

WIRE BONDING METHOD AND APPARATUS

ABSTRACT

A method and apparatus are described which enhance the reliability of wire-bonding strength by reducing variation in the entire transformation of a wire. At point P1, a bonding wedge (21) abuts a wire (71), exerting a load on the wire (71), which transforms by an amount of transformation A. The transformation stops at point P2. The transformation amount A varies greatly. At point P3 (T1), ultrasonic wave vibration is exerted and transformation of the wire (71) is restarted. At this stage, a variation in the transformation amount A is absorbed by an amount of transformation B and therefore a variation in the transformation amount $A + B$ becomes small. At a point $(T1 + T2)$, the transformation amount $A + B$ is maintained substantially constant. At point P4, the transformation amount of the wire (71) is set to 0 and measurement of the transformation amount of the wire (71) is started. Until the transformation amount of the wire (71) reaches an amount of transformation C (point P5), a load and ultrasonic wave vibration are given.

FIG 7



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