Claims

1. A production method for fine metal particles comprising:

a step of preparing metal particles, wherein a particle size of the metal particles is in a range of 2 μm to 3 mm; and

a step of supplying a feed gas containing a hydrocarbon to the metal particles to generate a grain boundary at the metal particles,

contact between the feed gas and the metal particles being carried out at a temperature of 600°C to 900°C.

2. The production method for fine metal particles according to claim 1, further comprising a step of removing carbon adhering to micronized metal after the contact between the feed gas and the metal particles.

3. The production method for fine metal particles according to claim 1 or 2, wherein metal forming the metal particles is iron, nickel, cobalt, or an alloy of at least two of iron, nickel, or cobalt.

4. The production method for fine metal particles according to any one of claims 1 to 3, wherein a partial pressure of the hydrocarbon in the feed gas is 0.025 MPa to 0.1 MPa.

5. The production method for fine metal particles according to any one of claims 1 to 4, further comprising a step of supplying at least one of carbon monoxide or hydrogen to the metal particles before the step of supplying the feed gas to the metal particles.