METHOD FOR HANDLING A SLAG POT OR LADLE AND PYROMETALLURGICAL TOOLS

[DESCRIPTION]

This invention relates to the handling of slag pots and ladles used in the ferrous or non-ferrous metallurgical industry.

Typically, the pyro-metallurgical industry produces slag which floats on top of the pool of molten metal due to its density which is less than that of the molten metal.

The collection of the slag is carried out in different ways. A first technique resides in the tipping of the pot wherein it is supernatant above the pool of molten metal. The slag can also be collected by scraping or by overflow during the tipping.

It is then recovered in slag pots or ladles, which are typically formed from refractory materials, cast iron or steel.

In the ferrous metallurgical industry, blast furnace slag and steel-making slag are distinguished.

The blast furnace slag is a by-product coming from the production of cast iron in a blast furnace, where it corresponds to the sterile gangue of the iron ore to which is added alloying elements and fuel ash, in particular coke, coal and/or alternative fuels. It therefore separates from the liquid iron by a difference in density.

The quantity of slag produced is proportional to the richness of the iron ore used. For a blast furnace operating with a prepared charge with a base of iron-rich ore, a proportion 180 to 300 kg of slag is generally reached for one tonne of cast iron produced.

The steel-making slag comes from pyro-metallurgical tools, such as various refining tools such as cast iron desulphurisation tools, converters that transform the cast iron into steel (BOF-Basic Oxygen Furnace), electric furnaces (EAF-Electric Arc Furnace), stainless steel refining converters (AOD-Argon Oxygen Decarburization) and the various tools for secondary metallurgy grading. For one tonne of steel produced, there is from 50 to 150 kg of steel-making slag produced.