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## Simulation on the Conductivity of Charging Stock with Percolation Structure in the Submerged Arc Furnace

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**摘要** Based on the fractal geometry, a new way for selecting material burden ratio and size distribution, named physical design of burden, which is different from stoichiometric weight of carbon burden, would play a more important role in the operation of submerged arc furnace process. Cold simulation investigation was carried out to find how the fraction and size of metal balls affects the specific conductivity of charge mixture, by applying the percolation structure theory. A parameter equation,  $s/s=A(F-F_c)v$ , was suggested to calculate the specific conductivity of the charge mixture.

**关键词** [submerged arc furnace](#) [resistance of charge](#) [percolation structure](#) [fractal geometry](#)

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