NEURAL MODEL IDENTIFICATION OF METALLURGICAL PROCESS IN OXYGEN CONVERTER

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Abstract : In the iron and steel industry domain, the adjustment of the percentage of the chemical composition of the cast iron in the oxygen converter is essential to produce steel; this operation is to carry out by an oxygen lance in the liquid cast iron without expenditure of energy (fuel). The oxygen injected makes chemical reactions with the cast iron elements, and according to the quantity of oxygen injected we can fix the percentage of each chemical element in steel. It is sometimes extremely difficult to modeling the variations of the chemical compositions with the dynamic nonlinear. In this work, the identification of the nonlinear relations are studied by using the neural networks, the real cases were adapted using data banks of the process, the results obtained are presented and discussed.

Keywords : modeling, neural networks, oxygen converter.