CALDE® GUARD

Calderys' new precast concept





What happens during a heat in foundry production?

The importance of the sinthering layer







What impacts the refractory performance?

Operating conditions like

- Furnace design: size, power, frequency
- Molten metal: copper / iron / steel
- Operating temperature

Sintering depth is crucial:

- it is influenced by the thermal load
- the thermal load is a function of temperature and time.



What impacts the refractory performance?

Operating conditions like

- Furnace design size, power, frequency
- Molten metal copper / iron / steel
- Operating temperature
- Operation conditions (shifts)

The continuance of production influences:

- the sintering depth
- the thermal cracks in the lining (thermal shock)



What impacts the refractory performance?

Operating conditions like

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- Furnace design size, power, frequency
- Molten metal copper / iron / steel
- Operating temperature
- Operation conditions (shifts)
- Scrap quality
- De-slagging

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Scrap quality and de-slagging:

- Might give a chemical load to the lining
- Important to have a hard and tight surface of the lining, e.g. if scrap containing Zinc is used



CALDE®GUARD

Helps you enhance your refractory performance and improve productivity

A full turnkey concept

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Our patented solution is a combination of:

- SILICA MIX Q BF, our boron-free silica mix monolithic
- Precast top ring and spouts, designed according to furnace specification and enhanced by steel fiber
- Specially developed installation method
- Your equipment is fully serviced in one of Calderys foundry service center and re-installed at your plant by our foundry installers



Excellent mechanical strength Fast installation Great lining performance





Focus on the SILICA MIX Q BF product





Why choose boron free?



Foundry that want to reduce their environmental footprint

Foundry sensitive to downtime





- Environmentally friendly as it is boron free
- Indicates more tones per lining Needs another material in the top ring and spout(s) since it will not sinter enough above the melt surface



Focus on CALDE® GUARD's top ring precast shape



Top ring is pre-casted, pre-sintered under perfect conditions

Mechanical strength enhanced by steel fibers in upper part

Does not need sintering at site, heated together with the silica lining



Thank you for your attention

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