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CAS-OB process is a process designed for controlling the steel composition and temperature before casting. In our previous work, a novel numerical model was proposed for the heat-up stage of the CAS-OB process. This model considers all the main phenomena observed in the process, including reactions between gas jet and steel bath, reactions between metal droplets and top slag as well as feeding, melting and oxidation of aluminium particles. In order to predict the heating rate accurately, special emphasis was put on the oxidation of aluminium and on the heat losses during heat-up. The purpose of this paper was to introduce modifications to the original model, to provide a preliminary validation and to propose guidelines for further measurement campaigns. The model predictions for final steel composition were in good agreement with the steel samples taken after the heat-up stage. In further work, the temperature losses need to be reassessed in order to improve the accuracy of temperature prediction.

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