

Invention relates to ferrous metallurgy, specifically to production of steel from iron ore using iron oxide reduction method via network of installations.

Method is proposed for producing steel from iron ore raw materials by reducing iron oxide, in which furnace with shaft chamber for preliminary reduction (A), horizontal chamber for final reduction (B), and liquid metal accumulation chamber (C) are used, all connected by transition channels. Pellets made from raw materials that do not contain carbon impurities are used as feedstock. Heating, reduction, and melting of raw materials are carried out using heat from low-temperature plasma generated by plasma torches, through which reducing gas is also supplied. The energy required for production process is provided by small modular reactor that generates electricity. Corresponding network of installations for implementing method is also proposed. Implementation of invention ensures reduction of capital expenditures and production costs, as well as improvement of environmental conditions by reducing harmful CO₂ emissions.