

Title (en)
REAL-TIME MONITORING OF A MULTI-ZONE VERTICAL FURNACE WITH EARLY DETECTION OF A FAILURE OF A HEATING ZONE ELEMENT

Title (de)
ECHTZEIT MONITORING EINES MEHRZONEN-VERTIKALOFENS MIT FRUEHZEITIGER ERKENNUNG EINES AUSFALLS EINES HEIZZONEN-ELEMENTS

Title (fr)
SURVEILLANCE EN TEMPS RÉEL D'UN FOUR VERTICAL À PLUSIEURS ZONES, DOTÉE D'UNE DÉTECTION PRÉCOCE DE L'ARRÊT D'UN ÉLÉMENT DE ZONE CHAUFFANTE

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Abstract (en)
[origin: WO2019058358A1] The aim of the invention is to help avoid wafer losses in thermal treatment. Wafers have values of up to 150,000 euros per batch. Therefore, unplanned failure of the thermal device for treating the wafers should be avoided. The method according to the invention for monitoring the thermal device(s) (100) for receiving and controlling the temperature of wafer lots or batches of wafers uses a continuously applied measurement of a resistance value (R1) in at least one heating zone (1') of a plurality of heating zones (1', 2', 3', 4', 5') of the thermal device. The currently measured value (R1(i)) of the resistance (1) in the associated heating zone (1') is compared with a previously measured value (R1(i-1)) of the same resistance (1). A warning or an alarm (90) for the thermal device (100) is already generated when a deviation (ΔR_i) of the two resistance values from the same heating zone (1') is detected by means of the comparison, said warning or alarm occurring temporally before a failure of a whole heating zone (1) of the thermal device (100). Improved ability to plan resources is a further goal.

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