

Iron Ore Pellet Reduction Kinetics and the Impact of Binders

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Abstract: *Iron ore pellet reduction was done at temperatures between 900 and 1100°C. The most accurate model for reduction kinetics was to use the slope of the fractional reduction vs. time curve's initial linear area as a proxy for the rate constant (k). Plots of k vs 1/T showed a straight line, which was used to compute activation energy. To determine the impact of binders, pellets with varying binders percentages were reduced and compared.*

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