



OPTIMISING IRON TRANSFER LADLE LIFE TIME USING A NEW GENERATION OF TRIAD* Z 160 CASTABLES

PARAMETERS:

Alloy:	Grey iron GJJ
Ladle type:	Transfer ladle of 1600 kg capacity, operating 3 shifts/day, 5 days/week
Furnace Type:	Long campaign cupola, channel holding furnaces and press pour furnaces
Installation practice:	Dense castable directly cast on the shell; 200 kg planetary mixer, air pocket vibrator, thickness from 100mm to 120 mm max Dry-out done via an air-gas burner, no monitored curve
Lining life time:	25 days - 5600 Tonnes + possibility to do a lining repair on the impact area

GREY IRON TRANSFER LADLE

FOUNDRY:

Italian automotive foundry supplying iron casting parts for more than 35 years. High productivity foundry with several molding lines.

FOSECO PRODUCTS

TRIAD Z 160 castable
VESBOND 4000 binder

KEY BENEFITS

- Extended life time by more than 35%
- Fast drying out (31 hours)
- Good flowability
- Long shelf life (12 months)



VESBOND 4000 binder addition into the mixer



Ladle after pulling out the former



THE CHALLENGE

The foundry wanted to improve the transfer ladle performance with the latest developments in refractory lining. The installation practice and drying should follow the same procedure and also they wanted to use the same equipment as with previous low cement castable technology such as planetary mixer, pocket vibrator and air/gas burner method.



OUR SOLUTION

Foseco offered the new TRIAD Z 160 castable developed for foundry applications. TRIAD Z 160 is a no cement castable that should be mixed with a separate binder VESBOND 4000. It provides superior hot resistance to molten metal/slag and a fast drying schedule. Of the selected material TRIAD Z 160, an alumina based castable (66%) with superior abrasion and thermal shock resistance 1200 kg were applied.



THE OUTCOME

By use of the TRIAD Z 160 the iron transfer ladle was capable of 25 days in service (5600 tonnes) instead of an average of 18 days (4032 tonnes) with a conventional lining. Increased erosion resistance was noted especially at the impact area. Due to its very good flowability and the good general aspect of the ladle it was possible to make a lining repair and re-use the ladle for a second run.

