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Reduction of Electrode Unit Consumption in Ladle Furnace

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In recent years, electrode costs have been increasing along with the rising unit price of needle coke. Furthermore, from the perspective of carbon neutrality, efforts to reduce electrode unit consumption have been becoming more active.

In order to suppress the side loss due to oxidation and the tip loss due to sublimation in Ladle Furnace (: LF) electrodes, we improved the LF operation (reviewing the power input pattern, optimizing the argon gas flow rate for stirring molten steel) and introduced LF electrode water cooling equipment. We achieved the reduction of the LF electrode unit consumption by about 30%. This paper introduces these results.

Keyword: Ladle Furnace, electrode, Operational Improvements, spray cooling

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