

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

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- 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 ; α_{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%. $\alpha_{\text{max}} = 420 \text{ C} \text{ \#} \text{ 11.5 Si} + 7 \text{ Mn} + 23 \text{ Ni} \text{ \#} \text{ 11.5 Cr} \text{ \#} \text{ 12 Mo} + 9 \text{ Cu} \text{ \#} \text{ 49 Ti} \text{ \#} \text{ 47 Nb} \text{ \#} \text{ 52 Al} + 470 \text{ N} + 189$ 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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Cited by

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