Title (en)

USE OF A DUAL-PHASE STAINLESS STEEL MATERIAL FOR DIFFUSION BONDING

Title (de)

VERWENDUNG EINES ZWEIPHASIGEN EDELSTAHLMATERIALS ZUM DIFFUSIONSSCHWEISSEN

Title (fr)

UTILISATION D'UN ACIER INOXYDABLE À DEUX PHASES POUR UN PROCESSUS DE SOUDAGE PAR DIFFUSION

Publication

EP 3216888 B1 20210602 (EN)

Application

EP 15857850 A 20151016

Priority

- JP 2014225576 A 20141105
- JP 2015079342 W 20151016

Abstract (en)

[origin: EP3216888A1] Provided is a stainless steel material suitable for diffusion bonded moldings in which diffusion bondability has been further improved without being affected by the extent of surface roughness. The present invention is a stainless steel material for diffusion bonding in which the metal structure before diffusion bonding has a multi-phase structure obtained from two or more of a ferrite phase, a martensite phase and an austenite phase, wherein: the mean crystal grain diameter in the multi-phase structure is not more than 20 µm; ^{3}max represented by formula (a) is 10-90; and creep elongation when a 1.0 MPa load is applied at 1000°C for 0.5 h is at least 0.2%. ^{3}max = 420 C ## 11.5 Si + 7 Mn + 23 Ni ## 11.5 Cr ## 12 Mo + 9 Cu ## 49 Ti ## 47 Nb ## 52 Al + 470 N + 189 The element notations in formula (a) represent the contents (mass%) of the respective elements.

IPC 8 full level

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CPC (source: EP KR US)

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