# Maxi-Lift Inc.® CASE STUDY:


# COKE PLANT PUTS TIGERS TO THE TEST

Rosebud Operating Services is a power production facility generating electrical power in Billings, Montana. When the company needed to add equipment to upgrade their service, Randy Blendu, the Facility Services Manager, knew one thing when it came to his bucket elevators: no steel buckets. "I wanted something to outlast steel buckets in our elevators."

Rosebud processes petroleum coke as the fuel used to generate power and petroleum coke can be destructive as it moves in the plant's processes. *"The coke we move wears out all kinds of steel surfaces in our transitions and elbows. I needed something better,"* said Blendu. He consulted with the experts at Agri-Systems in Billings, who were the construction company on the plant. They contacted Maxi-Lift for guidance. The team at Maxi-Lift made a number of suggestions and sent samples for the parties to evaluate. After looking at the options, Randy chose Tiger-Tuff maximum duty elevator buckets made of durable urethane. This specification was passed on to Rapat Corporation in Hawley, Minnesota, who built the three new elevators for the project.

Rosebud's capacity requirements put them needing 400 tons a day of the 3" minus petroleum coke to meet their fuel demands. 130 thousand tons per year of this abrasive material can do a lot of damage to the conveying systems in the plant. *"I thought the buckets would last maybe six months to a year," said Blendu. "Instead, we've had the buckets running since September of 2001. We've never replaced a bucket due to wear or damage. In fact, we had to replace a belt that failed and we were able to recover all of the buckets from the old belt. They were still in great condition."*

Rapat built three elevators for the project, all containing Tiger-Tuff Maximum Duty urethane elevator buckets. All of the legs have performed beyond the expectations of the plant's staff. *"The receiving elevator was rated at 160 tons per hour and it gets 195 tons per hour. The two processing legs are rated at 100 tons, but performing at 125 tons per hour instead. They have been solid gold!"*

The success is also due in part to an excellent maintenance inspection program. Each of the two, twelve-hour shifts perform a complete visual inspection of each elevator. This insures that no buckets are damaged or loose, and that bearings and belts are in proper working order.

If the company were to expand will Tiger-Tuff urethane buckets be part of the plans? *"Absolutely!"*, said a very pleased Blendu.

Tiger-Tuff elevator buckets are available in fourteen sizes and three materials to fit most industrial applications. Increased capacity and longer wear life are just two of the major benefits of using Tiger-Tuff elevator buckets. Contact your local distributor, equipment manufacturer or Maxi-Lift to discuss options using the Tiger-Tuff in your application.

TIGER TUFF®

**Call: 1-800-527-0657 or Visit Us Online at: www.maxilift.com**
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# Tiger-Tuff Industrial Duty Elevator Bucket

## Slow Speed Centrifugal Discharge 125-450 FPM

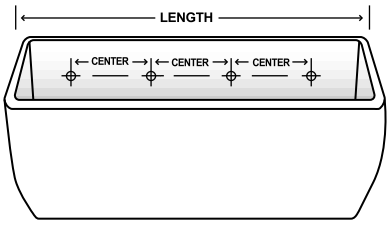
The Tiger-Tuff is a maximum duty elevator bucket designed and engineered to increase bucket life by minimizing wear and breakage. This reduces down time and lowers maintenance costs. The Tiger-Tuff bucket has the thickest lip, back wall and corners to extend the life of the bucket. Standard spacing is nominal projection times two. This is the best non-metallic bucket for high volume applications. Tiger-Tuff nylon and urethane buckets are currently used for cement, sand, aggregate, coke, clay and limestone.

## Features

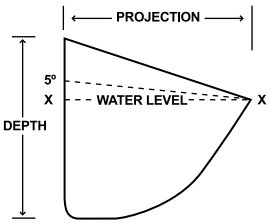
- Thicker corners
- Thicker walls, heavy front lip for digging
- More capacity
- Cleaner discharge
- High impact and abrasion resistant
- Non-corrosive, non-sparking

## Benefits

- Increases elevator capacity
- Lowers elevator maintenance
- Extended bucket life
- Decreases elevator down-time
- Corrosion resistant




MOUNTING HOLES AND VENTING TO YOUR SPECIFICATIONS




## Tiger-Tuff Industrial Duty Elevator Bucket

| BUCKET SIZE, INCHES** | | | | PUNCHING, INCHES | | | WEIGHT, LBS. | | CAPACITY, CU. INCHES | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BUCKET SIZE | Length | Proj. | *Depth | Centers | Number of Holes | Bolt Size | Nylon | Urethane | Water Level X - X | Usable 5° over X - 5° | Carton Qty. |
| 12 x 7 | 12-1/2 | 7-3/4 | 7 | | | | 3.92 | 4.26 | 269.24 | 298.12 | 7 |
| 14 x 7 | 14-1/2 | 7-3/4 | 7 | | | | 4.49 | 4.88 | 315.77 | 350.58 | 7 |
| 16 x 7 | 16-1/2 | 7-3/4 | 7 | | | | 4.77 | 5.18 | 377.41 | 415.14 | 7 |
| 12 x 8 | 12-5/8 | 8-3/4 | 8-1/4 | | | | 5.08 | 6.03 | 373.00 | 411.05 | 6 |
| 13 x 8 | 13-5/8 | 8-3/4 | 8-1/4 | | | | 5.16 | 6.46 | 404.85 | 446.15 | 6 |
| 14 x 8 | 14-5/8 | 8-3/4 | 8-1/4 | Belt and Chain Punching Provided Per Customer Specification | | | 5.55 | 6.60 | 436.80 | 481.35 | 6 |
| 16 x 8 | 17 | 9-1/16 | 8-1/8 | | | | 6.18 | 7.51 | 512.57 | 566.39 | 10 |
| 18 x 8 | 19 | 9-1/16 | 8-1/8 | | | | 6.91 | 8.08 | 567.49 | 627.08 | 10 |
| 20 x 8 | 21 | 9-1/16 | 8-1/8 | | | | 7.51 | 8.80 | 646.81 | 714.73 | 10 |
| 22 x 8 | 23 | 9-1/4 | 8-1/4 | | | | 9.71 | 11.20 | 701.90 | 757.40 | 6 |
| 24 x 8 | 25 | 9-1/4 | 8-1/4 | | | | 10.30 | 11.93 | 763.40 | 831.08 | 6 |
| 16 x 10 | 17 | 11 | 10 | | | | 10.03 | 12.24 | 795.70 | 875.37 | 6 |
| 18 x 10 | 19 | 11 | 10 | | | | 11.13 | 13.58 | 910.00 | 1,001.21 | 6 |
| 20 x 10 | 21 | 11 | 10 | | | | 12.05 | 14.42 | 1,032.50 | 1,135.98 | 6 |

## Ask about our 3 FOR FREE sample program!

| Materials | Polyethylene | Nylon | Urethane | Special Resins |
|---|---|---|---|---|
| COLOR | Orange | Tan | Green | As Available |
| APPLICATION | Grains & Food Products | Hot, High Impact Abrasive Dense Products | Heavy Abrasion, Sticky Materials | As Required |
| TEMPERATURE RANGE | -120° F to +180° F (210° F Intermittent) | -60° F to +300° F (350° F Intermittent) | -60° F to +180° F (210° F Intermittent) | As Required |
| FDA APPROVED MATERIAL | Yes | Available Upon Request | Yes | As Required |
| COMMENTS | Economical, high density polyethylene. FDA approved material for handling food-grade products. | Best for high heat applications, with tough impact and abrasion needs. | Most flexible and abrasion resistant. Resists product sticking and sharp cutting particles. | For specific requirements, such as extreme temperature, abrasion, color or product discharge. |

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