

Title (en)

TITANIUM ALLOY PLATE AND EXHAUST SYSTEM COMPONENT FOR AUTOMOBILES

Title (de)

TITANLEGIERUNGSPLATTE UND ABGASSYSTEMKOMPONENTE FÜR KRAFTFAHRZEUGE

Title (fr)

PLAQUE EN ALLIAGE DE TITANE ET COMPOSANT DE SYSTÈME D'ÉCHAPPEMENT POUR AUTOMOBILES

Publication

**EP 4283000 A4 20240306 (EN)**

Application

**EP 21920958 A 20210120**

Priority

JP 2021001778 W 20210120

Abstract (en)

[origin: EP4283000A1] This titanium alloy sheet has a predetermined chemical composition, in which a microstructure consists of an  $\alpha$ -phase and second phases, the average crystal grain size of the  $\alpha$ -phase is 3.0 to 10.0  $\mu\text{m}$ , the number proportion of crystal grains having a crystal grain size within a range of the average crystal grain size  $\pm 2 \mu\text{m}$  is 25% or higher in the  $\alpha$ -phase, the number proportion of crystal grains having a crystal grain size within a range of the average crystal grain size  $\pm 4 \mu\text{m}$  is 45% or higher in the  $\alpha$ -phase, and in a case where 100 of 10  $\mu\text{m} \times 10 \mu\text{m}$  regions obtained by dividing a 100  $\mu\text{m} \times 100 \mu\text{m}$  region into 100 equal parts in a cross section are set to measurement regions and the number density of the second phases is obtained for each measurement region, the number of measurement regions in which 5 to 15 second phases are observed within each measurement region is 80 or more.

IPC 8 full level

**C22C 14/00** (2006.01); **C22F 1/18** (2006.01)

CPC (source: EP)

**C22C 14/00** (2013.01); **C22F 1/183** (2013.01)

Citation (search report)

- [A] WO 2019155553 A1 20190815 - NIPPON STEEL CORP [JP] & US 11390935 B2 20220719 - TAKEBE HIDENORI [JP], et al
- [A] US 10358698 B2 20190723 - OTSUKA HIROAKI [JP], et al
- [A] US 2012267001 A1 20121025 - OTSUKA HIROAKI [JP], et al
- See also references of WO 2022157844A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

**EP 4283000 A1 20231129; EP 4283000 A4 20240306**; CN 116806277 A 20230926; JP 7541255 B2 20240828; JP WO2022157844 A1 20220728; WO 2022157844 A1 20220728

DOCDB simple family (application)

**EP 21920958 A 20210120**; CN 202180088952 A 20210120; JP 2021001778 W 20210120; JP 2022576264 A 20210120