

Ecstatic for Hydrostatic

REGIONAL GRAIN HANDLER VIRTUALLY ELIMINATES SCALE MAINTENANCE

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CASE STUDY

Emery Winslow Hydrostatic Scales

"With our hydrostatic scales, we've significantly reduced the amount of routine maintenance needed" says David Myles, electrical plant maintenance engineer for The Andersons Inc. at the regional grain handler's flagship elevator in Maumee, OH (419-891-2936/www.andersoninc.com).

Myles was speaking of his company's long-term relationship with Emery Winslow Scale Co., Seymour, CT (203-881-9333/www.emery-winslow.com), which dates back to 1986. Currently, The Andersons operates 11 of Emery Winslow's hydrostatic scales at its grain and fertilizer facilities in four states.

Two factors contribute to the reduced maintenance requirements of hydrostatic scales. First, the heavy-duty construction of the load cells allows them to stand up to wet and corrosive environments. Second, Emery Winslow's design also allows sensitive electronics to be located away from the scale and better protected from electrical surges.

Hytronic Technology

The Andersons heard about a new approach to truck scale electronics in



One of several hydrostatic trucks scales in service at The Andersons Inc.'s flagship elevator in Maumee, OH. This one is 93 feet long to handle full-size semis with pup trailers. Photo courtesy of Emery Winslow Scale Co.

the mid-1980s. Several Andersons employees went to see an Emery Winslow hydrostatic scale that had been installed at a Campbell Soup Co. tomato processing plant in Napoleon, OH. Shortly after that, in 1986, The Andersons installed a 70-foot Emery Winslow scale at an elevator it owned at the time in Findlay, OH.

"We liked it well enough that we've gone with hydrostatic scales anywhere it's feasible," Myles says.

Emery Winslow's Series 80 truck scales feature hydrostatic, 75,000-lbs. load cells made from 304 stainless

steel, which makes them impervious to water and other corrosives. "They could operate under water, if necessary," Myles says.

Hydrostatic cells operate on a thin film of oil, which sends a precise pressure signal to a summing totalizer located in the scale house. As a result, there are no electronic components under the scale whatsoever.

The hydrostatic cells are totally non-electric and, therefore, immune to water and electrical damage, including lightning. They have a lifetime guarantee against damage from these ele-

ments. There are also no electric cables under the scale that can be damaged by rodents.

The totalizer converts the pressure signal to an electronic signal for operation of standard digital instrumentation. It can interface with most accounting software systems for grain applications.

Pitless Design

Currently, The Andersons operates two different lengths on its Emery Winslow scales -- 70 feet and 93 feet.



Seventy-foot hydrostatic truck scale serving wholesale fertilizer operations at The Andersons Inc.'s Delphi, IN. facility. Photo courtesy of The Andersons Inc.

The longer scales can accommodate a full semi plus a "pup" trailer. The shorter scales float atop eight load cells, while the longer scales have 10.

In addition to selecting hydrostatic scales, The Andersons specify pitless,

above-ground scales wherever feasible. At Maumee, the scale platform sits 16 inches above grade.

According to Myles, the company prefers pitless scales over pit-style scales, where the load cells are located 5 or 6 feet below grade in the scale pit. The pits can fill with water, causing strain-gauge electronic load cells to fail.

"They are not a top priority for housecleaning at most place," Myles comments, noting that in many cases, scale pits are permit-required confined spaces under OSHA regulations. Sending a worker into such spaces requires a tremendous amount of paperwork, not to mention all of the man-hours that go into making sure the job is done safely.

Elsewhere in the company, the Emery Winslow hydrostatic scale gets equally high marks from Robert Marlow, operations manager at the Andersons' facility at Delphi, IN. The company installed a 70-foot truck scale in October 1999, also elevated 16 inches above grade, as part of the facility's wholesale fertilizer operation.

"It has worked very well for us," Marlow comments. "It's much easier to clean our elevated scale than our old pit-type scale. We just wash it out with a pressure washer, and that keeps the underside clean. Since the load cells are stainless steel, they are resistant to corrosion, and the structural steel and decking have an enamel coating to protect them, as well."

Ed Zdrojewski, editor

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73 Cogwheel Lane
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(203) 881-9333 Fax (203) 881-9477

4530 North 25th St.
Terre Haute, IN 47805

(812) 466-5265 Fax (812) 466-1046

www.emerywinslow.com

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