

Title (en)  
STEEL MEMBER AND PROCESS FOR PRODUCING SAME

Title (de)  
STAHELEMENT UND VERFAHREN ZUR HERSTELLUNG DAVON

Title (fr)  
ÉLÉMENT EN ACIER ET PROCESSUS POUR LE PRODUIRE

Publication  
**EP 2918694 A1 20150916 (EN)**

Application  
**EP 13852994 A 20131029**

Priority  
• JP 2012247775 A 20121109  
• JP 2013079197 W 20131029

Abstract (en)  
Provided is a steel member which is obtained using a thick steel plate and in which the inner zone (thicknesswise central zone) of the steel material exhibits high strength and high toughness even in a case where the steel member has undergone high-temperature and long-time post-welding heat treatment. The steel member has a prescribed composition and is characterized in that the texture of a thicknesswise central zone of the plate satisfies all the requirements (a) to (d): (a) the texture is tempered bainite and/or tempered martensite; (b) the mean equivalent circle diameter of grains that are each surrounded by a large-angle grain boundary where the misorientation between two adjacent grains is 15 or more is 20  $\mu\text{m}$  or less; (c) the maximum diameter of grain-boundary carbides is 0.8  $\mu\text{m}$  or less; and (d) the fraction of grain-boundary carbides is 1.0% by area or more.

IPC 8 full level  
**C22C 38/00** (2006.01); **C21D 6/00** (2006.01); **C21D 9/50** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/42** (2006.01); **C22C 38/44** (2006.01); **C22C 38/46** (2006.01); **C22C 38/54** (2006.01)

CPC (source: EP KR)  
**C21D 6/00** (2013.01 - EP KR); **C21D 9/50** (2013.01 - EP KR); **C22C 38/00** (2013.01 - EP); **C22C 38/001** (2013.01 - EP KR); **C22C 38/02** (2013.01 - EP KR); **C22C 38/04** (2013.01 - EP KR); **C22C 38/06** (2013.01 - EP KR); **C22C 38/22** (2013.01 - KR); **C22C 38/42** (2013.01 - EP KR); **C22C 38/44** (2013.01 - EP KR); **C22C 38/46** (2013.01 - EP); **C22C 38/54** (2013.01 - EP KR); **C21D 2211/002** (2013.01 - EP KR); **C21D 2211/008** (2013.01 - EP)

Cited by  
EP3889303A4; EP3392365A4; EP3372702A4; JP2020509193A; US10829830B2

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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

DOCDB simple family (publication)  
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