

Title (en)

STEEL SHEET WITH EXCELLENT SUITABILITY FOR FINE BLANKING AND PROCESS FOR PRODUCING THE SAME

Title (de)

STAHLBLECH MIT HERVORRAGENDER FEINSTANZUNGSEIGNUNG UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)

FEUILLE D'ACIER CONVENANT PARFAITEMENT A UN DECOUPAGE FIN ET SON PROCEDE DE PRODUCTION

Publication

**EP 1980635 A1 20081015 (EN)**

Application

**EP 07713798 A 20070129**

Priority

- JP 2007051835 W 20070129
- JP 2006023104 A 20060131

Abstract (en)

A steel sheet excellent in FB performance and also excellent in fabrication performance after FB working and a manufacturing method of the same are provided. The steel sheet is a steel sheet having a composition containing from 0.1 to 0.5 % of C, not more than 0.5 % of Si and from 0.2 to 1.5 % of Mn in terms of % by mass, with P and S being adjusted at proper ranges, and having a structure in which a ferrite has an average grain size of from 1 to 10  $\mu\text{m}$ , a cementite has a spheroidization ratio of 80 % or more, and of the cementites, an amount S gb of a ferrite intergranular cementite which is defined by the following expression (1) :  $S_{gb}(\%) = \{S_{on} / (S_{on} + S_{in})\} \times 100$  (wherein S on represents a total occupied area of a cementite present on the ferrite grain boundary of the cementites present per unit area; and S in represents a total occupied area of a cementite present in a ferrite grain of the cementites present per unit area) is 40 % or more. In this way, the steel sheet becomes a steel sheet excellent in FB performance, mold life and performance after FB working.

IPC 8 full level

**C22C 38/00** (2006.01); **C21D 9/46** (2006.01)

CPC (source: EP KR US)

**C21D 1/18** (2013.01 - EP KR US); **C22C 38/02** (2013.01 - EP KR US); **C22C 38/04** (2013.01 - EP KR US); **C22C 38/44** (2013.01 - KR); **C22C 38/50** (2013.01 - KR); **C22C 38/54** (2013.01 - KR); **C21D 2211/005** (2013.01 - EP KR US)

Cited by

EP2103697A4; EP3282032A4; US11365460B2

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

**EP 1980635 A1 20081015**; **EP 1980635 A4 20101201**; **EP 1980635 B1 20120111**; CN 101379208 A 20090304; CN 101379208 B 20120620; KR 101023633 B1 20110322; KR 20080077254 A 20080821; US 2009173415 A1 20090709; WO 2007088985 A1 20070809

DOCDB simple family (application)

**EP 07713798 A 20070129**; CN 200780004180 A 20070129; JP 2007051835 W 20070129; KR 20087016379 A 20070129; US 15901007 A 20070129