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Development and Application of fully-automated smart steelmaking system on converter applicate at the Ansteel steelmaking plant

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In the most of steelmaking plant, the steelmaking operation in converter still depend on the artificial experience mode, the artificial experience are different from each other, so that the accurate of [C] and [T] hit rate are not high at the endpoint, and the reboiling rate is generally more than 30%, which cause the steel liquid peroxidized, the consumption increasing and taping to taping time extending.

To solve those problems. AnSteel take the measure that the steelmaking technology and basic principle combine with the 5G/AI technology. The smart steelmaking system has been successfully implemented in the plant. This system include the big date model, the alloy calculated model, the [C] and [T] predict model, the gas on-line process analyses model and Sonar system for controlling the lance moving up and down, the slag and scrap calculated model, etc. By using a smart steelmaking system, the plant can achieve the Lance target, which can be controlled by computer, and the slag can be placed by computer. Compared with the artificial experience model, finally the plant achieve the object of intensive operating, decision-making smart, high efficient and low cost. This paper aims to intrude on the basic principle of a smart steelmaking system, as well as the specific application result.

Speaker Country

China

Are you interested in publishing the paper in a Steel Research International special issue?

Yes

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