

Ultra-low Carbon MgO-C Brick

for stainless steel
refining ladle



Ultra-low C MgO-C



Magnesia-chrome

Our manufacturing technology achieves high durable ultra-low carbon MgO-C brick for steel ladle slag line.

For slag line of stainless steel refining ladle, high corrosion resistance basic brick excluding graphite tends to be applied in terms of carbon pick up. However, service life of those bricks is insufficient because of peeling-off. Shinagawa's ultra-low carbon MgO-C brick with excellent spalling resistance allows to extend the service life. Many application results suggest that influence to carbon pick up is negligible.

	Ultra-low Carbon	Low Carbon	Magnesia-chrome
Carbon pick up	++++	++	+++++
Spalling resistance	++ (Ordinary) ++++ (Improved)	+++++	+
Corrosion resistance	+++ (Ordinary) ++++ (Improved)	++	+++++

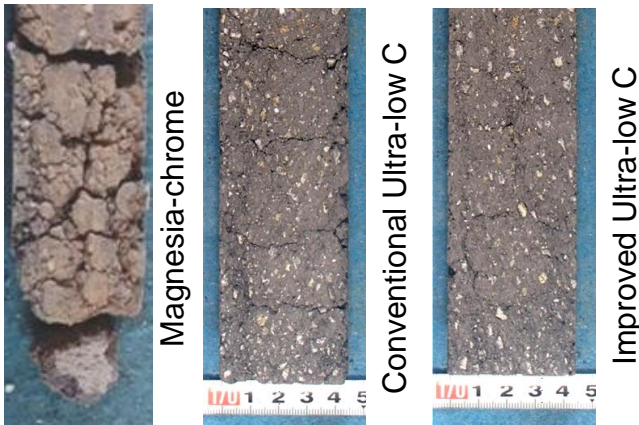
negative +, ++, +++, +++++, ++++++ positive

Spalling resistance

Excellent spalling resistance of ultra-low carbon MgO-C brick is achieved by the microstructure controlling technology.

As widely accepted, spalling resistance is deteriorated as graphite content decreases. Our microstructure-controlling technology enables to manufacture ultra-low carbon MgO-C brick with excellent spalling resistance.

In commercially operated steel ladle, this desirable feature permits high peeling-off resistance, resulting in significant reduction in wear rate.



Appearances spalling test.

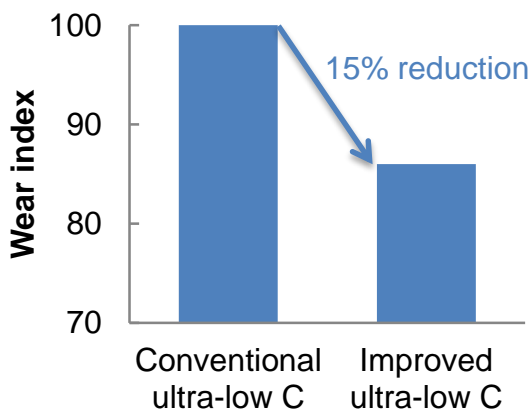


Slag line of steel ladle after use.

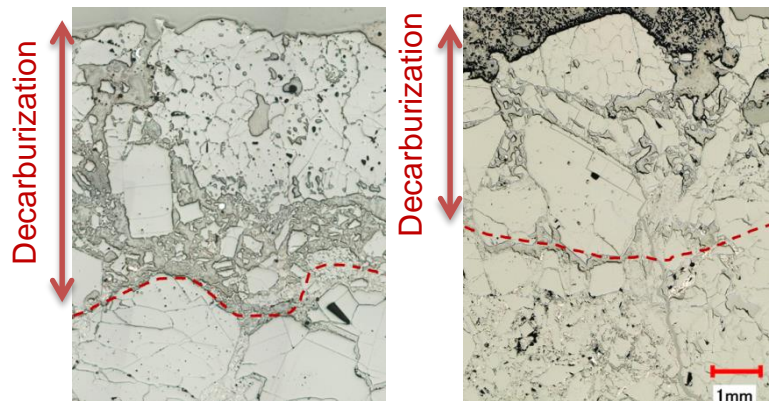
Corrosion resistance

Microstructure controlling technology improves corrosion resistance as well.

Well controlled microstructure decrease decarburization thickness as well as deterioration degree of microstructure in decarburization zone. Further improvement of corrosion resistance is attributable to the the microstructure controlling manufacturing technology.



Result of commercial application.



Microstructures after commercial applications.

