Title (en)

DUAL-PHASE HIGH-STRENGTH STEEL SHEET HAVING EXCELLENT DYNAMIC DEFORMATION PROPERTIES AND PROCESS FOR PREPARING THE SAME

Title (de)

ZWEIPHASEN HOCHFESTES STAHLBLECH MIT AUSGEZEICHNETEN DYNAMISCHEN UMFORMUNGSEIGENSCHAFTEN UND VERFAHREN ZUR HERSTELLUNG

Title (fr)

TOLE D'ACIER BIPHASE A HAUTE RESISTANCE AYANT D'EXCELLENTES PROPRIETES DE DEFORMATION DYNAMIQUE ET SON PROCEDE DE PREPARATION

Publication

EP 0969112 A4 20030521 (EN)

Application

EP 98907247 A 19980316

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- JP 19029997 A 19970715
- JP 22300897 A 19970806
- JP 25893897 A 19970924

Abstract (en)

[origin: EP0969112A1] The invention relates to dual-phase type high-strength steel sheets, for automobiles, which have excellent dynamic deformation properties and exhibit impact absorption properties, and are intended to be used as structural members and reinforcing materials primarily for automobiles, as well as to a method of producing them, which dual-phase type high-strength steel sheets with excellent dynamic deformation properties are characterized in that the final microstructure of the steel sheets is a composite microstructure wherein the dominating phase is ferrite, and the second phase is another low temperature product phase containing martensite at a volume fraction between 3% and 50% after 5% deformation of the steel sheet, wherein the difference between the quasi-static deformation strength as when deformed in a strain rate range of 5 x 10<-4> - 5 x 10<-3> (s<-1>) after pre-deformation of more than 0% and less than or equal to 10% of equivalent strain, and the dynamic deformation strength sigma d when deformed in a strain rate range of 5 x 10<2> - 5 x 10<3> (s<-1>) after the aforementioned pre-deformation, i.e. (sigma d - sigma s), is at least 60 MPa, and the work hardening coefficient at 5 SIMILAR 10% strain is at least 0.13. <IMAGE>

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IPC 8 full level

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CPC (source: EP KR US)

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Citation (search report)

- [XA] EP 0719868 A1 19960703 - KAWASAKI STEEL CO [JP]
- [X] PATENT ABSTRACTS OF JAPAN vol. 1995, no. 07 31 August 1995 (1995-08-31)
- [A] PATENT ABSTRACTS OF JAPAN vol. 1997, no. 04 30 April 1997 (1997-04-30)
- See also references of WO 9841664A1

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