

Concrete Mix Plant Boosts Output With Maxi-Tuff® Elevator Buckets



Rugged, lightweight Maxi-Tuff® buckets solved belt and bucket breakage problems for Lampy's sand and aggregate elevator.

Downtime and delivery problems caused by breakage of elevator buckets and belts are a fading memory at the Lampy Ready Mix concrete plant in Elbow Lake, Minn.

Five years ago, the plant began replacing cast iron buckets with rugged, lightweight Maxi-Tuff® buckets made of DuPont Zytel® ST super tough nylon resin. Today, a total 380 Maxi-Tuff buckets are loading stone aggregate, sand and cement on the plant's two elevators.

"The buckets have performed well for five years," Bruns says. "We've had no breaking and almost no wear, and the belts aren't ripping," says Robert Bruns, manager of the Elbow Lake site.

Iron buckets overloaded belts

In the past, heavy cast iron buckets played havoc with belts. "When a belt ripped, it took up to a day and a half to

repair, and that delayed concrete deliveries," Bruns reports.

When the iron buckets wore out, Lampy initially replaced them with lighter-duty plastic buckets. This reduced stress on belts, but the new buckets on the aggregate and sand elevator began to break within a year.

Little wear to date

Bruns decided to test Maxi-Tuff® buckets on both elevators. The test buckets performed well, and complete sets were installed on both elevators.

Belts are holding up better with the Maxi-Tuff buckets because they weigh much less than iron buckets. The 10 by 6 in. buckets on the aggregate elevator weigh only 1.8 lbs each, while an iron bucket weighs 10 lbs. The total weight of the 160 cast iron buckets was 1,600 lbs, versus only 288 lbs for the same number of Maxi-Tuff® buckets.

The switch to Maxi-Tuff® has also saved on Lampy's cleaning costs. In spring and fall, frost and moisture combined to cause aggregate to stick to the iron buckets. Capacity gradually decreased during operation, and frequent cleaning was needed. "We don't have sticking problems with the Maxi-Tuff® buckets," Bruns reports.

The Lampy Ready Mix plant produces more than 7,500 cubic yards, or 15,000 tons, of concrete annually.

The plant layout is such that cement stored in a silo is moved to the daily use bin by a 70-ft bucket elevator, which is

fed by a screw conveyor. A front-end loader moves stone and sand to a 90 ft bucket elevator for delivery to bins. Weighed quantities of cement, sand and stone aggregate are gravity-loaded into ready-mix trucks.

The 70-ft cement elevator has 220 Maxi-Tuff® AA buckets of the 9 by 5 in. size. The 90-ft elevator for sand and stone has 160 of the 10 by 6 in. size AA buckets. Both are mounted on reinforced rubber belts.

Lampy Ready Mix operates a concrete plant and a block plant in Fergus Falls, Minn., the company's headquarters. In addition to the Elbow Lake site, Lampy has a concrete mix plant in Battle Lake.

Maxi-Lift, Inc. makes 17 sizes of Maxi-Tuff® elevator buckets. For more information, call 800-527-0657 or 972-735-8855, or write to:

P.O. Box 700008
Dallas, TX 75370-0008
or
16400 Midway Road
Dallas, TX 75244



The Lampy Ready Mix plant at Elbow Lake, Minn., produces more than 7,500 cubic yards of concrete annually.