

OVER 40 YEARS OF PERFORMANCE DESIGNED SOLUTIONS



# ISO 9001 Quality "At Work"

## SITUATION:

URC was awarded the monoliths on North America's largest cement project in 2013. A number of preheater components were lined with UNI-SHOT AZ-SC, a fused grain alumina-zirconia product that resists alkali attack, sticking and abrasion. Over a 7 month period, more than **1.9 million pounds of UNI-SHOT AZ-SC** were scheduled to be installed. The entire project included 3.7 million pounds involving 14 different products.

## OUR GOAL:

URC's goal was to supply the contractor with products that **installed consistently** with **excellent properties**.

## URC PROCESS

The ISO 9001 production of the UNI-SHOT AZ-SC involved 3 key process steps:

### 1) Production Steps

- Pretested Raw Materials
- Computerized Mix Recipe System
- Automated Bulk Batching
- New State-of-the-Art Mixing/Sacking System



### 2) Quality Check

- **Every Batch** was tested for:
  - Water demand
  - Flow
  - Set
  - Strength



### 3) Property Confirmation

- In addition to testing every batch internally, URC independently tested a sample from every truckload. Properties were very consistent, as shown in these 4 truckload samplings of cast data.

CCS (psi)	C704 (cc)
14,681	3.3
14,743	3.3
15,292	3.5
14,312	3.5

## IMPACT:

Overall, 3.7 million pounds of URC products were installed **without one problem!**  
Specifically regarding the UNI-SHOT AZ-SC...

- **Mixing** was on target and consistent.
- **Pumping** was done without one problem.
- **Shooting** was completely consistent and uniform.

## SUMMARY:

Due to the consistency and quality of UNI-SHOT AZ-SC and the other URC products...

- **No time was lost** by the contractor.
- **No material was wasted** on the site.
- **No delays occurred** due to material or delivery.



TOP: Even with pipe reductions & 150 ft vertical hose heights, the pumping and shooting was done without one problem!

BOTTOM: Using two different activators, walls and roofs were lined without an issue.



*"Installing **1.9 million pounds** of product without one problem is quite an achievement!"*

~ Cement Company Executive



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