

CLAIMS

1. A bonding wire for a semiconductor device comprising:
a Cu alloy core material; and
5 a Pd coating layer formed on a surface of the Cu alloy core material, wherein
the bonding wire contains In,
a concentration of In is 0.031% by mass or more
and ~~0.011 to~~ 1.2% by mass or less relative to the entire
10 wire, and
a thickness of the Pd coating layer is 0.015 μm or more and ~~to~~ 0.150 μm or less.
2. The bonding wire for a semiconductor device according
15 to claim 1, wherein
the Cu alloy core material contains at least one element selected from Pt, Pd, Rh and Ni, and
a concentration of each of the elements contained in
the Cu alloy core material is 0.05% by mass or more and ~~to~~
20 1.2% by mass or less.
3. The bonding wire for a semiconductor device according
to claim 1 or 2, further comprising an Au skin layer on the
Pd coating layer.
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4. The bonding wire for a semiconductor device according
to claim 3, wherein a thickness of the Au skin layer is
0.0005 μm or more and ~~to~~ 0.050 μm or less.
- 30 5. The bonding wire for a semiconductor device according
to any one of claims 1 to 4, wherein
the bonding wire further contains at least one element

selected from B, P, Mg, Ga and Ge, and

a concentration of each of the elements is 1 ppm by mass or more and ~~to~~ 100 ppm by mass or less relative to the entire wire.

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6. The bonding wire for a semiconductor device according to any one of claims 1 to 5, wherein, in a measurement result when measuring crystal orientations on a surface of the bonding wire, a crystal orientation $\langle 111 \rangle$ angled at 15
 10 degrees or less to a longitudinal direction of the bonding wire has a proportion of 30% or more and ~~to~~ 100% or less among crystal orientations in the wire longitudinal direction~~in terms of areal percentage~~.