

Title (en)

High strength thin steel sheet having high hydrogen embrittlement resisting property and high workability

Title (de)

Bearbeitungsfähiges hochfestes dünnes Stahlblech mit hohem Widerstand gegen Wasserstoffversprödung

Title (fr)

Tôle d'acier mince à haute résistance, possédant une résistance à la fragilisation par l'hydrogène et une aptitude au façonnage élevées

Publication

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Application

**EP 05028528 A 20051227**

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Abstract (en)

[origin: EP1676933A1] The present invention provides a high strength thin steel sheet that has high hydrogen embrittlement resisting property and high workability. The high strength thin steel sheet having high hydrogen embrittlement resisting property has a metallurgical structure after stretch forming process to elongate 3%, which comprises: (i) 1% or more residual austenite; 80% or more in total of bainitic ferrite and martensite; and 9% or less (may be 0%) in total of ferrite and pearlite in terms of proportion of area to the entire structure, wherein the mean axis ratio (major axis/minor axis) of the residual austenite grains is 5 or higher, or (ii) 1% or more residual austenite in terms of proportion of area to the entire structure; mean axis ratio (major axis/minor axis) of the residual austenite grains is 5 or higher; mean length of minor axes of the residual austenite grains is 1  $\mu$  m or less; minimum distance between the residual austenite grains is 1  $\mu$  m or less; and the steel has tensile strength of 1180 MPa or higher.

IPC 8 full level

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Cited by

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