CLAIMS

WHAT IS CLAIMED IS:

1. A method for producing a TiAl intermetallic compound powder in which a cutting chips obtained by cutting a material of a TiAl intermetallic compound without hydrogen embrittlement is passed through a thermal plasma flame for a spheroidizing treatment, wherein a size of the cutting chips is 30 μm or more, and 500 μm or less.

2. The method for producing a TiAl intermetallic compound powder according to claim 1, wherein the size of the cutting chips is 70 μm or more, and 500 μm or less.

3. The method for producing a TiAl intermetallic compound powder according to claim 1 or 2, wherein the power of the thermal plasma flame is 10 to 250 kW.

4. The method for producing a TiAl intermetallic compound powder according to any one of claims 1 to 3, wherein the thermal plasma flame is a radio frequency plasma flame.

5. The method for producing a TiAl intermetallic compound powder according to any one of claims 1 to 4, wherein an operating gas of the thermal plasma flame is an inert gas.

6. The method for producing a TiAl intermetallic compound powder according to any one of claims 1 to 5, wherein a carrier gas used to supply the cutting chips to a region of the thermal plasma flame is an inert gas.

7. The method for producing a TiAl intermetallic compound powder according to claim 5, wherein a dehydrogenation treatment is not performed on the TiAl intermetallic compound powder after the spheroidizing treatment.

8. The method for producing a TiAl intermetallic compound powder according to claim 1, wherein the material is ingot.