

ABSTRACT

STAINLESS STEEL MATERIAL FOR DIFFUSION BONDING JIG

Provided is a stainless steel material for a diffusion bonding jig in which deformation of bonding members is suppressed while maintaining diffusion bonding properties of the bonding members, and in which releasability (detachability of a bonding member from a release member) after diffusion bonding treatment is excellent. An embodiment of the present invention provides a stainless steel material for a diffusion bonding jig having excellent deformation suppressibility and releasability, the material being a stainless steel material including 1.5 mass% or more of Si, and a ratio (F_r/F_p) of the high-temperature strength (F_r) of the stainless steel material at 1000°C to the high-temperature strength (F_p) of a bonding member at 1000°C being 0.9 or more, the bonding member to be bonded by diffusion bonding. The stainless steel material preferably includes C: 0.1 mass% or less, Si: 1.5 to 5.0 mass%, Mn: 2.5 mass% or less, P: 0.06 mass% or less, S: 0.02 mass% or less, Ni: 8.0 to 15.0 mass%, Cr: 13.0 to 23.0 mass%, and N: 0.2 mass% or less.