

Title (en)  
COLD ROLLED AND COATED STEEL SHEET AND A METHOD OF MANUFACTURING THEREOF

Title (de)  
KALTGEWALZTES UND BESCHICHTETES STAHLBLECH UND VERFAHREN ZU SEINER HERSTELLUNG

Title (fr)  
TÔLE D'ACIER LAMINÉE À FROID ET REVÊTUE ET SON PROCÉDÉ DE FABRICATION

Publication  
**EP 3976840 A1 20220406 (EN)**

Application  
**EP 20716952 A 20200402**

Priority  
• IB 2019054576 W 20190603  
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Abstract (en)  
[origin: WO2020245626A1] A cold rolled and coated steel sheet having a composition comprising of the following elements,  $0.12\% \leq \text{Carbon} \leq 0.2\%$ ,  $1.7\% \leq \text{Manganese} \leq 2.10\%$ ,  $0.1\% \leq \text{Silicon} \leq 0.5\%$ ,  $0.1\% \leq \text{Aluminum} \leq 0.8\%$ ,  $0.1\% \leq \text{Chromium} \leq 0.5\%$ ,  $0\% \leq \text{Phosphorus} \leq 0.09\%$ ,  $0\% \leq \text{Sulfur} \leq 0.09\%$ ,  $0\% \leq \text{Nitrogen} \leq 0.09\%$ ,  $\text{Nickel} \leq 3\%$ ,  $\text{Niobium} \leq 0.1\%$ ,  $\text{Titanium} \leq 0.1\%$ ,  $\text{Calcium} \leq 0.005\%$ ,  $\text{Copper} \leq 2\%$ ,  $\text{Molybdenum} \leq 0.5\%$ ,  $\text{Vanadium} \leq 0.1\%$ ,  $\text{Boron} \leq 0.003\%$ ,  $\text{Cerium} \leq 0.1\%$ ,  $\text{Magnesium} \# 0.010\%$ ,  $\text{Zirconium} \# 0.010\%$  the remainder composition being composed of iron and unavoidable impurities caused by processing, the microstructure of said steel sheet comprising in area fraction, 10 to 60% Bainite, 25 to 55% Ferrite, 5% to 15% Residual Austenite wherein carbon content in residual austenite is between 0.7% and 1% and 5% to 18% Martensite, wherein the cumulated amount of Bainite and Ferrite is at least 70%.

IPC 8 full level  
**C21D 1/32** (2006.01); **C21D 6/00** (2006.01); **C21D 8/02** (2006.01); **C21D 9/46** (2006.01); **C22C 38/00** (2006.01); **C22C 38/02** (2006.01); **C22C 38/06** (2006.01); **C22C 38/20** (2006.01); **C22C 38/22** (2006.01); **C22C 38/26** (2006.01); **C22C 38/28** (2006.01); **C22C 38/32** (2006.01); **C22C 38/38** (2006.01); **C22C 38/40** (2006.01); **C23C 2/06** (2006.01); **C23C 2/12** (2006.01); **C23C 2/40** (2006.01)

CPC (source: EP KR US)  
**B21C 47/02** (2013.01 - KR); **C21D 1/32** (2013.01 - EP); **C21D 6/002** (2013.01 - US); **C21D 6/005** (2013.01 - EP US); **C21D 6/008** (2013.01 - US); **C21D 8/0205** (2013.01 - EP US); **C21D 8/0226** (2013.01 - EP KR US); **C21D 8/0236** (2013.01 - EP KR US); **C21D 8/0263** (2013.01 - EP KR); **C21D 8/0273** (2013.01 - KR US); **C21D 9/46** (2013.01 - EP US); **C22C 38/001** (2013.01 - KR); **C22C 38/002** (2013.01 - EP US); **C22C 38/005** (2013.01 - EP); **C22C 38/02** (2013.01 - EP US); **C22C 38/06** (2013.01 - EP US); **C22C 38/20** (2013.01 - EP); **C22C 38/22** (2013.01 - EP); **C22C 38/26** (2013.01 - EP US); **C22C 38/28** (2013.01 - EP); **C22C 38/32** (2013.01 - EP); **C22C 38/38** (2013.01 - EP US); **C22C 38/40** (2013.01 - EP); **C22C 38/42** (2013.01 - KR); **C22C 38/44** (2013.01 - KR); **C22C 38/46** (2013.01 - KR); **C22C 38/48** (2013.01 - KR); **C22C 38/50** (2013.01 - KR); **C22C 38/54** (2013.01 - KR); **C22C 38/58** (2013.01 - KR); **C22C 38/60** (2013.01 - KR); **C23C 2/06** (2013.01 - EP); **C23C 2/40** (2013.01 - EP); **C21D 2211/001** (2013.01 - EP US); **C21D 2211/002** (2013.01 - EP KR US); **C21D 2211/005** (2013.01 - EP KR US); **C21D 2211/008** (2013.01 - EP US)

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