



## HOW TRIAD Z-189 HELPED TO GET CUPOLA MAINTENANCE COSTS DOWN

### PARAMETER:

Alloys:	SG Iron
Furnace Type:	Hot Blast Cupola with Oxygen Tuyere Injection with 80-100 tonnes/hr, 3455 mm well diameter
Application Temp.:	up to max. 1400 °C
Furnace Livetime:	X heats, approx. X months campaign
Installation practice:	???

## SHOTCRETE REPAIR OF CUPOLA MELT ZONE

### FOUNDRY:

High volume foundry in US, producing ductile iron castings for light vehicle, material handling, agriculture, construction, hydraulics and commercial vehicle castings.

### FOSECO PRODUCTS

TRIAD Z 189 no cement, separate binder castable  
VESBOND 4000 binder  
CRYSTAL 100 Activator

### KEY BENEFITS

- Fast mixing and wet-out
- Excellent adhesion / low rebound
- Rapid dryout
- Long life
- No formwork required



Shotcrete equipment



## THE CHALLENGE

Cupola maintenance is a costly process for foundries that takes place during a brief shutdown. Products that are used in the maintenance process need to be easily mixed and applied, able to withstand fast dry-out and heat-up, and provide long life. Materials used must help facilitate rapid turnaround and reduced frequency of maintenance.



## OUR SOLUTION

The newly developed TRIAD Z line of no-cement, sol bonded castables provide long life and a robust application process. TRIAD Z 189 has been shown to have excellent slag corrosion resistance. TRIAD Z 189 has the ability of being shotcrete for veneer repairs of the melt zone without formwork.



## THE OUTCOME

When applied using the shotcrete process, these castables exhibit excellent adhesion to both existing refractories and furnace shells. Rebound, or material loss is very low. The cupola is now relined twice per year with gunning maintenance done between major repairs.

