

## Challenge

### Issue

Pump volutes wore out before production campaign was completed, requiring unscheduled shutdowns and increased maintenance cost to repair.

### Goals

- Protect the pump volute from abrasion
- Complete processing campaign without unscheduled shutdown

### Root Cause

Severe abrasion and impact from unprocessed sugar beets, covered with sand and grit, wear internals prematurely.



Damaged pump casing

## Solution

### Preparation

- Grit blast to Sa 2.5 with 3 mil (75  $\mu$ m) angular profile

### Application

1. Apply **ARC BX2\*** @ 120-160 mils (3-4 mm)
2. Apply 1 coat of **ARC 855** @ 15-20 mils (375-500  $\mu$ m) to improve hydraulic efficiency

\*ARC BX2 is the "Bulk" package size of ARC 897



ARC BX2\* and ARC 855 applied to pump volute

## Results

### Client Reported

- Pump operated for complete campaign cycle without unscheduled shutdown
- Minimal wear to coated surfaces easily repaired
- Scrap and repurchase of casings reduced by 75%

### Client Reported Savings Per Pump

Savings over 3 years: \$23,000

\$=USD



Condition of coating at end of operational cycle