



Experiment on Damper Blade Control Mechanism for Downdraft Ceramics Kilns

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Abstract

Problems caused by combusted ceramics downdraft kiln is to control the combusted atmosphere within the ceramics downdraft kiln to combusted the atmosphere in oxidation firing always. In order to make the product of good quality. In fact, it may be difficult because there are many reasons that the combusted atmosphere is reduction firing. Therefore having to control the damper blade at all times during the combusted of the ceramic downdraft. The position of the damper blade is usually located in the chimney of the ceramic downdraft kiln, which is the channel that allows the exhaust gas to reach the chimney to control the cooling of the chimney and act to control the exhaust gas to flow out chimney too fast by control the damper blade translate to open – close. To get combusted atmosphere as you want. This translate damper blade will affect the combusted atmosphere inside ceramics downdraft kiln by giving oxidation firing or reduction firing. It is an important process for control the combusted atmosphere within the ceramics downdraft kiln. The original of control damper blade will be used to slide open-close by experienced person of ceramics downdraft kiln. The researcher therefore designed the control mechanism of the damper blade by the power transmission screw by the motor. The electric circuit designed by the researcher will be a circuit that controls the operation of the motor which will affect the distance control of the moving damper blade. Affecting in an effect on the combustion process within the ceramics kiln. The objective of this article is to test the motion control mechanism of the damper blade. To control the combusted atmosphere in the downdraft ceramics kiln. To use the damper blade to expel the exhaust from the furnace. In this work, Tried to control the mechanism of the damper blade modification to pave the way for the creation of automatic ceramic downdraft kiln systems.

Keywords: oxidation-reduction firing, The damper blade