn that wasn't there before. Then I called the railroad and told them to stop their trains."

The cooperative's Paxton, IL location was able to pick up the slack during the 2004 harvest.

When harvest was over, and it was time to plan the rebuild at Ludlow, the cooperative board opted not to rebuild the bolted steel tanks but instead to replace them with sturdier concrete.

Demolition of the remains of the steel tanks was completed by January 2005, and the old concrete foundations were removed the following month.

Ludlow Coop hired Cleveland Grain Systems, Tower Hill, IL (217-567-3002), as general contractor on the \$2 million project. Hoffmann Inc., Muscatine, IA (564-263-4733), was hired to build two 350,000-bushel jumpform concrete tanks on the site, and Paul's



One of two 20,000-bph Union Iron Works drag conveyors leading out to the new tanks. Ground-level photos by Ed Zdrojewski.



Two-story loadout shed, with a 40,000-bph Union Iron Works loadout drag conveyor and spout.

Machine & Welding Corp., Villa Grove, IL (217-832-2541), served as millwright on the project. "Hoffmann understood our need to get up and running again," Evans comments. "The company came in with two crews and had both tanks up by mid-June."

Excavation on the site began in February 2005, and the cooperative was expecting to have the new concrete annex up and running by Sept. 15.

Rail-Loading Annex

The two new jumpform concrete tanks are situated between the facility's two older slipform concrete structures.

These tanks stand 60 feet in diameter and 140 feet tall. The flatbottom tanks are outfitted with Bobcat doors, eliminating the need for a sweep auger.

There are no grain temperature cables, since the new tanks are used primarily for rail loading. Ludlow Coop has enough siding space for 25 railcars at Ludlow. (Unit trains are loaded at the Paxton, IL elevator; about five miles to the north.)

However, the tanks do have considerable aeration power. Four 50-hp New York Blower centrifugal fans and six 2-hp roof exhausters per tank provide 1/7 cfm per bushel, enough to store corn at 17% to 18% moisture.

A pair of 20,000-bph Union Iron Works (UIW) drag conveyors carry grain out to the new tanks from the south elevator. For cleanout purposes, the tanks empty onto a below-ground 15,000-bph UIW drag conveyor that takes grain back to the south elevator.

However, sidedraw spouts on each tank drop grain onto a 40,000-bph UIW loadout drag conveyor, which takes grain out to an InterSystems sampler and Paul's Machine loadout spout. (Since there is no bulkweigher or track scale, Ludlow Coop cannot provide origin weights at this location.)

The loadout conveyor is mounted adjacent to a Paul's Machine two-story loadout shed, with a control room on the upper level and a grain inspection lab on the lower level.

Ed Zdrojewski, editor

CONCRETE STORAGE SILOS

Jumpform and Slipform / Equipment Installation / Design and Engineering

Hoffmann, Inc. congratulates



Farmer's Elevator Co. of Lowder and Ludlow Cooperative Elevator Co. on their facility expansions.



HOFFMANN, INC.

Muscataine, Iowa / 563.263.4733 / hoffmann@hoffmanninc.com
visit us at www.hoffmanninc.com