

ABSTRACT

Disclosed is an online furnace drying method for a heat-insulation natural gas catalytic oxidizing furnace, comprising: (1) simultaneously introducing oxygen, natural gas and temperature-control gas capable of decreasing a reaction heating rate into a natural gas catalytic oxidizing furnace, controlling a molar ratio of the oxygen to the natural gas at (0.3-0.6): 1, and meanwhile, controlling a molar ratio of the temperature-control gas to raw material gas consisting of the oxygen and the natural gas at (0.1-7):(1.3-1.6); (2) preheating the mixed gas so as to gradually increase the temperature, and stopping the preheating until the temperature reaches an oxidation triggering temperature; and (3) gradually decreasing the molar ratio of the temperature-control gas to the raw material gas, allowing the reaction temperature to increase at a heating rate meeting the requirement of a designed furnace drying curve, and stopping the introduction of the temperature-control gas until the reaction temperature reaches a working temperature. The present invention solves the problem that the temperature rises excessively fast during the furnace heating process, prevents a heat-insulation fire-resisting material from being cracked due to shock heating, and protects the natural gas catalytic oxidizing furnace, so that the natural gas catalytic oxidizing furnace can be stably transitioned to a normal operation state.