Claims

1. An electric contact used to conduct a continuity test in a high temperature environment by being brought into contact with an Sn-containing terminal of an electric part, the electric contact comprising:

a first layer into which Sn is to melt and diffuse at a first diffusion rate, while the electric contact is brought into contact with an Sn-containing terminal of an electric part to conduct the continuity test of the electric part upon application of heat in a high temperature range of 125^{0}C to 180^{0}C; and

a second layer formed on an outer side of the first layer, into which the Sn melts and diffuses at a second diffusion rate lower than the first diffusion rate of the first layer, upon application of the heat of the continuity test while the second layer is brought into contact with the Sn-containing terminal of the electric part,

wherein

a thickness of the first layer is within a range of 0.2 μm to 5 μm,

the first layer is a Pd layer or a Pd alloy layer, and

the second layer is an Ag alloy layer composed primarily of Ag and containing Au or Cu in addition to the Ag, to provide a weight ratio of the Au or Cu being lower than the Ag.

2. An electric contact used to conduct a continuity test in a high temperature environment by being brought

into contact with an Sn-containing terminal of an electric part, the electric contact comprising:

a first layer into which Sn is to melt and diffuse at a first diffusion rate, while the electric contact is brought into contact with an Sn-containing terminal of an electric part to conduct the continuity test of the electric part upon application of heat in a high temperature range of 125°C to 180°C; and

a second layer formed on an outer side of the first layer, into which the Sn melts and diffuses at a second diffusion rate lower than the first diffusion rate of the first layer upon application of the heat of the continuity test while the second layer is brought into contact with the Sn-containing terminal of the electric part,

wherein

a thickness of the first layer is within a range of 0.2 μm to 5 μm,

the first layer is a Pd alloy layer composed primarily of Pd and containing Cu in addition to the Pd, to provide a weight ratio of Cu being lower than the Pd, and

the second layer is an Ag layer or an Ag alloy layer.

3. An electric contact used to conduct a continuity test in a high temperature environment by being brought into contact with an Sn-containing terminal of an electric part, the electric contact comprising:

a first layer into which Sn melts and diffuses at a first diffusion rate upon application of heat when the electric contact is brought into contact with an Sn-containing terminal of an electric part and a continuity

test of the electric part is conducted in a high temperature range of 125°C to 180°C; and

a second layer formed on an outer side of the first layer, into which the Sn melts and diffuses at a second diffusion rate lower than the first diffusion rate of the first layer upon application of heat of the continuity test,

wherein

a thickness of the first layer is within a range of 0.2 μm to 5 μm,

the first layer is a Pd alloy plated layer composed primarily of Pd and containing Ag, Au, Cu or Sn in addition to Pd, a weight ratio of Ag, Au, Cu or Sn is lower than the Pd, and

the second layer is an Ag alloy plated layer composed primarily of Ag and containing Au, Cu, Pd or Sn in addition to Ag, a weight ratio of the Au, Cu, Pd or Sn is lower than that of the Ag.

4. The electric contact according to any one of claims 1 to 3, further comprising a base material having electrical conductivity and a foundation layer formed on an outer side of the base material and composed primarily of Ni,

wherein the first layer is formed on an outer side of the foundation layer, and

the second layer is formed on the outer side of the first layer.

5. The electric contact according to any one of

claims 1 to 3, comprising a base material serving as the first layer, wherein the second layer is formed on an outer side of the base material.

6. A socket for electric parts used to conduct a continuity test in a high temperature environment, comprising:

a socket body;

a housing portion in which an electric part provided with an Sn-containing terminal is housed; and

an electric contact disposed in the socket body and placed in contact with the Sn-containing terminal,

wherein

a first layer into which Sn melts and diffuses at a first diffusion rate upon application of heat and a second layer formed on an outer side of the first layer when the electric contact is brought into contact with the Sn-containing terminal of the electric part and a continuity test of the electric part is conducted in a high temperature range of 125^{0}C to 180^{0}C, are formed on a surface of the electric contact, into which the Sn melts and diffuses at a second diffusion rate lower than the first diffusion rate of the first layer upon application of the heat of the continuity test,

a thickness of the first layer is within a range of 0.2 μm to 5 μm,

the first layer is a Pd layer or a Pd alloy layer, and

the second layer is an Ag alloy layer composed primarily of Ag and containing Au or Cu in addition to Ag, a weight ratio of the Au or Cu is lower than that of the

Ag.

7. A socket for electric parts used to conduct a continuity test in a high temperature environment, comprising:

a socket body;

a housing portion in which an electric part provided with an Sn-containing terminal is housed; and

an electric contact disposed in the socket body and placed in contact with the Sn-containing terminal,

wherein

a first layer into which Sn melts and diffuses at a first diffusion rate upon application of heat and a second layer formed on an outer side of the first layer when the electric contact is brought into contact with the Sn-containing terminal of the electric part and a continuity test of the electric part is conducted in a high temperature range of 125^{0}C to 180^{0}C, are formed on a surface of the electric contact, into which the Sn melts and diffuses at a second diffusion rate lower than the first diffusion rate of the first layer upon application of heat of the continuity test,

a thickness of the first layer is within a range of 0.2 μm to 5 μm,

the first layer is a Pd alloy layer composed primarily of Pd and containing Cu in addition to Pd, a weight ratio of Cu is lower than the Pd, and

the second layer is an Ag layer or an Ag alloy layer.

8. A socket for electric parts used to conduct a continuity test in a high temperature environment, comprising:

a socket body;

a housing portion in which an electric part provided with an Sn-containing terminal is housed; and

an electric contact disposed in the socket body and placed in contact with the Sn-containing terminal,

wherein

a first layer into which Sn melts and diffuses at a first diffusion rate upon application of heat and a second layer formed on an outer side of the first layer when the electric contact is brought into contact with the Sn-containing terminal of the electric part and a continuity test of the electric part is conducted in a high temperature range of 125^{0}C to 180^{0}C, are formed on a surface of the electric contact, into which the Sn melts and diffuses at a second diffusion rate lower than the first diffusion rate of the first layer upon application of heat of the continuity test,

a thickness of the first layer is within a range of 0.2 μm to 5 μm,

the first layer is a Pd alloy plated layer composed primarily of Pd and containing Ag, Au, Cu or Sn in addition to Pd, a weight ratio of Ag, Au, Cu or Sn is lower than the Pd, and

the second layer is an Ag alloy plated layer composed primarily of Ag and containing Au, Cu, Pd or Sn in addition to Ag, a weight ratio of the Au, Cu, Pd or Sn is lower than that of the Ag.