

Title (en)
Ferritic Chromium alloyed steel

Title (de)
Ferritischer Chromstahl

Title (fr)
Acier au chrome ferritique

Publication
EP 0924313 A1 19990623 (EN)

Application
EP 98124277 A 19981218

Priority
• US 99438297 A 19971219
• US 15382298 A 19980915

Abstract (en)
A ferritic non-ridging stainless steel and process therefor. A chromium alloyed steel melt containing sufficient titanium and nitrogen but a controlled amount of aluminum is cast into an ingot or continuously cast into a strip or a slab having an as-cast fine equiaxed grain structure substantially free of columnar grains. The as-cast steel contains 0.08% C, at least about 8% Cr, up to 1.50% Mn, < 0.020% Al, $\leq 0.05\%$ N, $\leq 1.5\%$ Si, < 2.0% Ni, $Ti \geq 0.10\%$, the ratio of $(Ti \times N)/Al \geq 0.14$, all percentages by weight, the balance Fe and residual elements. Preferably, the titanium is controlled so that $(Ti/48)/\sqrt{(C/12) + (N/14)} > 1.5$. A hot processed sheet may be formed from a continuously cast slab without grinding the surfaces of the slab. The hot processed sheet may be descaled, cold reduced to a final thickness and recrystallization annealed. Annealing the hot processed sheet prior to cold reduction is not required to obtain an annealed sheet essentially free of ridging and having high formability. <IMAGE>

IPC 1-7
C22C 38/18; **C22C 38/50**; **C21D 8/02**; **C21D 8/04**

IPC 8 full level
C21D 9/46 (2006.01); **C21D 8/02** (2006.01); **C21D 9/00** (2006.01); **C22C 38/00** (2006.01); **C22C 38/18** (2006.01); **C22C 38/40** (2006.01); **C22C 38/50** (2006.01)

CPC (source: EP)
C21D 8/0215 (2013.01); **C22C 38/18** (2013.01); **C22C 38/50** (2013.01)

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