GOLD-COATED BONDING WIRE, METHOD OF MANUFACTURING THEREOF, SEMICONDUCTOR WIRE BONDING STRUCTURE, AND SEMICONDUCTOR DEVICE

ABSTRACT

There is provided, in place of a bonding wire containing gold as a main component, a gold-coated bonding wire that has the characteristics equivalent to those of gold and is applicable to the method (CWB) of directly wedge-bonding multistage stacked chip electrodes with no material cost, while considering the needs for thinner chips and multistage stacking of semiconductor devices such as a memory. A gold-coated bonding wire 1 of the present invention includes: a core material 2 containing silver or copper as a main component; and a coating layer 3 that is provided on a surface of the core material 2 and contains gold as a main component. A film thickness of the gold coating layer is set to 5 nm or more and 200 nm or less, and a compressive stress when deformed by 60% with respect to a wire diameter is controlled to 290 MPa or more and 590 MPa or less, and thereby the issue is achieved.

Figure 1