

Case Study #15

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The following series of slides document the results of using Redux EF40L fluxes at 15 International Foundries to eliminate slag buildup on refractory walls of coreless induction furnaces, extend refractory life and clean ladles. Additional details on increases in refractory life are presently not available because of the COVID-19 pandemic.

By
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**Case Study 15 - Objective: Clean slag
build-up from Coreless Induction
furnace walls and extend lining life**



**Field Trial of REDUX EF40L in a 500 kg
Coreless Induction Furnace at
International Foundry "O" pouring Ductile Iron**

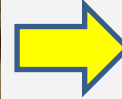


Background details at Foundry “O”

- Metal – Producing SG Iron
- Furnace- Coreless Induction Furnace with 500 kg capacity
- Power- 550 KW
- Melting Time per Heat- Approx. 35 to 37 Min
- Tapping Temperature : 1530°C to 1535°C
- Redux per Heat- 0.05 % of liquid metal capacity



Condition of the Furnace prior to the Redux EF40 Trial



Prior to adding
Redux EF40L to
the furnace



Redux Trial details at Foundry “O”

Trial Details

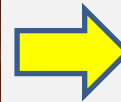
Redux addition per Heat-
0.05 % of liquid metal
capacity

Before charging further scrap
and foundry returns, added
250 grams Redux EF40L

Redux EF40L was added for
2 consecutive heats



Condition of the furnace after just 2 Redux EF40L treatments



After just 2 Redux EF40 additions to the furnace

- Liquid slag generated appeared at the melt line
- There was no slag sticking or building up on the furnace lining after just 2 treatments of Redux
- Foundry “O” plans to continue to add Redux EF40 on all future heats to determine effect on lining life.



Side by Side comparison of before and just 2 Redux Treatments



Initial Furnace Condition



After 2 Redux additions

Manufacturer of Redux EF40L recommends that Redux be
Used continuously to show Refractory Life increases of
75 to 200%

