

ABSTRACT

There are provided a Co based alloy powder, a Co based alloy sintered body, and a method for producing a Co based alloy sintered body that each can provide a Co based alloy material having mechanical properties equivalent to or higher than those of precipitation strengthened Ni based alloy materials.

The Co based alloy powder includes 0.08 mass % or more and 0.25 mass % or less of carbon, 0.1 mass % or less of boron, 10 mass % or more and 30 mass % or less of chromium, 5 mass % or less of iron, and 30 mass % or less of nickel; includes the iron and the nickel to be in a total amount of 30 mass % or less; includes at least one selected from the group of tungsten and molybdenum to be in a total amount of 5 mass % or more and 12 mass % or less; includes at least one selected from the group of titanium, zirconium, niobium, tantalum, hafnium, and vanadium to be in a total amount of 0.5 mass % or more and 2 mass % or less; includes 0.5 mass % or less of silicon, 0.5 mass % or less of manganese, and 0.003 mass % or more and 0.04 mass % or less of nitrogen; and includes cobalt and impurities as the balance of the powder. Crystal grains included in the cobalt-based alloy powder have segregated cells, and the segregated cells have an average size of 0.15 μm or more and 4 μm or less.